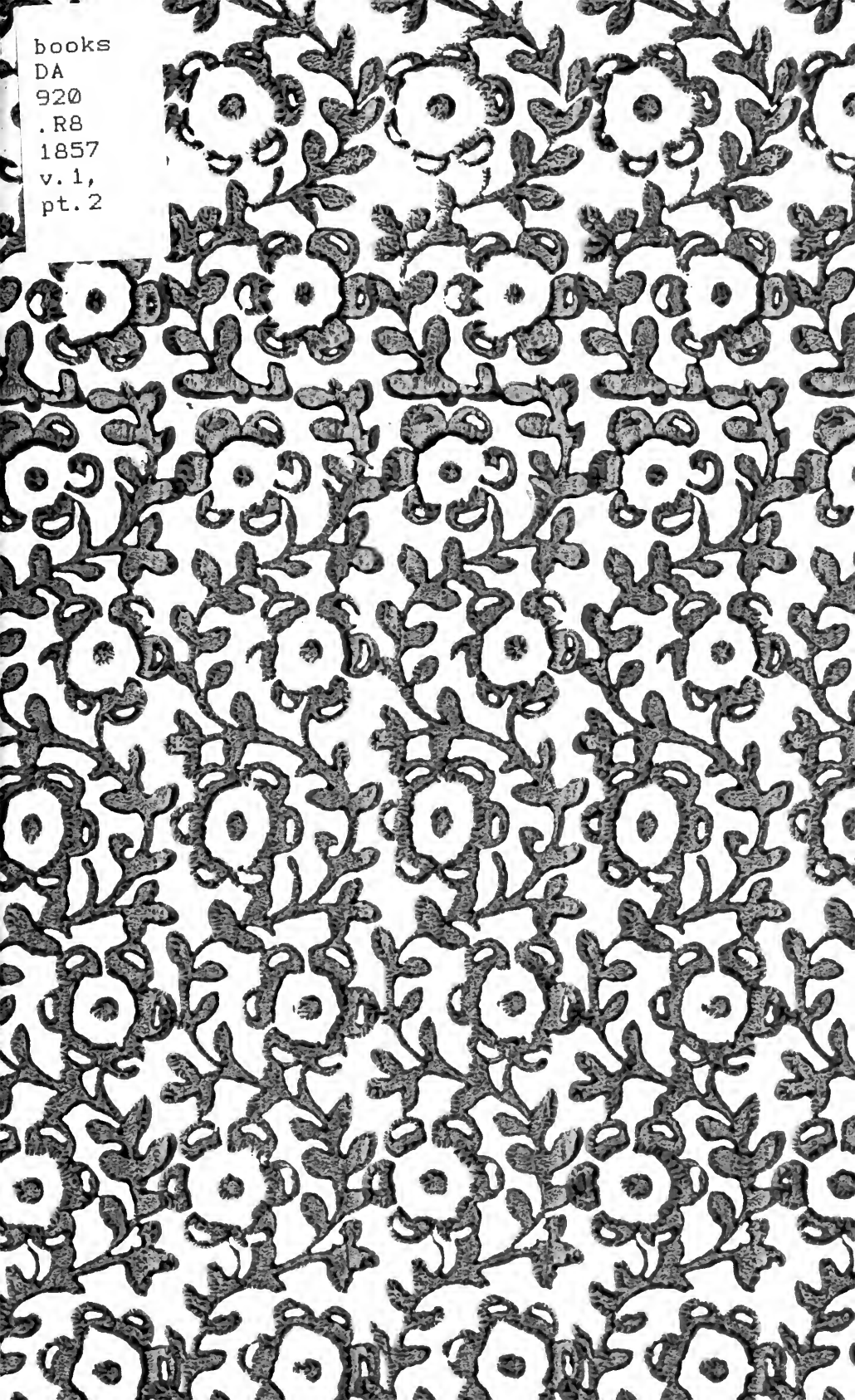


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A DESCRIPTIVE CATALOGUE
OF
THE ANTIQUITIES
OF
ANIMAL MATERIALS AND BRONZE
IN THE
Museum of the Royal Irish Academy.

BY
W. R. WILDE, M. D., M. R. I. A.

Illustrated with Three Hundred and Seventy-seven Wood Engravings.

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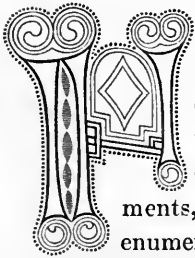
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CLASS IV.—ANIMAL MATERIALS.

EASTERN GALLERY, CASE III., AND WESTERN GALLERY, COMPARTMENT I.



THE foregoing sections we described the composition and localities of the different rocks out of which man fashioned his earliest tools and weapons; the earthen materials wherewith he decorated his person, formed culinary implements, or preserved the remains of the dead; and also enumerated the different trees and vegetable substances from which our early people formed their boats, paddles, mills, kneading-troughs, and drinking vessels, &c. This division of the Catalogue commences with a short notice of the native animals which ministered to man's necessities, or contributed to his amusements, in early times.

Man in his primitive state, depending almost solely on flint, stone, and wood, for his tools and weapons—the remains of which abound in Ireland, and are typified in the first and third sections of this Collection,—must have been originally, in a great measure, a flesh and fish-consuming animal. And it may naturally be inferred that he employed the hard bones as well as the softer horns and the flexible skins and warm furs of the creatures he slew, in the formation of weapons, tools, clothing, household utensils, and personal ornaments, as his wants required, or his ingenuity suggested. In the process of civilization he either tamed some of the wild animals, or introduced domesticated specimens from other countries. With those animals that may be considered pre-Adamite, we do not pro-

fess to deal,—they belong rather to the province of the geologist and palæontologist than to that of the antiquary; still the line of demarcation has not yet been accurately defined. Recent investigations tend to prolong chronology,—to extend farther back, towards the dawn of time, man's existence on the earth,—or to advance into coeval occupation with him many animals heretofore believed to have preceded him by centuries. Having described the different Irish animals associated with man, in the Proceedings of the Academy, vol. vii., p. 64 and p. 181, it is here unnecessary to do more than enumerate them.*

Of the ancient Fauna of Ireland, we as yet possess but imperfect knowledge. Among the larger carnivora was the bear, in Irish *mathghamhain*, probably the brown bear of northern Europe, and which existed in Scotland until the year 1057. Although said to be remembered traditionally, we have no historic reference made to it in any of our records. The majority of the bears' skulls discovered in Ireland show that the animal was of rather a small size, although the great cave bear coexisted here with the mammoth. The wolf, called in Irish *cú allaidh*, or the wild hound, and occasionally styled in the manuscripts *mac tíre*, the son of the soil (*filius terræ*), remained among our highland woods and caverns until the beginning of the last century. The ancient dog, or *cú*, usually called the Irish greyhound, and believed to have been employed in chasing the deer, or exterminating the wolf, may be said to have passed from amongst us. The fox, *sinnach*, or *madradh ruadh*, the red dog; the badger, *broc*; the otter, *dobhar-chú*, or water hound; the martin, or tree dog, *madradh crainn*; the stoat and weasel, *blánait*, or *easóg*; and the wild and domestic cat, or *cat garman*, include nearly all the carnivora of Ireland in early times. To this list may be added the seal, or *rón*, which abounds upon our coasts.

* See also the Author's Papers upon "The Food of the Irish" in the Dublin University Magazine for 1854.

Of the deer tribe, our gigantic Irish Elk, the *Cervus megaceros* was the noblest animal of its class of which we have any remains, but whether it coexisted with man is a mooted question. We have no Irish name for this extinct animal. That a small and probably degenerated variety existed with the human race in Ireland, may be assumed from the circumstance of the remains of one being found in peat overlying the clay; and others possibly may have been discovered in similar situations. (See Proceedings, vol. vii. p. 198.) The red deer, *fiadh ruadh*, was evidently the animal of this class that abounded most in Ireland, and was the chief object of the chase. Other varieties of the deer kind were, no doubt, to be found in great quantities during the middle ages; but it may be questioned whether they had not been introduced about that time. We had the sheep, *caóra*, and the goat, *gabhar*, at a very remote period, the former being many-horned. Oxen, *daimh*, were undoubtedly to be found in the greatest abundance, and of the finest breed in Ireland, from the earliest period to which our histories refer, and were probably long antecedent to man's occupation of the island.* The horse, *capall*, or *each*, was coexistent with the elephant; and the wild boar, *torc fiadhain*, abounded in our woods up to a comparatively recent period. The hare, called in Irish *gearr-fiadh*, "the short deer," and occasionally *míol-muighe*, or "the animal of the plain," and the rabbit, *coinín*, were also co-occupiers of Ireland with man at a very early period.†

Numbers of localities in Ireland, as well as persons, derived their names from animals, or from historic circumstances connected with them. The chief wealth of this island has ever

* One of the oldest lists of the Animals of the British Isles is to be found in an Irish Poem in the Academy's Collection of MSS (S. 149); and a prose description thereof is related in the Book of Lecan. Mr. Curry thinks the original poem was written in the ninth century. See the transcript and translation of it in the Proceedings, vol. vii. p. 184.

† See the Author's Paper on the "Ancient and Modern Races of Oxen in Ireland," in the Proceedings, vol. vii., p. 64, also p. 209.

lain in its cattle, and our annals abound in notices of epizootics that from time to time raged among the lower animals. Barter was chiefly carried on by means of sheep and oxen. The tributes paid by chieftainries or kingdoms were, for the most part, in cattle; and several of the feuds that prevailed in early times originated in cattle raids, and usually ended in the stronger party abducting the flocks and herds of the weaker.

The next question for consideration is, how far the ancient animals of Ireland contributed materials for those manufactured articles, which, under the head of "Animal Materials," our Museum presents. It is the largest collection of its kind in any country in north-western Europe, and contains specimens of bone, horn, skin, hair, fur, wool, gut, and even wax, as well as of food, such as butter, cheese, &c.

One of the earliest uses of horn among the primitive inhabitants of Europe appears to have been contemporaneous with, and subsidiary to, the use of flint and stone. And, although we do not as yet possess any specimens of horn to illustrate this assertion, our Museum contains fragments of flint (see Rail-case **A**), and also small stone celts, which, judging by analogy with their ascertained uses in other parts of the world, must have been fixed in portions of stag-horn, most probably those of the red deer, in the following manner:—A piece of the hornbeam, from 5 to 8 inches in length, cut or broken off, generally where a tine sprung, so as to give it greater breadth, was hollowed artificially for the insertion of a fragment of flint or small sharp stone celt, which was then driven into the broad part and fixed there either with wedges or cement, or fastened with thongs. Sometimes the horn was perforated across the centre for the passage of a handle formed of some tough, hard wood, such as oak, yew, ash, or blackthorn. It thus formed an axe, pick, or adze, according to the shape and direction given to its cutting edge. The majority of these small tools were, however, held in the hand, and had not flexible handles. Occasionally the horn tine had the celt inserted at right angles to it, and thus formed both handle and socket.

This was, perhaps, one of man's earliest manufactures: a weapon-tool equally formidable in the former, or serviceable in the latter capacity. Several such pieces of horn are to be found in the native collections of north-western Europe, extending from the Danube to the highest inhabited limits of Sweden and Norway; and their use has been for a long time more than a matter of conjecture, but until lately very few specimens with the attached flint or stone blades have been discovered. The Swiss crannoges, especially those in the Bodensee, have, however, afforded so many examples of such within the last few years, as completely to clear up the mystery; and two of these are here figured, one-fourth the natural



Fig. 160.



Fig. 161.

size, from unpublished engravings of the work of Professor Lindenschmit, of Mayence.* As yet none of these horn implements have come to light in Ireland, although we possess the stone blades in large quantities. In Mr. Murray's Museum at Edenderry there

are some bone implements of a different description, through which handles were evidently passed, and which served as picks or axes like those found in Jutland, and preserved in the

Copenhagen Museum of Antiquities.†

By permission of Mr. Murray, the following illustration, Fig. 162, is drawn from the most remarkable of these Irish bone axes. It is 8 inches long, and was found 7 feet deep on an ancient wooden togher or road in Ballykillen bog, barony

* See "*Die Alterthümer unserer heidnischen Vorzeit.*"

† See the last edition of Worsaae's "*Nordiske Oldsager,*" 1859, pl. 14.

Since the publication of Part I. of this Catalogue, a stone celt in a wooden handle was discovered in the Solway Moss, and is now in the British Museum. See "*Proceedings of the Royal Society of Antiquaries,*" vol. iv. p. 112.

of Cootestown, King's County, along with the flint arrow-head figured at p. 254.* The sharp cutting edge at the small extremity was formed by breaking or cutting off the bone obliquely, like the end of the horn tine, Fig. 168, at page 260.



Fig. 162.

The foregoing illustrations explain articles in the Academy's Museum, the uses of which could not, without them, be properly understood.

The more we study man in his primitive simplicity, and collect examples of his arts, as still existing among savage people, the more we are driven to the conclusion that in certain phases of life and states of progress, he acts as if by a common instinct or impulse to fulfil the like purposes, provide for the same necessities, and prompted by similar desires, to follow the same stages of development, merely modified by climate, the natural productions of the country he inhabits—and by race; the latter influence coming into play as he rises from the self-supporting nomad to that condition where men live in community, and depend upon each other, not merely for the luxuries, but the necessaries of life.

The deciduous solid horns of the deer tribe formed tools and weapons, and handles for all manner of implements, and were also employed in the manufacture of personal decorations; while the cuticular horns of the hollow-horned ruminants were applicable to many purposes, but were especially used for drinking vessels. It is strange that, compared with other countries somewhat similarly circumstanced—as, for instance, Scandinavia and northern Germany—so few of these vessels have come to light in Ireland. The great Kavanagh Horn in

* Geo. V. Du Noyer, M. R. I. A., presented to the Academy a valuable portfolio of drawings of objects in the Edenderry Museum, containing those of Figs. 162 and 164. (See Proceedings, vol. vii. for January, 1860.) The Author is much indebted to Mr. Murray for having forwarded, for his inspection and description, the bone-pick figured above, and the arrow-head given at page 254.

the Museum of Trinity College, although in the shape of the horn of an ox, is made of an elephant's tusk; and the Dunvegan cup (a work of Irish art already alluded to at page 114) is shaped like a mether, which was probably always the fashion of the Irish drinking vessel, as well as at the time when that particular article was made. Moreover, our oxen were nearly all short-horned, and did not afford materials out of which large drinking-horns could be manufactured similar to those found in the countries alluded to.

From the very earliest period down to the present day, man has availed himself of the skins of animals for various useful purposes, and soft, warm furs were used, as now, either for covering or decoration. Such peltry was procurable from several of the animals enumerated. The skin of the deer formed, perhaps, one of the earliest garments used by the natives of this country, and cow-hide, in either a raw or manufactured state, appears to have been very early employed for all purposes of household economy, wearing apparel, and horse-trappings. When letters were introduced, our numerous goats afforded the parchment that has embalmed the annals of Irish history, and the emblazonment of Irish art. Horse-hide and calf-skin covered our books, and leather formed satchels for our MSS.* The hair both of horses and goats was matted or woven into textures, either employed as coverings, or used as fringe for various decorative purposes: of which we possess an example in the Collection (see Fig. 188, page 295). Finally, wool became the chief material for man's clothing, long prior to the introduction of flax.

From the hard, long bones of quadrupeds were formed weapons, tools, and handles for both classes of implements; also fibulæ, pins, needles, piercers, bodkins, spindle-knobs, combs, draught and chess-men, musical instruments, and surfaces upon which was exercised the engraver's art. Besides the various

* See in particular the beautiful embossed leather satchel or case of the Book of Armagh, now in the Library of Trinity College, and figured in Petrie's "Round Towers," p. 329.

purposes to which bone was applied, and of which we possess illustrative specimens in the Museum, was that of the dart or arrow-head, shown in the accompanying illustration (Fig. 163), taken from a very perfect specimen in the Museum of Professor Nilsson at Lund,* and which is here introduced in order to



Fig. 163.

explain the uses of that large collection of small, thin, narrow flint-flakes, now preserved in Rail-case **A** (see also page 10), and the uses of which could not otherwise be understood. A smooth, sharp-pointed piece of bone, about 6 inches in length, was grooved on each side to about a quarter of an inch in depth. Into each of these grooves was inserted a row of fine, sharp-edged, and slightly-curved bits of flint, and fixed there by means of cement. The instrument thus armed was fastened to the end of a shaft of wood, which could either be thrown by the hand or projected by the bow-string.

Possibly some of the sinews, but certainly the intestines of animals, cleaned, twisted, dried, and oiled, were extensively employed in sewing, as well as for various other purposes to which twine and thread are applied in the present day. Both thong and gut probably assisted our primitive people in the construction of the sling. In the Edenderry Museum there is a flint arrow-head, remaining in a part of its briar-wood shaft, with a portion of the gut-tying still attached—as shown in the annexed engraving, reduced one-half the natural size, and here figured by permission of its owner, Mr. Murray. It was found, with the bone pick (Fig. 162), in Ballykillen bog, King's County.†



Fig. 164.

* See "*Skandinaviska Nordens Ur-Invanare*," 1843. A new edition of this work is in the press.

† This rare specimen, as also the bone pick figured at page 252, were exhibited at a meeting of the Academy on the 27th of February, 1860. See Proceedings, vol. viii. See also Mr. Du Noyer's portfolio, already referred to.

While the muscular flesh and cellular tissues afforded food, no doubt the fats were melted down, and served for the lamp that hung in the rude dwelling of the peasant, or the banquet-hall of the noble. At the banquets of the ancient Irish, special parts of the slaughtered animals were apportioned to particular classes; of which fact we have a notable example in the description of the feast in the *Teach Midhchuarta*, or great banquet-hall of Tara, given by Dr. Petrie in vol. xviii. of our Transactions.

Of the remains of such cetaceous animals as frequent our coasts, we possess only one specimen—an engraved book-cover formed out of the blade-bone of a whale, deposited in the Museum by Joseph Huband Smith, A. M. The mildness of our climate, and the great fertility of our soil, as well as the fact of our woods affording such abundance of game, and the rivers and inland lakes abounding in fish, may account for the circumstance that no antique implements of the harpoon class have yet been found in Ireland. The incinerated bones of birds have been found in urns and tumuli; and recent manufactured specimens may be seen in the Museum.

Of fish, as an article of food, we have frequent mention, especially salmon (*eo*, *bradun*, or *maighre*), which, according to the earliest annals, abounded in our rivers, particularly the Boyne; but fish-bone does not seem to have been employed in the arts by our ancestors.

Bees, *beacha*, were cultivated in Ireland so extensively, and at so early a period, that a large portion of our ancient Brehon laws is devoted to providing for their care and preservation; and their waxen products, found in square masses, and in the form of candles, have been discovered under circumstances which leave no doubt as to the great antiquity of such articles.*

The nature of the materials presents some difficulty in grouping all these articles, composed of animal substances, ac-

* Giraldus Cambrensis states that the abundance of the yew, and the winds and rains in Ireland, injured the bees.—Book I., chap. v.

ording to the secondary division of this Catalogue, for the uses of some are still undetermined, yet, with a few exceptions, they can all be brought within the limits of the classification which has been adopted. All the manufactured articles of bone and horn, except a few in Rail-case **H**, have been attached to two large Trays, **A** and **B**, at the extremity of the Eastern Gallery; to Tray **C**, in the first Compartment of the Southern Gallery; and to the "Find Trays," **A**, **B**, **C**, in the Southern Compartment of the ground floor of the Museum.

The great object and value of an antiquarian collection is to fill up that blank in history, which, while telling of cosmical phenomena, political events, religious procedures, invasions or expeditions, wars, battles, and famines, the feuds of tribes, or the personal revenge of chieftains, has left the social history of primitive man a still unwritten page. These substantial memorials of the past illustrate, with unerring certainty, that history, by revealing man in his domestic life, his manufactures, dress, decorative arts, and household economy, from the earliest times. As such, they cannot fail to assist the future Irish historian to draw pictures of society at those epochs to which they are referable. It must be borne in mind that there is a long period in Irish history undescribed by any annalist, in which the rath, the cromlech, and the stone sculptured monuments, the terra-cotta urn, the golden ornament, the flint, stone, and bone weapons and tools, and the early copper and bronze articles of the same class, were common—but of which no historian has made mention. Of this Pagan period there is no written history, and it is only by a careful study of the still existing monuments throughout the land, and of the articles in a collection such as that of the Academy, and by comparing them with kindred objects in other countries, that we can form any conjecture as to the social state of Ireland during the Druidic or pre-Christian period. It is not too great a stretch of imagination to suppose that, as our early annalists were Christians and ecclesiastics, they left unrecorded all notice of the

religion that it was their object to obliterate, and all records of the habits of a people among whom they were missionaries; merely preserving the genealogies of kings, with notices of the battles, eclipses, plagues, &c., derived from the bards that supplied them with their only means of information.

ORDER I.—BONE, HORN, &c.

SPECIES I.—WEAPONS.

ALL flesh-eating people, in the rudest states of society, and before they arrive at a knowledge of metal, have at hand ample materials for forming weapons either for war or the chase in the long bones of animals, which, by being broken obliquely, scraped by a sharp flint, or rubbed down on a hard, rough-grained stone, could be easily fashioned into daggers, and, by means of their central cavity or narrow hole, fastened on sticks or poles, so as to form darts or spears formidable to either man or beast. But the great length of time which has elapsed since such objects were used precludes the possibility of many of much antiquity remaining to the present day. Still, one of the oldest specimens of Irish handicraft in the Museum is the bone fibula figured and described at page 183, and which was undoubtedly an object of much value either anterior to, or at a time when the people of Ireland practised cremation and urn-burial, and were apparently unacquainted with metal. The few bone weapons which we possess were probably made and used by a people who lived when and where metal was known, but to whom such was not always accessible; in the same way as pins and fasteners of bone were employed by the poorer classes contemporaneously with the use of the same description of articles of bronze or silver by the wealthier and higher ranks.

Subsequent to the introduction of metal, bone and horn were employed, as occasionally in the present day, in forming handles and ferules for swords and daggers, &c. Next to

wood and sharp-edged stones, the bones of animals presented to man, in his half-civilized state, the most suitable material for such weapons as daggers and the heads of spears, darts, and arrows, &c.

DAGGERS AND SPEARS.—The top row of Tray **A**, in the End-case of the Eastern Gallery, consists of forty articles of bone or horn, the majority of which are evidently weapons or tools. One of the most remarkable specimens is the central



Fig. 165. No. 20.



Fig. 166. No. 21.



Fig. 167. No. 30.



Fig. 168. No. 31.

object, a bone dagger, No. 20, shown in the foregoing cut (Fig. 165), and formed out of the leg-bone of one of the large ruminants. It is $10\frac{1}{16}$ inches long, of which the rough handle is only $2\frac{1}{2}$; thus confirming the opinion (deduced from the size of the hafts of our bronze swords) that the hands of the race who used them were very small. The blade is smooth, and brought to a very fine point. This unique specimen was found in the bed of the River Boyne, a short distance below Clonard, in the townland of Ballyronan, county of Kildare, "on hard blue clay, four feet under sand, along with some stone spear-heads of about 9 inches in length, and half an inch in thickness." It and No. 21 (Fig. 166) were—*Presented by the Board of Works*. See *Proceedings*, vol. v., Appendix, pp. 35 and 54.

No. 21, in the same row, on Tray **A**, is a bone spear-head

of a dark-brown colour, $9\frac{3}{4}$ inches long, and about $1\frac{1}{4}$ in diameter (see Fig. 166). It also was found 4 feet below the bottom of the river at Ballyloughlan, barony of Kilcoursey, King's County. It appears to have been formed by cutting off obliquely a portion of one side, and is traversed by rivet-holes for securing it to the handle. Nos. 30 and 31, Figs. 167 and 168, shown by the accompanying illustrations, are circular conical spear or arrow-points, and belong to the same class of weapon, but are smaller than No. 21. The latter (No. 31) is decorated with a chevron pattern like that on some of our oldest cinerary urns and gold ornaments, &c. They were manifestly fastened to handles of some description, as the sockets and rivet-holes still remain. The first is $2\frac{1}{2}$, and the last 3 inches long.

The handles of metal daggers and swords were partially formed of bone and horn, as shall be explained under the head of "Bronze Swords."

The antique shields of all early nations are, owing to the perishable materials of which they were composed, of great scarcity. Those belonging to the early Irish, and to which reference is made in our histories, were circular, and probably constructed partially of leather and wicker work, but as yet no vestiges of any such have been discovered.

SPECIES II.—TOOLS.

PICKS and hammers composed of bone and horn, like that figured at page 252, have been discovered in Scandinavia; but one of the most primitive implements of this description which has yet come to light in Ireland is a hornbeam of an immense red deer, not shed, but apparently artificially worked off below the crown, see Fig. 169 on the next page. Its small extremity has been sharpened by some clean-cutting instrument, probably metallic. It is twelve inches long, is of great density, weighing as much as nineteen ounces, is of almost stony hardness, and the cancellated structure is filled with carbonate of lime to a greater extent than ever occurs in the living bone. It has, in fact,

undergone, to a considerable extent, the process of mineralization,—certainly far more so than we find in many specimens of the great Irish fossil deer; and as it was evidently worked by the hand of man prior to the commencement of its chemical alteration, it shows us to what a very remote period we may with safety refer it, and some of the tools and weapons which modern investigations have brought to light in other countries. This very rare specimen of a wrought mineralized bone, was found deep in the excavations made in the River Shannon, on the north side of Banagher Bridge in 1843, and was—*Presented by the Shannon Commissioners.* See No. 1, in Rail-case **H**.



Fig. 169. No. 1.

The numerous fragments of bone and horn found in crannoges and street cuttings, show how much these materials were used in the arts. Many tips of deers' horn in the collection are evidently the sawn-off ends of portions used, in all probability, in forming handles to swords, knives, daggers, and tools of various sorts; but others are decorated, and some perforated either at the end or at one side, so that they were evidently employed for some distinct purpose. Besides the well-determined weapons described and figured at page 258, we find in this Collection a number of handles of bone and horn, and a few of ivory, for affixing to tools and food-implements. Some of these hafts are not inelegantly decorated, particularly Nos. 2, 10, and 14, on Tray **A**.

KNIVES (in Irish, *sceana*), being employed for a greater variety of purposes than any other implement in either ancient or modern times, and being used indifferently as weapons, tools, and food implements, might with propriety be placed in any of the three first species in the Classification adopted in this Catalogue; still, they find a more appropriate place among the Tools. We find two kinds of knives here: in one the animal material is employed in the construction of the han-

dles only; and in six of these articles on Tray **A**, from Nos. 11 to 16, small iron knife-blades, evidently of a very rude construction, and ancient fashion, are still fixed. The second variety is formed altogether out of bone, such as Nos. 8, 9, and 10, on Tray **A**, and No. 319, on Tray **B**; No. 10, which is 8 inches long, and highly decorated on the handle, and a portion of the blade, is represented by the accompanying wood-cut, Fig. 170. It was found with a great



Fig. 170. No. 10.

many other specimens of manufactured bone in the Ballinderry crannoge, county of Westmeath. Crannoges have, indeed, been the chief source from which have been collected most of those small implements connected with ancient household economy, domestic use, or personal decoration, contained in the Academy's Collection, and preserved either under the head of "Animal Materials," or kept together as types, among the "Finds" hereafter to be described. The soft substance which formed the substratum of these lake-fortresses, as well as the circumstance of many of them having been rifled of their more precious contents, or remaining uninhabited for years, until the waters rose above their surface levels, may account for the preservation of such a number of these small articles. Crannoges were also small towns or villages, in which, no doubt, the artisan plied his trade with greater security than he could upon the mainland. From street-cuttings, or excavations made for sewage, &c., in the city of Dublin, numbers of small bone and horn articles have been obtained.

To the top row of Tray **A** have been affixed several curved tines of stags' horns, some hollowed at the base, and all bearing the marks of having been artificially pointed. Similar objects,—tools, or weapons in either a rude, partially worked, or finished state,—are of frequent occurrence in crannoges and street-cuttings. In length they vary from 2 to 8 inches. Nos. 36, 37, and 38, are skewer-like pieces of bone, rasped

sharp at both ends, and somewhat resembling the Collection of wooden pins described at page 200.

Upon Tray **B** has been arranged another collection of these bone-tips (see Nos. 1 to 32). Nos. 22 to 26, inclusive, are flattened and notched on the concave surfaces, of which No. 24, here figured one-half the natural size, affords a good example. As to what their use may have been—whether as guards to the finger in straining the bow-string, or like those employed in the present day by hatters for chucking the sheep-gut string of the bow in felt-ing wool—it is difficult to determine.*



Fig. 171. No. 24.

There are other objects in this Collection formed of bone and horn, with the precise uses of which we are at present unacquainted. When, however, the turner's art was introduced, numberless were the forms given to bone and horn, as may be observed in the present day. Under the head of Tools may be classed spikes and piercers, available for a great variety of purposes. The following Catalogue gives a detailed account of the articles belonging to the foregoing species, and displayed upon the top rows of Trays **A** and **B**.

SHELF I., Tray A.—Miscellaneous bone and horn articles, Weapons, Tools, &c., from No. 1 to 40. No. 1 is a hollow, dark-coloured bone haft, $5\frac{3}{8}$ inches in length. No. 2, ditto, with a double aperture at top, stained black, $5\frac{1}{2}$ inches long, ornamented by spiral and interrupted grooves. No. 3, a bone handle, 4 inches long, much worn at one end. No. 4, ditto, $3\frac{3}{4}$ inches in length. All these, together with Nos. 18 and 40, were found in Lough Gurr, county of Limerick. Nos. 2, 18, and 40 were—*Presented by the Hon. Sophia O'Grady*. No. 5, a plain bone handle, $3\frac{1}{8}$ inches long. No. 6, ditto, ornamented, $2\frac{5}{8}$ inches long. No. 7, another bone handle, $2\frac{7}{8}$ inches

* One of the most ancient remains of animal material referred to the "Stone Period," and preserved among the flint collection of the Copenhagen Museum, is a horn tine, notched on the concave edge, precisely similar to those in the possession of the Royal Irish Academy, but somewhat larger.

long, from Ballinderry crannoge. No. 8, a single piece bone-knife, $6\frac{5}{8}$ inches long, ornamented. No. 9, a similar instrument, $5\frac{3}{8}$ inches long, slight, and with a pointed handle. No. 10 (Fig. 170, page 261) is an ornamented bone-knife, which came into the collection along with—Nos. 110 and 114, among the pins on this Tray, and those stone specimens in RAIL-CASE B, described at page 120. All these, together with No. 11, an ornamented handle $4\frac{5}{8}$ inches long—were found in the Ballinderry crannoge; No. 11 was—*Presented by Doctor Lentaigne*. Nos. 12, 13, and 14 are bone-knife-handles, averaging $3\frac{1}{2}$ inches long, and having short iron blades still attached. No. 15, a bone knife-handle, highly ornamented, $4\frac{1}{2}$ inches long, with an iron blade 5 inches in length, sharp at the point, and thick in the back. No. 16 is of the same character, but is of ivory. No. 17, a short ivory handle, with a narrow knife-blade, 4 inches in length. No. 18, an ornamented handle, $4\frac{3}{8}$ inches long. No. 19, a large black bone pin, 9 inches long (see Fig. 224), found in the bed of the Shannon at Grosses Island, near Carrick-on-Shannon, in July, 1847, and—*Presented by the Shannon Commissioners*. No. 20, a bone dagger, described at p. 258 (see Fig. 165). No. 21, a bone spear-head, ditto (Fig. 166). No. 22, a similar small bone spear-head, 4 inches long, found in the crannoge near Cloonfree, county of Roscommon—*Presented by Alonzo Lawder, Esq.* (see Proceedings, vol. v., p. 219). No. 23, ditto, $5\frac{1}{2}$ inches long, was procured with the Dawson Collection, and said to have been found at Garristown, county Dublin. No. 24 is $5\frac{3}{8}$ inches long. No. 25, a bone dart, $6\frac{1}{2}$ inches long. No. 26, a bone spear, similar to the foregoing, $5\frac{1}{4}$ inches long. No. 27, ditto, $5\frac{1}{2}$ inches in length. No. 28, ditto, $4\frac{3}{4}$ inches long. No. 29, ditto, 5 inches long. No. 30, a conical bone point (see Fig. 167, p. 258). No. 31, ditto, ornamented (Fig. 168). No. 32, a solid and apparently unfinished horn tip, similar to the foregoing, $2\frac{3}{4}$ inches long. No. 33, a curved piece of deer's horn, $5\frac{1}{8}$ inches in length, hollowed in the base. No. 34, ditto, $5\frac{3}{4}$ inches long. No. 35, a tine of deer's horn, $6\frac{1}{8}$ inches long, hollowed at the base. Nos. 36, 37, and 38, three skewer-shaped pieces of bone, pointed at both extremities, and varying in length from $3\frac{1}{4}$ to $7\frac{1}{2}$ inches; found at The Cutts, near Coleraine, county of Derry—*Presented by the Board of Works* (see Proceedings, vol. v., p. 417). No. 39, a metacarpal bone (Fig. 225, p. 344). It appears to have been part of a musical in-

strument. No. 40, the shank-bone of a sheep or goat, $8\frac{1}{4}$ inches long, stained black, highly polished, and perforated at one end. Of the foregoing articles, Nos. 24 to 29, also 33, 34, and 35, were discovered in the crannoges of the lakes in the vicinity of Strokestown, county of Roscommon, and, except 25, 28, and 29, were—*Presented by the Board of Works*. For the remainder of Tray **A**, see pp. 273, 335.

SHELF II., Tray B—Contains 303 miscellaneous Bone and Horn Articles,—Tips, Burrs, Pins, Plates, and Whorls, &c. No. 1 is a tine of deer's horn, $3\frac{7}{8}$ inches in length. No. 2, a horn tine, $3\frac{1}{2}$ inches long, from Lough Gurr. No. 3, ditto, artificially shaped, $2\frac{5}{8}$ inches in length. No. 4, ditto, ditto, $3\frac{5}{8}$ inches in length; found with No. 7 in Christ Church-place, Dublin. No. 5, ditto, $3\frac{1}{2}$ inches long; from a rath at Ennisnag, county of Kilkenny. No. 6, a goat's horn, $2\frac{5}{8}$ inches, hollowed artificially at the base. No. 7, a horn tine, $3\frac{1}{8}$ inches. No. 8, ditto, $2\frac{5}{8}$ inches, slightly ornamented. No. 9, ditto, $3\frac{1}{8}$ inches. No. 10, ditto, $3\frac{3}{8}$ inches. No. 11, ditto, $3\frac{1}{8}$ inches, polished at top; from Dunshaughlin. No. 12, a portion of bone, $4\frac{3}{8}$ inches in length, found as No. 5. No. 13, a knife-handle, $3\frac{1}{8}$ inches. No. 14, a bone piercer, ditto. No. 15, ditto, $3\frac{1}{4}$ inches. No. 16, ditto, $5\frac{1}{2}$ inches. No. 17, a small bone, $4\frac{1}{8}$ inches long, from Lough Gurr. No. 18, a bone spike, $4\frac{5}{8}$ inches long. No. 19, a tine of deer's horn, slightly ornamented, $2\frac{3}{8}$ inches long. No. 20, ditto, $2\frac{3}{4}$ inches, plain. No. 21, ditto, $2\frac{5}{8}$ inches. No. 22, ditto, $2\frac{3}{4}$ inches, flat, with indented notches. No. 23, ditto, ditto, $2\frac{5}{8}$ inches. No. 24, ditto, 3 inches long, slit at the base (see Fig. 171, p. 262). Nos. 25 to 32 are horn tines, varying in length from $2\frac{1}{2}$ to $4\frac{1}{2}$ inches long; some in process of manufacture. All these, from No. 19, except 24 and 25, were found in a deep cutting in the formation of a sewer in Christ Church-place, Dublin.

On this *Tray* are three antler crowns or burrs (Nos. 186 to 188) which may have been either used as tools or as rings in horse furniture; also carved pieces of bone, resembling modelling tools, for the description of which see the continuation of *Tray B* on page 274.

SPECIES III.—FOOD IMPLEMENTS.

DRINKING-HORNS,—in Irish, *cuirn*, from the Latin *cornu*, and also *cuacha*,—cups or goblets, come in to this category; but it is

to be regretted that, although there is evidence to show that the Irish excelled in the formation and adornment of vessels of this description (examples of which have been already alluded to at page 114, and to which numerous references may be found in early Irish writings), the only horn vessels at present possessed by the Academy are the small circular and square drinking-cups, Nos. 1 and 2, in the lower Compartment of the last Glass-case; and No. 3, in Rail-case **H**. The accompanying illustration is drawn from No. 2, a mether-shaped drinking-vessel, $4\frac{3}{4}$ inches high, and $2\frac{1}{2}$ wide at the top, ornamented by dots, punched or burned into the horn. The pine bottom was inserted when the horn was soft, into a groove similar to that in a mether.



Fig. 172. No. 2.

No. 1 is a circular horn goblet, with a bottom of the same material, let in like that in No. 2. It is $4\frac{3}{4}$ inches high, by 3 wide at top, and is ornamented with raised rims; the handle was fastened to the vessel by iron rivets. It was found in the parish of Tamlaght O'Crilly, in the county of Derry. No. 3, in Rail-case **H**, is a very small four-sided drinking-vessel of horn, only $2\frac{1}{2}$ inches high, but similar in shape to No. 2; found at Dunshaughlin.

Besides cattle, bondsmen and bondswomen, steeds, cloaks, hounds, shields, swords and armour;—drinking-horns, are enumerated among the chief tributes paid to the Kings of Erin, as set forth in *Leabhar na g-Ceart*, or Book of Rights. The original of the poems in that work are said to be as old as Bennis, the immediate successor of St. Patrick in the See of Armagh, and, in their present state, may be fairly considered as ancient as the ninth century. Mention is there made of the following forms:—“Drinking-horns, with handsome handles, curved drinking-horns, inclining drinking-horns, horns for carousing, drinking-horns for the banquet, drinking-horns for distribution fully prepared, drinking-horns for quaffing mead, variegated drinking-horns, with their peaks; drinking-horns

of various colour;" and also, "drinking-horns, on which is gold," which the King of Gaela, in Ui-Maine, brought with him to the banquet of Cruachain. In the Annals of the Four Masters, and also in those of Clonmacnoise, it is stated that King Tighearnmas, to whom the art of smelting gold and dyeing colours is attributed, was the first "who caused standing cups to be made"—probably drinking-horns with feet, like that figured below. In one of the sculptures upon the short cross at Monasterboice there is a representation of a sitting figure, holding a long curved drinking-horn to the mouth.*

In the central Glass-case of the Southern Gallery stands a very accurate model of the celebrated Charter-horn in the Museum of Trinity College, usually known as the "Kavanagh Horn." The original, from which the accompanying illustration was taken, is carved out of ivory; it measures 22

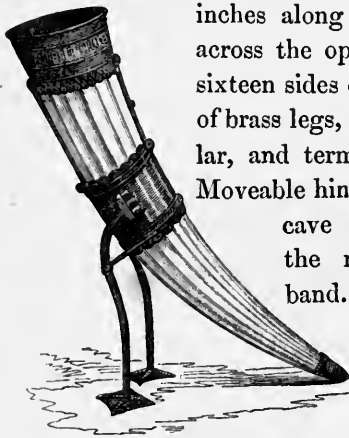


Fig. 173.

inches along the convex edge, and is $4\frac{1}{2}$ across the open of the mouth. It presents sixteen sides or faces, and stands upon a pair of brass legs, fastened above into a brass collar, and terminating in birds' webbed feet. Moveable hinged plates pass along the concave and convex margins, between the middle and the upper collar band. All these metal portions were originally gilt. The end terminates in a ferule; a decorated brass plate surrounds the top, and bears the following inscription:—

TIGERNANUS O'TAVAN ME FECHT, DIO GRACIAS. E. D. S.

Vallancey, who published a drawing of this in 1784, says: "It was the property of Thomas Kavanagh, Esq., of Ballyborris, in the county of Carlow, who has generously added it to the

* See the Author's "Beauties of the Boyne and Blackwater," second edition, p. 303.

Collège Collection." (See "*Collectanea de Rebus Hibernicis*," vol. iv. p. 25, pl. 4.) The model in the Academy's Museum was—*Presented by the late Dr. R. Ball.*

Wherever cuticular horns are accessible spoons have been formed out of them, and such are still in common use in many places; but one of the rarest spoons, composed of animal material, which has come down to the present time, is that shown in the accompanying cut, drawn two-thirds the natural size, from one of two articles of this description, formed out of the concave epiphyses, or joint surfaces of the vertebræ of some large mammal. It



Fig. 174. No. 21.

is almost of the natural shape, but has been slightly cut away on one of the edges, so as to form a short handle, which may have been inserted into a piece of bone, horn, or wood. This and its fellow, No. 22, in Rail-case **H**, were found in the craniole of Tonymore, between Crossdoney and Cavan. (See Proceedings for 23rd Jan., 1860.) A bone knife and fork, Nos. 358 and 359, are affixed to Tray **C**, see p. 338.

BOG BUTTER, CHEESE, AND WAX.—Under this species may also be classed food itself, the most remarkable examples of which in the Museum are the specimens of bog butter, the finest of which, No. 37, standing in the centre of the first compartment of the Southern Gallery, has been already described and figured at page 212.

The substance called bog butter, or "mineral tallow," has been found in the peat in various parts of Ireland, and is supposed to have been buried for safety, as well as to give it a peculiar taste and consistence, which it derived from being converted into a hard yellowish substance like *adipocere*, or old dry Stilton cheese. It is usually found in single-piece wooden vessels, somewhat like methers or long firkins, as in No. 37.*

* See the author's notice of Bog Butter in the Proceedings of the Academy, vol. vi. p. 369, where the various authorities bearing on the subject are referred to.

It was first noticed as a curiosity in Ireland in 1736, and has also been discovered in the Færoe Isles, and in Scotland. It is usually found at a great depth, and in old solid bogs, in which it was originally placed, or through which it sank in lapse of years, after being deposited either for security, or to produce a certain chemical change, and consequent alteration in flavour, and, probably, in durability. Besides No. 37, the large specimen alluded to, there are several examples of this animal material in the lower compartment of the last glass-case in the Eastern Gallery.*

No. 37 was found 9 feet below the surface in Grallagh-bog, near Abbeyleix, Queen's County, and was—*Presented by Lord De Vescei*. No. 38, a hard, yellowish-white substance, like old Stilton cheese, and in taste resembling spermaceti, is contained in a large, square, thin mether, apparently intended originally for a butter or milk vessel; it is 9 inches high, and 5 across, of willow, and double-handled. It was found in Ballyconnell bog, county of Donegal, 15 feet below the surface, and—*Presented by Dr. Nolan*. (See mether, No. 62 A, p. 216.) No. 39 is a small specimen of bog butter, purchased with the Dawson collection. No. 40, another small specimen of the same material, but apparently more recent. No. 41, a large specimen of bog butter, found 18 feet under the surface, in the county of Kilkenny; presented by William Walsh, Esq., to the Royal Dublin Society, and by that body deposited in our Museum. It was probably from this specimen that Professor E. Davy made the analysis of this peculiar substance, published in the Proceedings of the Royal Dublin Society for 1826. No. 42 is a fragment of the foregoing article.

CHEESE (*cáise*).—While bog butter is always found in wooden vessels, specimens of cheese of great antiquity have also been discovered in our bogs, unconnected with vessels of any

* In the lower compartment of this case is a wooden model of a stone coffin, presented by Dr. Walsh, and referred to at p. 185. It is 2 feet long, 8 inches deep, and 10 wide, and contains a quantity of incinerated bone, chiefly human, found in tumuli, and presented at different times to the Academy.

kind. Cheese differs in shape from the ancient butter, and bears upon its surface the impress of the cloth with which it was surrounded in the press. There are two examples of ancient cheese in the collection—No. 43, a globular, and No. 44, an oblong, brick-shaped specimen.

No. 43, a globular mass of cheese, very light, dry, and crumbly, and more like Stilton than the other specimen in the Collection. The top surface bears the mark of the cloth with which it was pressed, and it has also some leaf-marks upon it. No. 44 is an ancient cheese of a brick colour, $7\frac{1}{2}$ inches long, by $3\frac{1}{2}$ deep, marked all over with the impression of the cloth, which appears to have been of a much finer texture than that employed with No. 43. It has a raised cross on one side, evidently derived from the press, and at the ends may be seen the marks of the folds of the cloth.

WAX (*céir*).—With the specimens of bog butter in the end of the Eastern Gallery is a cake of pale yellow bees'-wax, No. 45; it is 7 inches long, 2 thick, and is believed to be antique. It formed a portion of Mr. R. C. Walker's collection, and was—*Presented by the Duke of Northumberland.*

SPECIES IV.—ARTICLES OF HOUSEHOLD ECONOMY, FURNITURE,
DOMESTIC USE, AND THE TOILET, ETC.

UNDER this head we find piercers, needles, bodkins, combs, spindle and distaff-whorls, of bone and horn, all of which are attached to the Trays placed in the End-case of the Eastern Gallery. The three first varieties of articles enumerated in this species find many representatives among the Collection on Trays **A**, **B**, and **C**, but are (except Nos. 79 and 81 to 84, on Tray **A**) with difficulty separated from the pins used as fasteners or for personal ornament.

COMBS—in Irish *ciora*.—Below the pins on Tray **A** is arranged a collection of forty-four combs, in either a perfect or fragmentary state, numbered from 116 to 172. From their shape it is evident they were used more for toilet purposes than as ornamental objects; indeed, we have not as yet met

with any ancient combs in Ireland specially used for holding up the female hair. If the hair was plaited, it was, in all probability, fastened as well as decorated with a bodkin of bone or metal. We have no warrant for supposing that the early Irish were acquainted with the manufacture of such horn combs, nor were they likely to have had much knowledge of ivory, or the use of tortoise-shell; and there is no evidence to show that our females, in early times, retained the hair in position by means of a comb of any kind, the introduction of which fashion is modern. The Irish, both males and females, were celebrated for the length to which they wore their hair (hence called *glibbs* and *cuil-fion*); and it is not unlikely that the latter sex adopted the fashion of plaiting it. (See Walker's "Essay on Irish Dress," and also Lady Moira's paper in the "Archæologia," vol. vii., referred to at p. 326.)

The combs in the Academy's collection may be divided into three varieties,—the long rack-comb, the single fine-tooth comb, and the double fine-tooth comb. The first vary in length, from No. 123, which is about 4 inches, to No. 120, Fig. 175, which, judging from the half that remains of it, must have been 10 inches: in breadth they range from half an inch to $1\frac{3}{4}$ inches. With the exception of Nos. 135, 136, and 137, which appear to be ornamented pocket-combs, there are no specimens in this collection formed out of a single piece. The sides of these rack-combs are generally hog-backed, and taper from the centre to the extremities, the great majority of them being highly decorated, many with pleasing patterns. Between these sides are set the pectinated portions, varying in breadth from half an inch to an inch and a quarter, according to the size of the bone out of which they were cut, the whole being fastened together with metal pins, generally brass, riveted on each face of the side. The back of the pectinated portion generally rises above the handle in the centre and at each extremity, as may be seen in the following illustration, Fig. 175, restored from the remaining half of No. 120, which

must have been 10 inches in length, and $1\frac{3}{4}$ wide. These toothed portions are in separate pieces, on account of the grain of the bone, as well as the cavity in its centre: for it is manifest that a durable comb of this size could not have been cut out of a single bone without great liability to fracture. By this ingenious

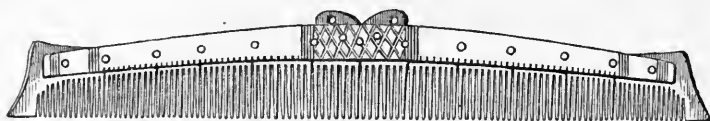


Fig. 175, No. 120.

contrivance, also, the pectinated portion, if worn or broken, could easily be repaired by driving out a rivet in the side pieces, withdrawing the injured part, and inserting a new toothed portion.

The accompanying illustrations, drawn two-thirds the natural size, present us with two beautiful specimens of the short one-sided or single fine-tooth comb, and both of which are highly decorated. No. 137, on Tray A, fig. 176, is $2\frac{1}{4}$ inches long by $1\frac{3}{8}$ deep, and formed out of a single piece.

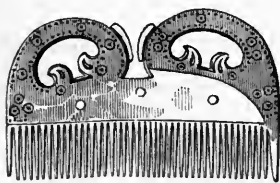


Fig. 176, No. 137.

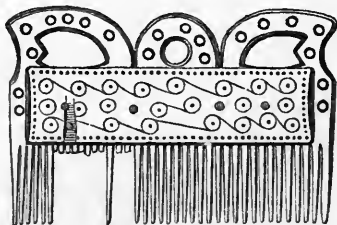


Fig. 177, No. 159.

Its decoration chiefly consists in its graceful outline, and the number of dotted lines and circles upon its sides. The three elevated rivets projecting above the toothed portion fastened metal plates, which, either in the original formation, or when the article had been accidentally broken, were attached to it. Figure 177, drawn from No. 159 in Rail-case

H, numbered in continuity with the combs on Tray **A**, is the finest specimen of its class in the Collection. It is $2\frac{1}{2}$ inches long, and $1\frac{3}{4}$ deep, and the three pectinated portions are held together by flat sides, decorated with scrolls and circles. The top or handle shows a triple open-work decoration, and the side pieces are grooved at one end for receiving the clasp of a metal tooth, which replaced one of the lost bone ones. It was procured from the Ballinderry crannoge (see Proceedings, vol. vii., p. 129).

The third variety resembles very much the modern fine-tooth comb, and generally varies from 3 to $4\frac{1}{2}$ inches in length, and from $1\frac{1}{4}$ to $2\frac{1}{4}$ across, the teeth portions being double, and passing through and through the sides to which they were riveted. The specimen, here figured two-thirds the natural size, is a good example of this variety. The tooth part was originally in five pieces, and fastened between the sides with metal rivets.

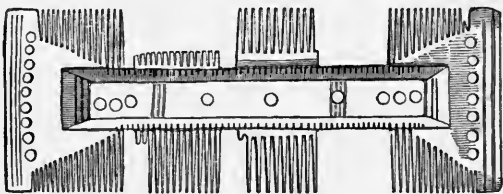


Fig. 178. No. 149.

No. 140, which more resembles a modern comb than any of the others, has a copper ring inserted into one extremity, by which, in all probability, it was attached to the person.

In some specimens may be seen brass teeth inserted where those of bone had given way, thus showing that at the time, or in the locality where such repair was made, brass was either easier worked or procured with greater facility than bone.

The Academy's Museum is particularly rich in combs; the crannoges of Dunshaughlin, Ardakillen, and Cloonfinlough, and the street cuttings in the city of Dublin, have afforded nearly all the specimens of which the localities have been recorded. The total number of combs at present in the Collection, including those on the "Find Trays," is eighty. Many of these

combs are but fragmentary; yet, in each a sufficiency has been preserved to enable us to judge of the original size, and also of its style of ornamentation, which generally consists of transverse or oblique grooves, diced-work, interlacings, dotted lines, and circles surrounding a central indented spot. For particulars respecting these articles, see the following details:—

SHELF I, *Tray A*.—The long rack-combs are placed above, the double close combs below, and the small pocket ones in the centre. No. 116 is a portion of a long rack-comb. No. 117, the complete back of a comb, $5\frac{3}{4}$ inches long. No. 118, ditto, nearly complete, $5\frac{1}{2}$ inches long; the pectinated portion rising above the back at the ends. No. 119, ditto, was, with Nos. 121 and 126, found in excavations made in Christ Church-place, Dublin. No. 120, Fig. 175, page 271, now $5\frac{1}{2}$ inches long, is little more than half the original size; it, as well as Nos. 140 and 142, were procured from the Strokestown Crannoges. No. 121 is complete in the back, and $6\frac{1}{2}$ inches long. No. 122, a small, perfect specimen, 4 inches long, was, together with Nos. 118, 135, 136, 137, and 149, procured from the Crannoge of Lagore, near Dunshaughlin. No. 123, a portion of rack-comb, $5\frac{3}{4}$ inches long. No. 124, the back portion of a rack-comb, much curved. No. 125, a perfect back, $4\frac{3}{4}$ inches long. No. 126, a fragment of a rack-comb. Nos. 127, 128, and 129, ditto. No. 130, one side of a back, complete. Nos. 131, 132, and 133, are fragments of single combs. No. 134 is the fragment of a long comb, with remarkably fine, narrow teeth, only $\frac{1}{4}$ of an inch long. No. 135 is a portion of a pocket-comb, like No. 137. No. 136, a pocket-comb, $1\frac{5}{8}$ of an inch long, by $1\frac{3}{4}$ high, with a semicircular and decorated top. No. 137 is from Lagore, figured at p. 271. No. 138, a portion of a rack-comb. No. 139, ditto, narrow, and repaired with brass teeth at one end. No. 140, a portion of a double comb (p. 272), found with No. 141, in the Ardakillen Crannoge. Nos. 141, 142, and 143, are portions of double combs; the last was found in the bed of the River Glyde, county of Louth (see Proceedings, vol. vi. p. 179), and—*Presented by the Board of Works*. No. 144, a perfect double comb, 3 inches long, and $2\frac{3}{8}$ broad, with a brass ring attached to one extremity; it was found in the Crannoge of Loch-Laoghaire, near

Clogher, Co. Tyrone, in 1845, and—*Presented by the Earl of Enniskillen.* (See Proceedings, vol. v. p. 215; also a notice of that Cranog at p. 231 of this work.) No. 145, a double-comb, very rude, and having the side piece indented, either by long use, or from combing very coarse hair. Nos. 146, 147, and 148, are imperfect or fragmentary portions of double combs. No. 149 is the best specimen of double ornamented comb in the collection, and presents an entirely different pattern from any of the foregoing. (See Fig. 178, p. 272.) No. 150, a large, imperfect, hog-backed rack-comb, ornamented on the sides, and found in a deep excavation in Fishamble-st, Dublin. Nos. 151, 152, and 153, are fragments of rack-combs; the last, together with No. 156, was found in a street cutting in Castle-street, Dublin. Nos. 154, 155, 156, and 157, are fragments of rack-combs. No. 158, a portion of a double comb, ornamented, the teeth much worn; found at Lackanash Hill, between Trim and Navan, county of Meath, and—*Presented by The Very Rev. R. Butler, Dean of Clonmacnoise.* (See Proceedings, vol. vi., p. 171).

The other articles on this Tray are enumerated at pages 262 and 235.

SPINDLE WHORLS, *cuigéala*,—of bone, and numbered from 274 to 280, occupy a central position on the last line but one of *Tray B*, and resemble those of stone already figured and described at page 115. In one of these, No. 274, here figured two-thirds the natural size, a portion of the lower end of the bone spindle still projects. Of the remaining six, Nos. 276 to 279 are notched, and worn round their central apertures, as if by the passing of threads. They are all more or less decorated, and average $1\frac{1}{2}$ inches in diameter. For the particulars of other articles on this Tray, see the following description:—



Fig. 179. No. 274.

Tray B, already described at page 264, contains articles of bone and horn, consisting for the most part of stag-horn tips, mantle pins, decorated bone plates, spindle whorls, draftsmen, counters, and a number of miscellaneous articles, the precise uses of which have not yet been determined. The top row consists of tines or ex-

treme points of deers' horns, some in the rude state, and others decorated at top and bottom. A few, particularly Nos. 22 to 26, are flattened on the sides, and notched on the concave surface. These were probably tools. (See p. 262.) From No. 33 to 185 are bone-pins, described under the head of "Personal Decoration" at p. 331. In the centre are four circular disks (Nos. 186 to 189), the three first being burrs of stags' horns, smoothed and polished upon the inner surface of the rings, the largest measuring 3 inches in diameter. The last is a circular piece of a scapula; the perforation in the centre is smaller than in the three first; it and No. 186 were found at Lagore, county of Meath, and No. 187 was dug up at Christ Church-place, Dublin. (See p. 264.)

Beneath these rings are three long bone articles (Nos. 190, 191, and 192), apparently tools, possibly for netting or modelling, the longest being about 9 inches. Each is perforated in several places, the holes being surrounded by rings, as in the bone plates and other small articles alluded to at page 342. No. 193 is a bone spoon, 5 inches long.

The other articles on this *Tray* are enumerated at pages 264 and 336.

SPECIES V.—DRESS AND PERSONAL DECORATION; HORSE TRAPPINGS, ETC.

HAVING at the commencement of this section glanced at the various animals by which the primitive Irishman was surrounded, and which either ministered to his wants in food, gratified his vanity in the decoration of his person, or contributed to his amusements; and reviewed the various animal products employed in the early state of the arts, as exhibited by this Collection, we now proceed to the consideration of animal substances—in clothing and decoration. Under this head come skin and leather coverings of all descriptions, and for every part of the body, with their necessary fasteners, such as straps, pins, and buttons, also hair and woollen fabrics, together with pendants, necklaces, and other decorative objects. Notwithstanding the perishable nature of

such materials, undoubtedly the two oldest specimens of personal decoration (except those of amber), in the Collection, are the bone fibula and shell necklace, found, with cinerary urns and human skeletons in the tumulus, in the Phœnix Park, already described and figured at p. 183. The fibula is enlarged at both ends, and was probably employed in fastening the hair. It, and the necklace, undoubtedly coexisted with flint weapons, the practice of cremation, and interment within cromlechs and tumuli, long anterior to the metal age.

SKIN AND LEATHER DRESS.—Before the art of weaving was known, probably before wool was introduced, we can picture to ourselves man clad in garments of the skins of large ruminants, such as deer or oxen, but particularly the former, which, from their fineness, flexibility, and strength, as well as the character of the hair, would be the most suitable as articles of dress. Ledwich truly observes: “It may fairly be affirmed, the most ancient Irish dress of which we have any certain account was barely a skin mantle, which the Welsh also used; this was afterwards changed for a woollen one” (*Antiquities of Ireland*, p. 260); but the author does not give any reference to that “account.” We are not, however, left here altogether to conjecture, or forced to draw analogies from the habits of half-civilized man in other countries at the present day, for a human body, completely clad in a deerskin garment, was found in a peat-bog, on the lands of Gallagher, near Castleblakeney, county of Galway, in the year 1821, and was for many years exhibited in the Museum of the Royal Dublin Society. Unhappily, only a few fragments of this most interesting dress now exist, and they form a portion of the valuable Collection lately deposited by that Society in our Museum. Rail-case H, No. 5. Portions of the seams still remain, and are creditable specimens of early needlework. The material employed in sewing was fine gut, of three strands, and the regularity and closeness of the stitches are most remarka-

ble, as shown by the accompanying cut, in which a bit of one of the joinings is represented double the natural size. This closure was effected by what is termed the looped stitch, similar to that used in working a button-hole, so that, by having each stitch knotted, the chance of ripping was lessened.



Fig. 180. No. 5.

Examined under the microscope by Mr. Queckett, this skin and hair, some of which latter still remains, is found to be that of the deer, but of what species could not be determined. The body, as well as the dress, was, when first discovered, quite perfect, but, having been disinterred at different times for the inspection of the curious, the clothing was very much injured before it was deposited, eight years afterwards, in the Dublin Society's collection. It was found ten feet below the surface, in a small dry bog, surrounded by pasture land. The head, legs, and feet were uncovered, but the body was enveloped in the skin tunic, which reached to the knees and elbows, and was laced in front by thongs of the same material.* The body was immediately replaced by those who first found it, but exhumed a few years afterwards, and finally taken up in 1829, and deposited in the Dublin Society. It was said to have been six feet high, apparently of a person of about thirty years of age, and, when discovered, had the teeth, long dark hair, and even the partially grown beard, perfect. Had it and its skin dress, in Irish *cochall croichinn*, been preserved in its original state, no museum in the British Isles could boast of a more valuable specimen, nor one more conducive to the advancement of ethnological science. The foregoing circumstance is illustrative of the neglect of our na-

* See Dr. Petrie's paper in the Dublin Philosophical Journal, vol. i., p. 433, 1825; and the letter of Mr. A. O'Kelly, of Tycooly House, to the Royal Dublin Society in 1829,—in the Proceedings of that Institution, vol. xlv., Appendix to Report of Feb. 12, 1829.

tional antiquities, or of investigations into the true history of the Irish race, until a very recent period.*

Even in the rudest states of society, sharp flint knives, such as those described in Section I., could skin the animal and fashion the garment, while a fine bone piercer or needle, and a leather thong, or the twisted intestines of the same creature, would form sewing materials, long before the use of vegetable fibre, or even wool, was known in Ireland. From the same untanned material, defences for the feet were formed. It is stated in the old bardic tale of the *Táin bó Cuailgne* that Loegh, the *ara* or charioteer of the hero Cuchulainn, was clothed in a tunic of deer-skin. Giraldus Cambrensis, writing in the twelfth century, relates a story, on the authority of some sailors who were driven on the Connaught coast, that they met two men in a long, narrow, oblong boat, covered with hide, stitched together on the outside. They were, he says, "naked, except that they were girded with loose belts of untanned hides of animals," and they stated that they used no clothes except those of skins, and that they lived altogether on flesh, fish, and milk.—*Topographia Hiberniæ*, p. iii., c. 26. This statement has, however, been questioned by Father Stephen White, in his "Apologia pro Hibernia."

The earliest head-dress was also, in all probability, of skin, but of what shape we have now no knowledge; it is, however, probable that the peltry of hares, rabbits, dogs, and other small animals, being highly decorative as well as useful, was employed not only for head-gear, but other ornamental purposes. A skin skull-cap, covered with dark fur, and perforated round the edge by a double row of holes, may be seen in the first Compartment of the Southern Gallery (see No. 4). It formed a portion of the valuable collection of the late Mr. R. C. Walker, when purchased by the Duke of Northumberland, and—*was presented by his Grace.*

* For a description of the body which this dress surrounded, and which is now preserved in the Academy's Museum, see the Section on Human Remains.

Although a complete skin costume, such as that now used by Esquimaux, must have given place, at least in several articles, to textile fabrics, at the commencement of the Christian era, yet skin or leather garments, chiefly cloaks, are alluded to in our early histories. They must have been in common use during the great frost of A. D. 942, when *Muircheartach Mac Neill, Prince of Aileach*, surnamed “Murtagh of the Leather Cloaks,” in making his celebrated circuit of Ireland, by that great forced march in which his army never slept twice in the same place, clad his warriors in long leather cloaks, or outer garments, which not only protected them from the severity of winter during the day, but were also employed as tents at night. It is said that there was not a man lost in that campaign.*

Upon the coast where seals abound, their skins were probably used by the natives for clothing. When the country was more than half covered with wood, and the mountain passes and rocky fastnesses afforded secure retreats to the wolf, the fox, the badger, the martin, and probably the squirrel, and the river's banks swarmed with otters,—their warm furs afforded the natives, in great plenty, a means of clothing and decoration, not now procurable except by importation. Even long after the great bulk of our forests had been submerged in bog, or were cut down, peltry formed a considerable article of traffic, and also a portion of our exports;† and all the Irish chieftains, down to the seventeenth century, of whom we have any picture or accurate description, appear to have been decorated with fur.

We can imagine the transition from the complete covering of the figure with untanned skin in the earliest state of

* Leather cloaks, in Irish *Cochall Croicoinn*. See O'Donovan's translation of “The Circuit of Ireland, by Muircheartach Mac Neill,” published by the Irish Archaeological Society.

† As many as 169 otter-skins were claimed by the English Exchequer at Dublin in 1408, from the representative of the family of Gillamochoalmog, as arrears of his rent for Radon. See Gilbert's “History of Dublin,” vol. i., p. 233.

society, to the time when buff coats, with or without mail, leather caps or helmets, belts, and military accoutrements, buckskin breeches, ornamented leggings, together with sandals, shoes, and every variety of boot, gaiter, gauntlet, and glove, again clad the figure with its primitive materials,—but in a manufactured state. As, however, we have had no Froissart in Ireland, and as yet possess but little accurate knowledge on the subject of our early national costumes, we have no means of tracing the steps by which this process took place.

Skin and leather, in the Academy's Museum, are, for the most part, represented by sandals, shoes, and buskins, of which we now possess one of the most extensive collections of its kind extant. They are attached to Trays **D**, **E**, **F**, and **G**, in the End-case of the Southern Gallery.

SHOES AND BOOTS, of what may be termed antiquity, present, upon a close examination, several curious artistic details and ingenious devices. When the Irish first learned the art of tanning, is at present unknown; but as this branch of manufacture is of great antiquity in most countries possessing any degree of civilization, it is not likely that we were unacquainted with it during historic times.* Most of the specimens in the collection are evidently made of tanned leather, and are also considerably worn; but a few are of untanned hide. As nearly all the antique objects of skin were discovered in peat-bogs, to the tanning properties of which they were subjected for so many years, it is now difficult to state with precision whether each article was originally tanned or not.

For the sake of arrangement, these articles of dress may be divided into the single-piece shoe or buskin, and that in which two or more pieces were employed in its fabrication. To understand the antique single-piece shoe, it is well to in-

* See an extract from one of the Brehon Laws relating to the penalties for stripping bark for tanning purposes, given as a specimen of the Irish language in the fourteenth century in O'Donovan's "Irish Grammar," p. 448.

quire whether anything approaching thereto is worn in the present day. In the western islands of Aran, the majority of the people wear a sort of mocassin or slipper of untanned hide, which envelopes the foot for about an inch and a half all round, and is tightened by means of two pieces of cord, the one lacing up the toe-part, and the other the seam at the heel. The string from the latter passes through loops along the inside, and that in front by the outside, to the instep, round which they are then fastened like a lady's sandal. These flexible coverings to the sole and edge of the foot formed out of the fresh hide, with the hair externally, after a short time assume a certain degree of firmness, while they adapt themselves to the form of the wearer's foot. They are admirably suited for climbing the precipices, and progressing upon the great stone fields of these islands, and are, perhaps, the most ancient remnant of the aboriginal Irish dress which has come down to modern times. The name given to these foot-covers by the islanders is *Pampoota*, which is not Irish, nor, as might be expected, Spanish, but resembles the German word "Pamposheen," a galosh or warm shoe-cover. It is, in fact, the *pantoufle*, a low shoe or slipper laced to the foot, analogous to the Latin *solea*, "a sandal or slipper covering only the sole of the foot, and fastened with laces." There are two pairs of modern pampootas in the collection, one purchased many years ago with the Dawson collection, and which have been placed for exemplification as Nos. 1 and 2 on Tray **D**. The second pair, Nos. 24 and 25, on Tray **F**, were purchased by the Author of this Catalogue from one of the islanders, during the recent ethnological excursion of the British Association to Aran in 1857. They are made of untanned calfskin, the strings or latchets being formed of fishing-line.*

* " Froissart, in his account of Edward III.'s expedition in 1326, tells us that ten thousand pairs of old worn-out shoes, made of undressed leather, with the hair on, were left behind by the Scotch on that midnight retreat which baffled the English, and terminated the inglorious campaign."—Planche's "History of British Costume." It does

Although vegetable material, flax, hemp, or pegs, are now used in the manufacture of boots and shoes of the strongest description, the oldest coverings for the feet which antiquity has brought to light were sewn together, and also laced to the foot with thongs or straps of leather. Sewing with a thong, however, has been in use in the manufacture of the *brog*, or rude unbound shoe of strong cowhide, commonly called "kip," up to recent years, as for such purposes it was much more durable than the waxed-end of hemp or flax; and, swelling or collapsing according to the state of dryness or moisture of the material it united, it formed a much more durable fastening than either of the latter. Both brogues and pumps, the latter made without a welt, and turned after the sole was attached, were usually sewn with a thong.

In the accompanying illustrations are shown two forms of thong-closed, single-piece shoes. Fig. 181, No. 6, on Tray **D**, is a large shoe of strong, tanned leather, 10 inches long, gathered round the toe in full plaits by means of a flat thong,

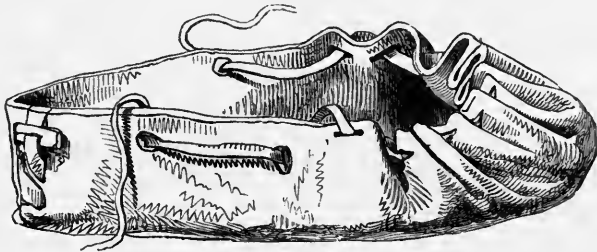


Fig. 181. No. 6.

on the principle of the pampoota; but the fulness of the gathers in front resembles the cloth or velvet round-toed shoe worn in the time of Henry VIII. The back seam is closed by a broad thong, ingeniously fastened, as shown in the accompanying cut. This very ancient shoe was found in a bog near

not appear that Froissart was ever in Ireland—whatever his Chronicles contain respecting this country, was derived second hand from Henry Castide, whom he met in France.

Roscrea, county of Tipperary, and was presented by the Hon. A. Prittie to Dean Dawson, with whose collection it came into the Academy's Museum. Of the same variety, but smaller, and evidently belonging to a different class of society, is the single-piece, thong-laced shoe, No. 23 on Tray **F**, figured below, and found on the foot of a female discovered in a dry bog at Castlewilder, county of Roscommon. It is now $7\frac{1}{2}$

inches long, and was laced with thong in front and behind. The front seam is elegantly plaited, and must origi-

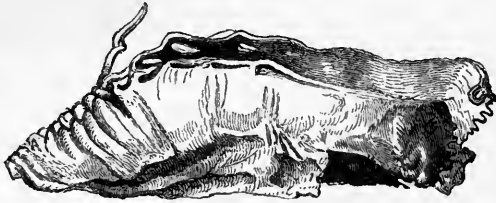


Fig. 182. No. 23.

nally have come high up on the instep. This specimen is of much thinner material than that employed in any other ancient shoe or buskin in the collection, and it appears to have been bound round the ankle with the leather thongs, which closed the seams, after the fashion of the pampoota sandal. It is said that the body from which this curious relic was removed was clothed in a woollen garment, had an abundance of long, black hair on the head, and was decorated with golden ornaments. From the mystery attending this discovery, and the endeavour to conceal the body, the latter statement is not improbable.

Still forming the shoe out of a single piece of leather, and without any attached or additional sole-piece, a double step in advance seems to have been made contemporaneously: that of closing the seams by their flat edges instead of overlapping or intermixing them, and also of carving and decorating the surface of the leather, as shown in the annexed representation drawn from No. 11, on Tray **D**. To effect the former object, gut* (*ionnathar*) was introduced, and with this substance all the other single-piece shoes in the Collection, except those

* This has been proved by macerating portions of the sewing of every shoe in the Museum, in which it was employed.

already shown to have been kept together with thongs, have been sewn. Moreover, this description of shoe was evidently closed upon a last, stitched by what is termed grafting, and then turned. The front seam is now so very close as to form a regular zigzag pattern, produced, no doubt, when the leather was wet, and each side drawn so tightly as to indent the op-

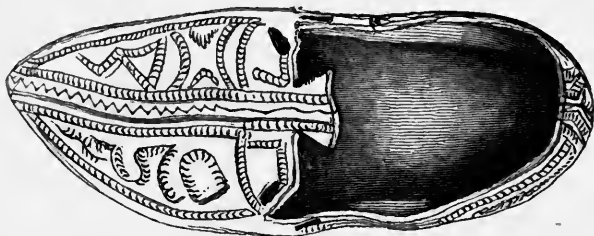


Fig. 183. No. 11.

posite edge. This shoe is pointed in the toe, and has a triangular piece of the sole-portion turned up to form a round heel, which, as well as the quarter, is also decorated with a regular pattern. There are oblong holes cut out of the sides, for attaching sandals to. Nos. 10 and 13 are decorated shoes of this description, although presenting great variety in ornamentation.

Of the double, or many-piece shoes or buskins, the two following examples will suffice. Figure 184, from No. 22, on Tray E, is the upper of a curiously formed and decorated

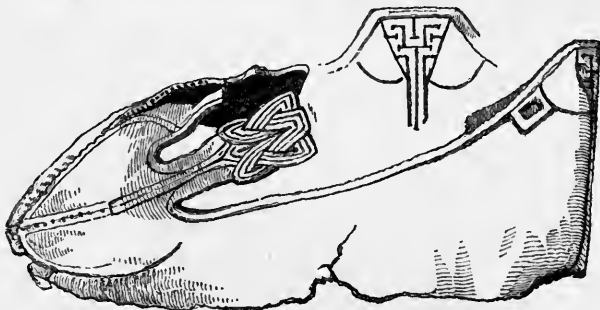


Fig. 184. No. 22.

shoe, 10 inches long, of dark, well-tanned leather, and differing in shape from any of the foregoing, being cut down as

low as possible in front, and rising about 4 inches over the heel. It is formed of one piece, sewn on the inside with gut, and has the longest quarter of any shoe in the Collection. The square apertures at the back were intended for laces, and the upper edge of the part above the heel is decorated with an angular form of ornamentation, which is shown to advantage in the separate drawing on the foregoing woodcut. The front of the upper is cut out very low down, but has an ornamented flap $2\frac{1}{2}$ inches long, and an inch wide, decorated with a twisted device, carved out of the substance of the leather. A comparison of this beautiful interlacement (which partakes of the character of that form of ornamentation displayed in some of our early manuscripts, crosses, and shrines, and which may be styled the *Opus Hibernicum*) with the rude, irregular decoration represented by figure 183, shows the great advance in art which had taken place between the periods when these two specimens of leather work were made. The toe-piece presents a semicircular cut carried round in a heart-shape, where, probably, a portion was taken out, and the edges sewn together with fine gut, so as to turn up the extremity like an oriental slipper. It was found in a bog at Carrigallen, county of Leitrim, and presented to the late Dean Dawson by the Hon. and Rev. J. Agar.

In No. 13 the toe-piece of the upper is decorated with an open-work pattern, which passes through the leather. In No. 8 we find the transition from the leather-sewing to that effected with gut, with which the hind seam is closed, while the front lacing is accomplished with a thong.

So far as the means of closure is concerned, a third stage came into fashion, apparently long prior to the use of flax or hemp, and was that in which the seams were closed by woollen threads, of which we have examples in Nos. 16 and 17, on Tray E. Whether shoemakers' wax, or any such adhesive material, was employed in sewing leather with a woollen thread, cannot now be determined.

Among the many-pieced, gut-sewn coverings for the feet' besides those already described, we possess two strong leather buskins, or half boots (*coisbheirt*), Nos. 19 and 20 on Tray F, the former of which forms the subject of the accompanying illustration. It is of thick, coarse leather, of a tan or dirty-yellow colour, similar to

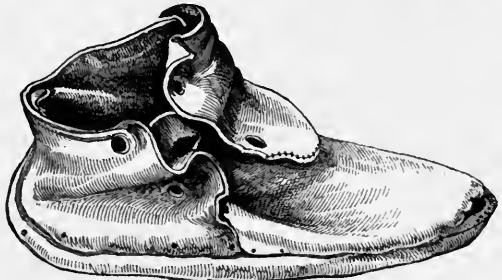


Fig. 185. No. 19.

that of the boots worn in Madeira and the islands of the Canary Archipelago. It is now 11 inches long, and was formed on the plan of a turned pump, with a double sole: both, however, together with the upper and welt, being included in the same stitch. A long triangular heel-piece, carried up from the sole, is ingeniously inserted between a slit in the upper, as in some of the very rudest single-piece shoes, so as to give a comfortable rotundity to that part. A large flap overlaps the instep, the loops for fastening which still remain, and a stout piece of thong is stretched across the angle between the vamp and upper to prevent breakage or straining. It was found in 1790 in a bog in the townland of Belladrihid, parish of Ballisadare, county of Sligo, and—*Presented by the Duke of Northumberland*, who purchased it with the collection made by Mr. R. C. Walker.

A fourth period in the progress of leather-working dates from the introduction of vegetable material, such as flax or hemp, for closing the seams, and consequently, so far as such an artificial arrangement is concerned, brings down the art to the present time. As an exemplification thereof, the accompanying illustrations of a very curious pair of double shoes are presented, drawn from Nos. 24 and 25 on Tray F, and here

shown, both in profile (Fig. 187), and upon the sole aspect (Fig. 186). These represent a pair of right and left shoes, very curiously made, and united by a double strap of the common sole, each about 2 inches long, and 1 wide. This sole consists of a single piece, and is attached to the uppers without the intervention of a welt, after the manner of a turned pump. The heel, which is the first

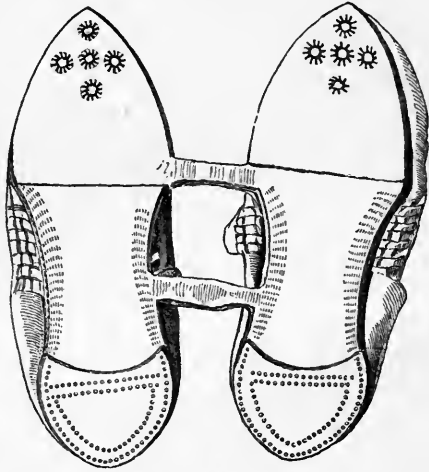


Fig. 186. Nos. 24 and 25.

instance of such that occurs in the Collection, is composed of several plies of leather, fastened on with pegs. The upper in each shoe is formed out of a single piece of thin leather, grooved, tooled, and embossed like cordovan; the quarters are double, the inside leathers being open behind, and the only seam in the upper is a delicate grafting with thread along the front of the toe-piece. This continuity of upper is well seen in the right shoe, but there are three seams in the left, apparently from a defect in the leather. In each quarter it slopes from the point above the heel, where it is 3 inches high, to its junction with the front, about

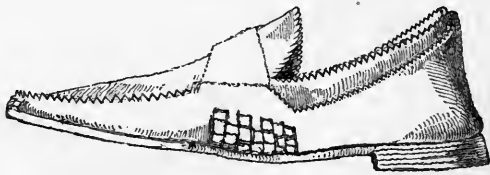


Fig. 187. No. 24.

the middle of the foot; and the entire border is mitred or pinked. A toe-piece, or ornamented vamp, passes all round the edge of the upper, which it overlaps, and interlaces with the back portion at its free scalloped edge. Not the least curious part

of these shoes is the ingenious mode by which the uppers are attached to the soles by a double thong, showing wonderful perfection in the art of stitching. These shoes were probably turned after one half of the soles were attached. Where the fronts and quarters join, at the point where the double back runs into the ornamental over-lapping of the upper, there is an open-worked or interlaced strapping, about 2 inches long, and 1 broad. They are said to have been found, wrapped in a piece of leather, in the rampart of a fort in the parish of Kill, near Cootehill, county of Cavan, about forty years before they were purchased by the Academy, in 1843. During the interval they remained in the roof of a peasant's cabin, near the place where they were discovered. They are evidently much more modern than any of the foregoing, except the pampootas. Conjecture as to the use of these marvellous specimens of the Crispinian art might suggest the possibility of their having been used as inauguration shoes by the chieftains. Certain stones used at that ceremony in ancient times still exhibit the indentations in which the feet were placed on such occasions. These shoes are worthy of examination as a curious instance of the ingenuity of the maker, like shirts woven without a seam, and many other similar examples of handicraft.

Besides the specimens of leather-work referred to in the foregoing description, there is a collection of ladies' old-fashioned slippers and high-heeled shoes of the seventeenth and eighteenth centuries, worthy the attention of the curious, as illustrative of the strange extravagancies in costume, from the length and narrowness of the heel, which in some of these articles excites our wonder as to the possibility of progression on such slender and unnatural points of support. The following is a detailed list of all the shoes and buskins composed of animal materials in the Collection:—

SHELF I., *Tray D*, Single-piece Leather Shoes and Sandals, Nos. 1 to 9.—Nos. 1 and 2 are modern pampootas, described at p. 281. No. 3 is a single-piece buskin, 9 inches long, imperfect, laced much higher

up than the modern pampoota, and fastened by leather thongs before and behind, but which did not encircle the instep. Like most of the other ancient single-piece shoes in this Collection, this seems to have shrivelled considerably, yet never could have belonged to a large foot. There are still some traces of hair upon the outside of the skin. No. 4 is a single-piece shoe, 9 inches long, of thick leather, with the side on which the hair was, placed externally. Thick, firm, and in good preservation, it is laced before and behind with a round thong; the latter took a purchase for an inch along the edge of the upper before it closed the seam; the front lacing continued high up upon the instep. No. 5 is similar to No. 4, but smaller, being only 8 inches long, and it is not laced quite so high up in front. The hind thong is ingeniously knotted at both extremities by being passed through holes in itself. Both these shoes were found "several spits deep in Drummacon Bog," county of Cavan, and were—*Presented by Lord Farnham*. Like all the other specimens on this *Tray*, the external face of the hide is placed outwards. No. 6, Fig. 181, is described at p. 282, No. 7, a left single-piece shoe, 9 inches long, laced with a thong at both heel and toe; the front seam collects the upper into gathers; and there is no apparent means of fastening the thong. There are two lateral holes in the quarters, apparently for attaching laces to. The heel is ingeniously protected at the lower edge of the seam by a heart-shaped piece, which is made to overlap the end of the joining. No. 8, a small single-piece shoe of strong leather, much corrugated, 7 inches long, laced up the front with thongs, which also passed round the edge of the upper, and gathered it round the instep. These strong flat thongs remain attached, and that in front has a loop at one end for fastening the knotted tying to. The back seam is closed with gut, this being the first shoe in this arrangement in which that material was employed. No. 9, a single-piece left buskin, 9 inches long, having but one seam, that in front, which was laced over the instep with a thong. The thick, soft leather is deeply indented by the seam which puckered it when the skin was fresh. It was found in Cartronawar Bog, county of Longford; and was—*Presented by the Rev. Dr. Martin*.

Tray E, Decorated and sewn Leather Shoes and Boots, Nos. 10 to 18.—No. 10, a single-piece left shoe, 9 inches long, much worn in the sole, and closed behind and in front with gut, so very tightly that

the seam presents an indented or zigzag appearance, produced when the leather was wet and soft. The upper overlaps the instep by an ornamental flap, like a modern slipper, and a triangular piece of the sole, carried up round the heel, is attached with great accuracy to the upper, and gave a roundness to that part; the toe is rather pointed. It is highly decorated all over the upper and a portion of the quarter. Although formed altogether of one piece, both this and the following were evidently lasted and grafted. They are right and left shoes, but not fellows. It was found in a turf bog, 7 feet beneath the surface, between the trunk and branch of a tree at Ballymacomb, near Bellaghy, county of Derry, and was—*Presented by Miss Alexander.* (See Proceedings, vol. iii., p. 541.) No. 11, a single-piece shoe, similar to the foregoing, and highly decorated (see Fig. 183, p. 283). It is $9\frac{1}{2}$ inches long, and $5\frac{1}{2}$ from flap to point of toe. No. 12, a single-piece right shoe, 10 inches long, with projecting flap. It is sewn in front and at the heel with gut; an oval piece overlaps the heel at its junction with the sole. The front seam presents a number of gathers, by which the leather was drawn into its present shape when soft; the edge of the upper is notched all round. It is made of soft, tanned leather, and was found in the Castle of Tullamore, Queen's County. No. 13, a single-piece left shoe, of the pampoota shape, round-toed, with an open-worked front, so that it was evidently not intended to keep out the wet; it is closed with a thong both in the back seam and along the open-work, and was laced to the foot with a leather sandal, a portion of which still remains; in the upper edge of the quarters, near the heel, are longitudinal slits, through which these tyings were passed. It is now 9 inches long; appears to have been much worn; was found deep in the Bog of Buggaun, parish of Ballymore, near Moate, county of Westmeath, and—*Presented by Mr. Hayes.* (See Proceedings, vol. vii., p. 160.) No. 14, a right single-piece shoe of thick, tanned leather, with a pointed toe, sewn with gut, both along the triangular flap over the heel, and in the overlapping in front, which is gathered in by a seam of beautiful workmanship, in which there is an interlacement of the material itself, like No. 12. It is now $9\frac{3}{4}$ inches long, is in good preservation, and was also found in the Bog of Buggaun, and—*Presented by Mr. Hayes.* No. 15, a remarkable two-piece right shoe, 11 inches long, of thick leather, the anterior

and posterior portions being joined across the middle of the sole, by grafting with gut from the inside. It is also sewn with gut up the front, and at the heel, where the lower edge of the seam is overlapped by a portion cut from behind, and fixed to the quarter by a leather thong. Nos. 16 and 17, a pair of shoes, right and left, each 9 inches long, of thin, well-tanned, and apparently glazed or varnished leather, of a yellowish colour. The upper of each is of one piece, joined on the inside of the quarter; the sole is composed of many pieces, and attached to the welt by woollen threads. The stitching at the edge of the sole includes four plies,—the sole, insole, welt, and upper; and in some parts the welt is double. The right and left shoes in this instance are well marked, and evidently belonged to a person with small feet; they appear to have been intended more as a protection in walking and for ornament than to keep out the wet. The upper edges of the back and vamp bear marks of sewing, and are said to have been attached to the trows or pantaloons, in connexion with which they were found. Where the quarter and upper meet, a leather loop has been ingeniously fastened through the angle, so as to strengthen the junction, and prevent its tearing. To the outside loop upon the left shoe is fixed a triangular piece of leather, which, at first sight, appears to be ornamental, but on closer examination its edge is found pierced with holes, so that in all probability it was attached to another piece of the same material which passed from behind forwards, and protected the tendo Achillis. These shoes or buskins were found upon the body of a man in full woollen costume, discovered in the year 1824, six feet under the surface of a bog in Killery parish, county of Sligo. They were, together with the dress—*Presented by the Duke of Northumberland*. No. 18, a single-piece right side upper, 11 inches long, of the same description as the foregoing, of fine, well-tanned leather, apparently the natural colour, with the smooth side out; joined on the inside, but no fragment of the sewing material remains. The tongue rises into a high flap; the angle between the quarter and upper is cut down to within $1\frac{1}{2}$ inch of the sole, is protected by a stout leather loop on the left side. This shoe was found in a bog in the county of Tyrone.

SHELF II., *Tray F*, Shoes, Buskins, and Pampootas, Nos. 19 to 28.
—No. 19, a strong, leather buskin, figured and described at page 286.

No. 20, a laced left boot, of stout, tanned leather, uncoloured, 9 inches in the sole, and $8\frac{1}{2}$ high in the leg, laced half way up in front. It has a single sole, which was turned without a welt, being attached to the upper with gut. An ornamental seam runs up the front, which rises into a peak. The angle between the vamp and quarter is protected by a strong leather thong, and a small piece has been inserted into the upper at the turn of the heel, in order to remove the angularity at that point; ingeniously contrived thongs fastened this boot in front. It was found in the Queen's County, and—*Presented by Mr. M. Gill.* No. 21, the right sole of a turned pump, 10 inches long, "found, in taking up part of the old city of Dublin wall adjoining the old tower in the Castle-yard, by Mr. Johnson, and said to have lain there since the year 1202."—*Presented by W. Farran, M. D.,* 21st July, 1842. No. 22, the decorated upper, Fig. 184, described at page 284. No. 23, the lady's single-piece shoe or buskin, described and figured at page 283. Nos. 24 and 25 are the pair of double shoes described and figured at pages 287 and 288. Nos. 26 and 27, a pair of modern pampootas from the island of Inisheer, in Galway Bay.—*Presented by W. R. Wilde, Esq.* No. 28 is a right, thong-sewn, turned shoe of several pieces, and differs in many respects from every other specimen in the Collection. It has been apparently much worn, especially in the sole, and is now $9\frac{1}{2}$ inches long, and composed of thick, well-tanned leather, with the cuticular side externally. The upper is composed of six pieces, viz.: the toe-piece, the two quarters, which are cut down to an angle, a little in front of the arch of the foot; and the spaces between the front and back portions are filled up with lachets on each side, which strapped over the instep; behind there was a flap, which fell over the heel portion, and appears to have been more for ornament than use. The sole is double, so that the thong-stitching embraced three folds of leather. This shoe forms a portion of the deposit of Irish antiquities lately made by the Royal Dublin Society, in the Museum of which body it had remained since 1808. From a letter of that date, found in the shoe, it appears to have been presented to General Vallancey by General Freeman, who procured it from the then Dowager Lady Monck. The letter states that it was discovered twenty feet deep in a turf-bog near Templemore, county of Tipperary.

Tray G, Ladies' Slippers and high-heeled Shoes, Nos. 29 to 34.—

Nos. 29 and 30, a pair of ladies' slippers, each $9\frac{1}{2}$ inches long, very much pointed at the toes; the uppers formed of puce-coloured satin, bound with yellow, and having silk tassels in front, the soles formed of matted cord-work; heels made of cork; and insoles of several plies of linen and paper. Nos. 31, 32, and 33, are three high-heeled shoes, showing the increase in the extravagance of that fashion. The first is beautifully made, of leather; the quarter, black; the vamp, red; the heel is carried down like the head of a hammer, and covered with fine, red leather to near the end, where it is about an inch broad. No. 32 is a left high-heeled shoe, 11 inches long, with a particularly low upper, formed of leather, yellow behind, blue and pink in front. The heel slopes forward $4\frac{1}{2}$ inches, so as to touch the ground underneath the central point of the arch of the foot, where it narrows to $\frac{3}{4}$ of an inch, and then spreads out to about an inch in width. The back of the heel is covered with yellow leather. No. 33 is the most extraordinary specimen of this curious fashion, and that in which it was carried to the greatest pitch of absurdity, the heel being formed of an iron spike, extending $4\frac{1}{2}$ inches from the sole, and ending with a surface only $\frac{1}{2}$ an inch square. It is fastened to the leather heel by brass studs, and takes an oblique direction forwards, inwards, and downwards, as it is a left-foot shoe. The upper is formed of jean, and stuff bound and foxed with red and pink leather, and embossed with white silk. It is difficult to conceive how females managed to progress, or even to preserve an upright position upon such shoes as this, in which the feet must have been as much distorted in one direction as they are by the Chinese in another. The pictures of Hogarth and his contemporaries show that such extravagances in dress were common in his time, and they existed to even a later period in this country. No. 34 is a white satin slipper, with pointed toes, high heels like No. 30, but somewhat lower, being but 2 inches below the sole.—*Presented by Aquilla Smith, M. D.*

The only other articles of hide or leather in the Collection are some small portions of "buff" attached to bridle-bits and harness ornaments among the Bronze Collection; a dagger sheath, No. 1 in Rail-case H, which is 5 inches long, sewn upon one edge, with a loop at the top for attaching it to the

person; the portion of hide, No. 22 "Find" Tray **I**, Dublin, on the ground floor; and the saddle or horse-cover, No. 7 in the first Compartment of the Southern Gallery. This saddle (*diallait*) is of untanned cow-hide, with the red hair on the upper side, and is shaped like the large saddle-cloth or lower pad of the Spanish or oriental saddle. It is 38 inches wide, is much worn in front, and on each side it is perforated by three sets of apertures, through which were passed the thongs which attached the pad or stuffing to it, and which appear to have been fastened like those used in some of the shoes and buskins. It was found in the Bog of Springfield, near Dungannon, and—*Presented by Robert Foster, Esq.* In the original drawing of the taking of the Earl of Ormond by O'More, in 1600, may be seen such a saddle. Most of the antique trappings must have been of leather; but, with the exception of the specimens already alluded to, no other horse-furniture belonging to early times has been preserved.

ORDER II.—TEXTILE FABRICS.

WOVEN AND KNOTTED FABRICS.—With the distaff and spindle (the knobs or whorls of which latter have several representatives, both in bone and horn, on Tray **A**, already described at p. 274) must be associated the art of spinning and weaving, and for this purpose the wool of the sheep and the hair of the goat afforded effective materials. The latter substance is not now used in this country, but was employed in making coarse carpets, particularly in the county of Clare, and in several of the western districts, within the last thirty years.

In Rail-case **H**, No. 6, may be seen a very remarkable specimen of manufactured hair-work, which was probably used as a fringe to some garment, one of the cloaks, for instance, so often referred to in Irish writings. It is composed of goat's hair, not woven, but tied or knotted together like a mat, in small bundles, with transverse bars of the same material,

each thread of the warp being subdivided between the crossings of the woof, so as to leave a clean interspace, as shown in the accompanying cut (Fig. 188) which represents, of the natural size, a small portion of this very curious ancient fabric. This fragment is about 7 inches wide, measured on the length of the hair, and, as shown

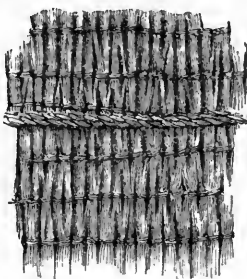


Fig. 188. No. 6.



Fig. 189. No. 8.

in the illustration, is crossed in the middle by a broad band, the very beautiful plait of which is not seen on the wrong or reverse side. It was found 14 feet deep in Carrick bog, on the bank of Lough Sheelan, in the county of Cavan, in 1853, together with a fine woollen band, of a bright brown colour, Fig. 189, apparently woven, and to which it was probably attached: see No. 8 in Rail-case H. The foregoing cut is a faithful representation of a portion of this band, drawn the natural size. It and the hair-cloth were—*Presented by Dr. Fleming.* (See Proceedings, vol. vi., p. 19.)

WOOLLEN GARMENTS.—Having thus disposed of the skin, leather, and hair coverings, formerly employed by the people of this kingdom, we approach the period when the domestication of animals, or the introduction of such breeds from other countries, together with the art of weaving, were known to the Irish. Our histories are silent with respect to the manufacture of animal material in very early times, and the precise costume of any class prior to the English invasion has not yet been decided on. From the learned Essay of the Earl of Charlemont, first President of the Academy, we learn that the woollen manufacture of Ireland was celebrated in the beginning of the thirteenth century, when it appears to have been an article of commerce; but, long prior to that period, woollen fabrics must have been in general use for na-

tive dress.* Eventually, we know it attained such celebrity as to excite the jealousy of neighbouring nations.

With the question of the employment of woollen material might be considered the whole subject of costume; but however inviting the topic, it would be out of place to enter at any length upon such a dissertation in a descriptive Catalogue, except so far as such inquiry may be necessary for the explanation of existing antiquities or of articles in our Museum. A few references are, however, necessary.

Light may be thrown on this obscure subject by referring to the following sources of information:—The annals, and other ancient records, in either manuscript or print; comparative philology, or an examination of the roots, precise meaning, derivations, and affinities with other languages, of the Irish terms employed to express different articles of dress; the illuminations in ancient books; the figure carvings on our stone crosses and shrines; a few drawings, maps, frescoes, and engravings;—and some sepulchral monuments.

We possess unmistakable evidence of our native population having adopted particular colours, of which deep yellow (*croch*), styled by English writers “saffron,” was the most prominent; and so national, that enactments were made to limit the extent of some garments, and to prohibit altogether the adoption of others dyed this colour. The Four Masters, and also the Clonmacnoise Annalists, attribute the art of dyeing party-coloured clothes (the latter say purple, blue, and green) to King Tighearnmas, whose reign extended from A. M. 3580 to 3656. And in the first of these authorities it is stated, under the year of the world 3664, that his immediate successor, King *Eochaidh*, was surnamed *Eadghadhach*, “because it was by him the variety of colour was first put on clothes [no doubt woollen] in Ireland, to distinguish the honour of each by his garment, from the lowest to the highest. Thus was the dis-

* Transactions, vol. i., Antiquities, p. 17. See also Hutchinson's “Commercial Restraints of Ireland.”

inction made between them: one colour in the clothes of slaves; two in the clothes of soldiers; three in the clothes of goodly heroes, or young lords of territories; six in the clothes of ollavs [professors]; seven in the clothes of kings or queens." (See O'Donovan's translation.) In a MS. H. 2, 18, in Trinity College, it is added to the foregoing, that all colours were used in the dress of a bishop.

That there was a *tartan*, or plaid, like that used by the Highlanders of Scotland, there is undoubted proof in the remains of costume preserved in this Collection. It appears to have been black and yellow or "saffron colour;" and probably each clan possessed a characteristic colour, and a plaid, as well as a special dress. All these have now, however, merged into the colour of the frieze worn in particular districts, such as the dark brown of Galway and Mayo; the light blue of Sligo; the silver-grey of Longford; the light drab of Meath, Dublin, and Louth; and the blue-grey, or powder blue, of Kerry, &c.

The female costume has undergone a very rapid change within the present century; for the scarlet or madder-coloured cloaks, blue mantles and crimson bodices and petticoats, which, like the friezes, were all of household manufacture, and for the most part coloured with native dyes, have given place to imported cotton and woollen fabrics. Within the memory of the present generation, in Connaught in particular, some boys wore yellow sheepskin knee-breeches, probably the last remnant of the ancient leathern costume. Long trousers are still considered by many old people there as an unwearable innovation. The large-caped frieze *cota-mór*, or "riding-coat," is daily falling into disuse; and the strong, heavy, felt hats, formerly worn as well for protection in the fray as against the weather, are giving place to caps and soft light hats.

Our only authentic histories afford but meagre references to dress or personal decoration; and the Fenian tales and bardic romances, in the garb in which they now appear, present

too many anachronisms and incongruities to be worthy of quotation until they have been carefully edited and annotated.

With the first woollen garments may be associated metal weapons and ornaments, as the art of spinning and weaving may fairly be assumed to have been contemporaneous with the period when smelting and casting were brought to much perfection.

Our magnificent illuminated manuscripts, such as the Books of Kells and Durrow, in the Library of Trinity College, and the Irish works of the same class in the Monastery of St. Gall,* and other continental libraries, except in very few instances, only show the costume of the ecclesiastics of the periods when they were written; and such dresses were common to all the clerics of Europe at that time.

The figures in the Books of Durrow and Armagh are altogether ecclesiastical. In the Book of Kells, a Latin vellum MS. of the Gospels, said to be as old as the sixth century,† and undoubtedly one of the most beautifully written and most elaborately illuminated works of its period in Europe, there are a few lay figures introduced by the artist, for the mere purpose of decoration, or to fill up space. As the work is thoroughly Irish in every respect, these figures may fairly be presumed to represent the costume of the country at the time they were painted. In some instances the illuminated initial letters are composed of human figures; and although the attitudes are of necessity grotesque, the costume appears to be, in most respects identical with that of the figures alluded to. The following facsimiles (traced and cut by Mr. G. Hanlon), give perhaps the oldest representations of Irish costume now extant. Fig. 190, from folio 200, is evidently that of a soldier, armed with a spear and round target, and placed either in the act of receiv-

* See Dr. Ferdinand Keller's Essay, referred to at page 346.

† See the Rev. Dr. Todd's paper on "The Biblical Manuscripts of the Ancient Irish Church," in the *Irish Ecclesiastical Journal* for 20th Sept., 1846, No. 75.

ing an enemy, or compressed by the artist to suit the space on the page unoccupied with writing. The head-dress is yellow, with a mitred edge along the brow, as occurs on many other



Fig. 190.



Fig. 191.

human heads in that work. The coat is green; the breeches, which come down below the knee, are light blue, picked out with red; and the beard and moustache brown. The legs and feet are naked. The shield is yellow; and the spear-head blue, exactly resembling some of those of iron in the Academy's Collection, in which the cross rivets project considerably beyond the socket. A line of red dots surrounds the outline of the figure—as is usual in the Book of Kells, and as may be seen in many of the initial letters, especially those used in this Catalogue, which are all copied from that work. At folio 201 there is a sitting figure, in the act of drinking from a circular goblet (Fig. 191), wearing a sort of turban, principally yellow, with a flesh-coloured border; the cloak is dark red, bound with yellow; the tunic blue, with a yellow border and green sleeve; the feet are naked, and partially concealed by the letters, which shows that the illumination was made after the text had been completed.

In the two small equestrian figures on page 300, we have another phase of costume. Figure 192, from folio 89, shows the ancient short cloak remarkably well, and, from a careful examination of both figures, it would appear that the horses were also clothed or caparisoned. The cap is yellow, fitting tightly

to the head, and hanging down behind—or this head-dress may represent the natural hair. The cloak is green, with a broad

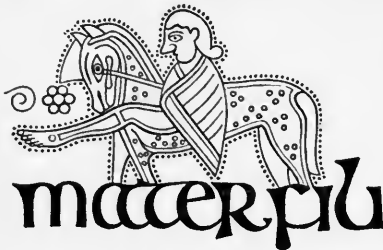


Fig. 192.



Fig. 193.

band of bright red, and a yellow border; the breeches green; the leg covered, but the foot naked. The cover of the horse is yellow, but the head, tail, and such portions of the right legs as appear, are green. The word over which it is placed is engraved, to show the position of the illumination. Fig. 193 occurs on folio 255; the parchment has been injured underneath the cloak, but a sufficiency of the colour remains to show that it was green; the cap is yellow.

The initial N, at folio 253, represents two human figures, with beards, yellow fringed caps, and tight fitting green dresses, similar to those in the foregoing illuminations. In almost all instances throughout the Book of Kells, the cap is yellow, but in none is it conical. At folio 202, a number of heads are crowded into a large illumination, in which the head-dresses are principally of the turban shape, of a yellow colour, picked out with red, gold, or black. The cloaks on these figures are red, blue, green, and striped, but in no instance cross-barred, or plaided, like the modern tartan; and it remains for the archæologist to determine whether their costume is intended to be native or oriental. At folio 99 there is an unfinished figure of a spear-man (like Fig. 190), in a recumbent attitude, holding a small, round shield in the left hand, and grasping a spear with the right. The outline was sketched in red, and a blue wash filled up all the parts intended for clothing. The figure is curious, as showing the process of illumination.

From these figures we see that, the lower limbs were clad in tight-fitting garments, generally blue, that reached a little below the knee, like the modern breeches; the legs and feet were naked,—the braccæ or chequered pantaloons not being then the fashion,—and the body was covered with a light tunic, with sleeves reaching as far as the wrist. The cloak, however, was the chief and most highly decorated garment. It is also manifest that the costume of the Irish was, at that period, both picturesque in shape and highly coloured.

Upon the fly-leaf of the Book of Ballymote, an Irish vellum manuscript, written in the year 1396, now in the Library of the Academy, there is a rude pen-and-ink sketch of a ship, supposed to represent the Ark, with eight figures in it. The costume of these is a simple, unornamented, close-fitting tunic, with sleeves, fastened round the neck and down the front, like the primitive leather garment already described at page 276,—possibly the artist wished to portray the oldest garments known, even by tradition. The figure of Noah is encircled with a broad belt, decorated with a buckle and tassel, and wears a crown like that of the English monarchs of the twelfth or thirteenth centuries, and resembling one of those represented in the Knockmoy fresco, described at page 317.

The figures on our Irish metal shrines and stone fonts are generally draped in ecclesiastical costume, and do not therefore assist in the present inquiry.

Our early sculptured monuments are chiefly of the same class, for although there are a few representations of Irish dress, the great majority of the figures thereon are clad in the ecclesiastical costume of Christendom, and not of Ireland alone, at the periods they represent. The number, beauty, and antiquity of the sculptured crosses in Ireland would afford ample materials for a large volume, descriptive of their respective styles of art, and character of ornament; the associations and historical recollections of the localities where they are placed; in many instances, of the biographies of the persons by whom they

were erected ; the then prevailing ideas respecting the various scriptural scenes they represent ; the legends or incidents which many of their sculptures commemorate, and the costumes of the figures in the various processions, religious services, and battles, &c.*

Those crosses which contain figures are much more injured by time, weather, or the hand of man, than those on which the sculpture is principally ornamental. On that at Tuam, one of the very earliest in Ireland, there are some figures of men and animals, and the representation of a chariot ; and the effigy in the Crucifixion wears a kilt. There are also figures of men, horses, and chariots, sculptured upon the base of the street cross at Kells. The cross at Kilclispeen, county of Kilkenny, is decorated with many human figures. On the base is a group of seven, each clothed in a tunic and cloak, with a hat like that of the ancient palmer, falling down behind upon the neck ; six of these—shepherds or ecclesiastics—bear curved implements in their hands, more like handled celts than croziers. In the Clonmacnoise crosses, the figures are chiefly those of ecclesiastics, but in two, apparently military, the beards are very long, and in one it is plaited ; their cloaks are fastened with brooches on the right breast. In one of the Kells crosses there are some military figures, armed with circular shields, spears, and swords ; a group of horsemen, with round targets and conical caps ; and on the west side of the base of the street cross, there is a remarkable group of five fighting figures, two armed with spears, and holding shields of a peculiar lunette shape ; the three others having swords and round targets.

* Dr. Petrie alone could write such a work as that sketched in the text. Mr. G. V. Du Noyer lately presented to the Academy a most valuable collection of drawings of sculptured crosses, and other incised stones. (See page 252.) It is to be hoped that some day they may be published. Mr. O'Neill has recently published folio lithographs of several of our Irish crosses ; and it is to be regretted that so picturesque and expensive a work should not have attached to it some letter-press descriptions of antiquarian value, instead of unworthy personalities and unseemly criticisms upon established facts, respecting the origin and uses of the Round Towers.

Where the military figures are in tolerable preservation, and when viewed in a particular light, we can always trace the shield, with its central *umbo*, or boss; and on many, the broad spear, the curved-handled celt, and the long iron sword, with the straight cross-guard, resembling the Danish pattern; but we do not find the very ancient leaf-shaped bronze sword anywhere represented.

The magnificent crosses of Monasterboice are covered with human figures, chiefly, however, connected with scriptural subjects. An examination of some in the compartments upon the short cross erected by Muiredach, the Tanist Abbot of Armagh, about the middle of the ninth century, will assist the present inquiry. In each of the three compartments on the west side there is a group of three figures, evidently the same personages repeated. The history which these sculptures are intended to commemorate evidently commences in the lowest entablature, where an ecclesiastic in a long cloak, fastened with a brooch, and holding a staff in his hand, stands between two figures, either soldiers or robbers, each armed with a long Danish sword, and dressed in a tight jerkin and trunk hose, plaited round the thigh, and ending above the knee. Both have long moustaches, and their head-dresses consist of close caps falling behind, not unlike the present Neapolitan cap. Some of these resemble, in a remarkable manner, the illuminations figured in the Book of Kells, previously described. In the compartment over this, the same personages are represented as students, each with a book, but the soldiers have assumed the ecclesiastical garb, although they retain the moustache. In the top compartment, the figures are again repeated, all in long flowing dresses, the central one—then, perhaps, aged, or at the point of death—is represented giving his staff to one, and his book to the other of his former assailants.*

* See the Author's work upon "The Beauties of the Boyne, and its Tributary the Blackwater," Second Edition, p. 302, containing the woodcut illustrating the legend mentioned in the text, and also the cut (Fig. 194) on the next page.

In the accompanying illustration, drawn by Mr. Wakeman, in 1846, from another compartment of this cross, is shown a scene, which probably represents an execution. In the left-hand corner is seated a figure, perhaps a judge or Brehon, wearing a long gown or tunic, which reaches nearly to the feet, and a head-dress which falls over the shoulders. The right hand holds a curved drinking-horn, possibly figurative of some judicial ceremony, and on the lap rest a long, straight sword, and round buck-

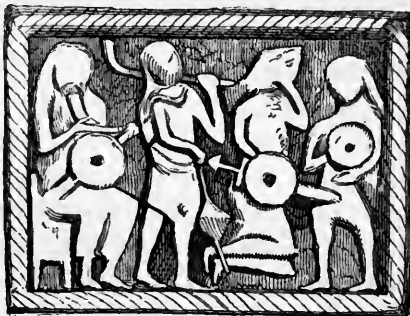


Fig. 194.

ler. These may, however, belong to the next figure, who is armed with a celt or curved implement, held in the left hand, which is upraised, as if in the act of striking the third figure, which kneels before it. This second figure has a shorter tunic than the first, and a small hood or cape hanging from the head and shoulders. The right hand holds either some article attached to the captive's feet, or a sort of paddle; but which, owing to the great age and weather exposure of this cross, it is now difficult to determine. The captive has a conical cap, and is armed with a circular shield, and a long Danish sword. The left hand is raised to the head, and the figure seems to shrink from the impending blow of its adversary. The fourth resembles the second in costume, and merely carries a shield.

The effigies on our later sepulchral monuments are, with few exceptions, to be described hereafter, those of Anglo-Normans or Anglo-Irish; and they do not differ much from the same class of representations in Great Britain.

If we seek for documentary evidence before the period of the Anglo-Norman invasion, the earliest accessible authority upon the subject of costume is the "Book of Rights," already

quoted in this work. There, among the tributes paid by the different states or kingdoms of the Irish Pentarchy, we read of the cloak or *brat*, the outer garment,—of which the following varieties are specified:—“A thousand cloaks not white, —speckled cloaks,—cloaks with white borders,—red cloaks,—red cloaks not black,—blue cloaks,—royal cloaks,—green cloaks,”—and “green cloaks of even colour,—cloaks of strength,—coloured cloaks,—chequered cloaks of lasting colours,—napped cloaks, with the first sewing, which are trimmed with purple,—purple cloaks of fine brilliance,—purple cloaks of fine texture,—purple cloaks of four points,—and cloaks with golden borders.” The *cohall*, hooded cloak or cowl, is seldom mentioned among these tributes.

The *matal* (which word is not translated by O'Donovan), was probably smaller than the cloak, and may have been worn beneath it, or as an ordinary coat, and it is remarkable that on only one occasion, where we read of its having a “golden border,” is it mentioned that that article of dress was decorated; but we read of “fair beautiful matals,—royal matals,” and also of “matals soft in texture.”*

The tunic, *inar*, formed a considerable portion of the ancient tributes, and is described as “brown red,—deep red,—with golden borders,—with gold ornaments,—with golden hems,”—and also “with red gold.”

The *leann*, translated by O'Donovan “mantle,” would appear to have been a white woollen garment, probably a sort of loose shirt, but, from its being almost invariably mentioned along with “coats of mail,” it lends probability to the conjecture that it was only used in connexion with armour. Thus, the chief of Cinél Eanna was entitled, among other tributes, to receive “five mantles, five coats of mail;” and the king

* “Matal was probably another name for the *Fallaing*, which in latter ages was applied to the outer covering or cloak; but this is far from certain. Matal is applied in *Leabhar Breac* to the outer garment worn by the Redeemer.”—See note to *Leabhar na g-Ceart*, p. 38.

of Tulach Og, to “fifty mantles, fifty coats of mail,”*—but “mantles [*leanna*] of deep purple” are also enumerated.

When flax and hemp were first introduced, has not been recorded. Linen shirts were in use at the time of the English invasion, and are said to have been of immense size, and dyed a saffron colour. Notwithstanding the suitability of our soil to the growth of flax, it was only on the suppression of our woollen manufacture and the introduction of the Huguenot and Dutch settlers into Ulster, that this article of native produce attained celebrity.† We do not possess any specimen of ancient linen in the Academy’s Collection; and the only articles containing flax or hempen fibre of any great age are the sewings of some vellum manuscripts, in particular the *Leabhar na h-Uidhre*; but several of our old works of that class are sewn to horse-skin bands, with strong twisted silk.

The variegated and glowing colours, as well as the gorgeous decorations of the different articles of dress enumerated in the Book of Rights, added to the brilliancy of the arms, must have rendered the Irish costume of the eighth and ninth centuries very attractive. It is remarkable that, except helmets, Be-nean, in his relation of the Tributes and Taxes, does not enumerate any form of head-dress. Most of the Irish appear to have used their luxuriant hair as a natural covering for the head, even in the time of Elizabeth, and the only term employed by authors for our ancient head-dress is that of *bar-read* (from the mediæval Latin word, *birretum*), a high conical cap, somewhat between that known as the Phrygian,

* The subject of mail and armour will be considered under the head of Bronze and Iron Weapons. Dr. O’Donovan has afforded the writer the following note:—“The word *lean* (which has nothing to do with *léine*, a linen shirt) is explained in a MS. in Trinity College Library, H. 3, 18, p. 75, and in Cormac’s Glossary, *sub voce lenn*, as a white *brat* of wool; and the word is understood in this sense by Colgan and the writers of the seventeenth century. The word is simply rendered *brat* by O’Clery.” The Gaulish term *lenna* occurs in Isidore.

† See an Essay on “The French Settlers,” in the *Ulster Journal of Archæology*, vol. i., page 209.

which was common in England in Saxon times, and the pointed grenadier's cap of the last century, or the present Persian, with which all oriental travellers are acquainted;* but the material of which it was composed has not been determined; perhaps it was formed of different textures or skins. The Irish helmet, of which we possess a specimen, was of this shape.

In the plan or perspective view of the taking of the Earl of Ormond in 1600, preserved in the Library of Trinity College, the figure of O'More is represented in a short, red cloak, fringed round the neck, a high conical cap or barread of a light colour, and tight-fitting pantaloons.

Cloaks—the *cochall*, and the *fallaing*—were, however, the chief articles of dress in early times, but were probably different either in shape or material. In Cormac's Glossary, the former term is derived from the Latin *cucullus*; and, says Ledwich, "if any reliance is to be placed on the legendary life of St. Cadoc, cited by Ware, the Irish *cocula*, in the middle of the sixth century, was a cloak, with a fringe [such perhaps as that figured at p. 295] or shaggy border at the neck, with a hood to cover the head."†—*Antiquities of Ireland*, p. 359.

Scarlet cloaks were commonly worn by the Irish chieftains in the fourteenth century, and, as already stated at page 297, dark crimson-red was the prevailing colour of those used by

* The cap of rushes made by children gives a good idea of the ancient *barread*, of which it is possibly an imitation. The *old* leprechaun, or fairy shoe-maker, was always described as wearing knee breeches and a conical cap; although the moderns usually represent him in a three-cocked hat.

† Mr. Whitley Stokes' "Irish Glosses," published by the Archæological and Celtic Society, contains much valuable information on the true etymology of these Irish words; and will be a lasting monument of the deep learning and vast research of the author. *Cocall* glosses *Cassulla*, and is, he says, one of those Celtic words which, by the influence of the Church, has become universal. "The *Cuculla*, sometimes called *casula* and *capa*, consisted of the body and the hood, the latter of which was sometimes specially termed the *casula*." In the Breton it is *kougoul*, in Cornish *cugol*, and in English *cowl*. *Sléstan*, according to the same writer, was "probably a cloak covering the thighs and hams,"—and *fallaing*, a mantle, may, he says, be connected with *pallium*; and he quotes the Welsh expression in which the same word

the female peasantry until the last few years. In early times the cloak was furnished with a hood, which could be drawn over the head like the Suliote capote; but it does not seem to have been worn much longer than the time of Spenser, when enactments were made forbidding its use.* It was fastened either in front or on the right breast with a pin or brooch; and the very general use of this and other cloak or scarf-like garments may account for the circumstance of so many fibulæ of different kinds being found in this country. Walker, in his "Historical Essay on the Dress of the Irish," gives the figure of a king draped with a long flowing cloak, fastened with a brooch across the breast, and reaching to the ground (see Plate V. Fig. 1). This he calls the "*canabhas*." It was a long, graceful robe or cloak used by kings, brehons, and priests, and of which we have a vestige in the heavy-caped frieze *cota-mor* of the modern Irish, often worn hanging from the shoulders. The ancient cloak, no doubt, varied in shape, size, and probably colour, at different times and in different localities; but it was evidently the analogue of the sagum of the Celtic Gauls, described by Plutarch as "parti-coloured;" the thick, woollen læna of the Belgæ; the *reno* of the early Germans; the *chlamys* of the Greeks; the *pallium* or *toga* of the Romans; the *bornous* of the Arab; the *plaid* of the Highlander; the *capote* of the Al-

is used, *mal y Gwyddyl am y ffaling*, "like the Irishman for the cloak." In a MS., quoted in the same work, we find *broit buit* used in a passage thus translated, "an old man in a yellow cloak, in a blue tunic of full size," which, while it explains the meaning of the word *brat*, is also illustrative of the colours used in Irish costume.

* In Dineley's Account of his Visit to Ireland in the reign of Charles II., published by Mr. E. P. Shirley in the *Kilkenny Archæological Journal*, it is stated—"The common people of both sexes wear no shoes, after the English fashion, but a sort of pumps called brogues. The vulgar Irish women's garments are loose-body'd without any manner of stiffening." And again, of these common Irish, he states—"Never at any time using hats, after y^e manner of the vulgar English, but covering and defending their heads from rain with a mantle, as also from the heat of the sunne to which Spanish lazy use the Irish men apply their cloaks."—Vol. i., N. S., p. 186.

banian; and the abbas of the Turk and most oriental people, including the Hebrews.

In the twelfth century, Giraldus Cambrensis thus briefly describes the costume of the Irish: they “wear thin, woollen clothes, mostly black, because the sheep of Ireland are in general of that colour; the dress itself is of a barbarous fashion; they wear cappuces, which spread over their shoulders, and reach down to the elbow. These upper coverings are made of fabrics of different textures, with others of divers colours stitched on them in stripes. Under these they wear woollen fallings (*phal-ingæ*) instead of the pallium, and large loose breeches and stockings in one piece, and generally dyed of some colour.”—*Topographia Hiberniæ*, Book iii., chap. ix. This description of the braccæ or trowsers accords perfectly with a specimen of this portion of dress in the Academy’s Collection. The same author tells us that the native Irish went “naked and unarmed to battle;” by which latter assertion he must have meant, unprovided with defensive armour, in contradistinction to the Anglo-Norman soldiery, who, at that period, wore metal breast-plates and helmets. That armour had, however, been used by some classes of the Irish, is proved by the fact, that “coats of mail” (in Irish *luireacha*, from the Latin *lorica*) are enumerated among the Irish tributes, at least two centuries prior to the visit of the Welsh historian. (See Book of Rights.) The former statement is possibly founded on fact; for we know that another Celtic race, the Highlanders of Scotland, stripped off the greater portion of their clothes at the battle of Killiecrankie, several hundred years later.

From an illuminated copy of Giraldus, in the possession of Sir Thomas Phillipps, Bart., some small sketches have been given by Mr. Planché, in his History of Costume, in which the cloak and trews, as well as a short jacket, like the *bau-neen*, or flannel vest of the modern Connemara peasant, are represented. Diarmaid Macmurrough is figured in a short tunic and tight trews; with a long beard, and uncovered

head, as shown in the accompanying figure, given the natural size, from the drawing in the original manuscript, and for which we are indebted to that distinguished antiquary, Mr. Albert Way. The ex-king of Leinster being at that time an ally of the English, this portrait may very probably have been taken from life. He is armed with a long-handled hatchet or battle-axe, the blade of which is shaped like some specimens in the Museum (see the Iron Collection in the Southern Compartment on the ground-floor, Trays **I** and **K**). It does not resemble the gallowglass axe of later times; but is that known by the name of the Sparthe—a "*sparthe de Hibernia*," such as "Gentle Mortimer" had in his armoury at Wigmore Castle, in 1322. The hair is sandy; the tunic or short coat (*inar*) is of a brown colour, fastened round the waist with a belt, and bound tightly to the wrists with bands, that were probably ornamented. The tight-



Fig. 195.

fitting trews are green. Of this memorable Irish character, Giraldus elsewhere says: "Dermon Mac Morogh was a tall man of stature, and of a large and great bodie, a valiant and a bold warrior in his nation; and by reason of his continuall halowing and crieng, his voice was hoarse: he rather choce and decided to be feared than to be loved: a great oppressor of his nobilitie, but a great advancer of the poore and weake. To his owne people he was rough and greevous, and hatefull to strangers; he would be against all men, and all men against him."*

* "Sylvester Giraldus Cambrensis, his vaticinall Historie of the Conquest of Ireland," book I., chap. vi. Hooker's Translation, 1587.

Mr. Way has also furnished us with the two following illustrations from the same source. That given below (Fig.

196) shows the short cloak or fallaing of olive green, like those in the Book of Kells, already described at page 300.* The trews are, in the original, of a light brown; this figure also wields the sparthe or battle-axe, but with a shorter handle than in the foregoing.



Fig. 196.

The third figure, also procured from the same rare manuscript, is one of great interest. It represents a scribe seated in a bird-cage chair (such as existed in many

* In that truly national work, "The Sculptured Stones of Scotland," published by the Spalding Club, we find many examples of costume that serve to illustrate, in a remarkable manner, the dress of the ancient Irish, or the Celtic race generally. The hooded cloak or cochall, in particular, is so well represented as to leave no doubt respecting its shape, and the way in which it was worn. See, in particular, the plate of the incised pillar-stone at St. Madoe's, near Perth. On that monument there are three equestrian figures, not unlike those from the Book of Kells, represented at page 300 of this work; each is in the same attitude, with the legs projected forwards, and the body covered with a short triangular cloak, the hood of which is carried up over the head.

Every day's observation and research bring to light new affinities with early Irish costume, and it is only by a careful study and comparison of the primitive pictorial representations of other countries with the memorials still existing in our own, that we can form a fair idea of the early costume of the Irish. In the great French work, "*Herculaneum et Pompeii*," tom. v., pl. 20, there is a battle scene copied from a mosaic at Pompeii, in which the arms and dress of the combatants are almost identical with those of ancient Ireland. It is supposed to represent the battle of Arbela, between Darius and Alexander; but it is just as likely to illustrate an engagement with the Gauls. The vanquished are clothed with tight-fitting trowsers, close tunics, several of which are plaided, and cloaks with the hood coming over the head, precisely like the Irish cochall. The chief figures wear torques round the neck, and bracelets on the wrists. Some fight in chariots, and are armed with bows and

parts of the country until very lately); before him is a desk, which supports the work he is engaged on, and underneath is the inscription, "The Scribe writing the marvellous Kildare Gospels." The person is probably an ecclesiastic, as the top of the head is shaved. He wears a short jacket of greenish-brown, fringed round the lower edge; the trowsers are light brown; and from beneath the desk hangs a short drapery of a green hue, probably a fold of his cloak. The right hand holds a pen, and in the left is what appears to represent a knife, and with which he keeps the page in its place. In each of the figures



Fig. 197.

the braccæ fit tight to the ankles; and the shoes or buskins, which are long and pointed, rise high over the instep, like those seen in the Knockmoy fresco, described at page 318.* "The

arrows, long spears, and leaf-shaped swords. Besides the torques round the neck, slender, twisted bars, apparently of metal, encircle the arms, a short distance below the shoulder. In some of the figures the hood is retained in its place by a narrow frontlet, apparently of gold. The colour of the garments in the figures on the mosaic are also peculiarly Irish. In some, the cloak is yellow; the mantle, dark red; and the tunic, purple, edged with white. This latter is, moreover, sprinkled with triple stars of gold, arranged after precisely the same fashion as those figured in the Book of Kells (see Figs. 191, 192, and 193). The chariot in which the principal figure stands, resembles some of those figured on our sculptured crosses. The charioteer wears a pointed cap, a green tunic, and a tartan vest. The head-dress of others is yellow. All the vanquished wear beards, and their hoods or head-dresses envelop their chins. My attention was called to this remarkable plate by Mr. C. M. O'Keefe, a writer who has devoted much attention to the subject of Irish costume. Virgil's description of the dress of the Gauls accords, in almost every particular, with the foregoing: *Æn.* viii. For other illustrations of costume, see Dr. Petrie's essay on the "Seals of Irish Chiefs," in the *Irish Penny Journal*, page 356.

* Among the references to early Irish costume given in our Irish MSS., we read of the *Tuighean*, or the chief poet's cloak, composed of the skins of birds, evidently those of water-fowl. See Cormac's Glossary, also the "Dialogues of the Two Sages" in the Library of Trinity College. "*Tuigen*, quasi *toigen*, from *toga*, for the *toga* is *vestis pretiosissima*, a kind of most precious garment. *Aliter tuigen*, i. e. *tuig-en*, for

Irish, like the Gauls," says Lynch, "wore shoes with long, slender, conical tops, and only one sole, for the greater celerity in running."—Cambrensis Eversus, chap. xiii.

Sir James Ware says—"A frieze cloak, with a fringed or shagged border, was the outward garment of the Irish, and this they wore almost down to the ankles." And his commentator, Harris, adds—"The Irish mantle, with the fringed or shagged border sowed down the edges of it, was not always made of frize or such coarse materials, which was the dress of the lower sort of people; but, according to the rank or quality of the wearer, was sometimes made of the finest cloth, bordered with a silken or fine woollen fringe, and of scarlet and other various colours. Many rows of this shagg or fringe were sowed on the upper part of the mantle, partly for ornament, and partly to defend the neck the better from the cold, and along the edges run a narrow fringe of the same sort of texture."*

Although the word *fallaing* or *filleadh* is not met with in Irish works older than the twelfth century, both the article and the name have come down to modern times, for fifty years have not elapsed since it was worn in parts of the west of Ireland. This garment consisted of a triangular piece of home-made, wool-dyed, blue cloth, with the corners rounded off, and about two yards wide. It was carried up over the head, and fastened on the breast by an iron pin or *dealg*, and, being of a triangular shape, and worn somewhat like a scarf, shawl, or shepherd's plaid, a fresh portion could be brought up on the shoulders from day to day. It was popularly called a *faullen*.†

the *tuigen* of the poets is made of the skins of white and variously-coloured birds; up to the girdle it is of the necks of drakes, and from the girdle to the neck, of their tufts."—Cor. Gloss., *in voce Tuigen*.

* The Antiquities of Ireland. Dublin, 1762. Fol., vol. ii., p. 175.

† The triangular shape and rounded corners of this *fallaing* contrasts with that form of cloak described at page 305, as having "four corners." No doubt this was the Irishman's *plaid*, which, when the Scot economized, he called it a *filleadh-beg* (*fillibeg*), the little *fallaing* or *kilt*. Another outer garment worn in

Even yet many of the female peasantry, and all the beggars in the south and west, use, out of doors, a sheet, quilt, or blanket, as a mantle or outer covering, generally drawn up over the head, and fastened on the breast, as described above.

The ancient Celtic *braccæ*, the bracked, speckled, striped, chequered, or many-coloured leg coverings, called in the native tongue *truis* or *triubhais*, do not require any general description here, as this garment is figured at page 327 (see Fig. 207).

In the illuminated metrical French history of the Irish campaign of Richard II., published in the *Archæologia*, vol. xx., we find many curious references to the state of the country, the mode of warfare, and the costume of that period. One of the illustrations represents Art Mac Murrough on horseback, riding fiercely down a mountain pass, bare-footed, without a saddle, and in the act of casting a long spear. His costume consists of a conical cap of the Persian shape, a wide cloak flowing loosely on the shoulders, and an inner spotted garment with sleeves, descending like a gown or skirt to the ankles. He also wears a long and rather pointed beard, according to the ancient custom of the Irish.* The whole figure resembles some of those represented in the Nineveh sculptures. Strutt asserts, but does not state on what authority, that the chieftain's robe was "light pink." Behind their chief ride two mounted warriors, also armed with spears, and with the

Ireland some years ago was the "*Jock-coat*," often of fricze, a long great-coat, with sleeves, a hood or cape, and a broad belt which fastened it round the waist. It was worn by both sexes, and, for a time, became fashionable in the upper ranks, even as now the ancient Irish brooch is admitted to polite society, and the crimson cloak of the Claddagh is esteemed becoming. In addition to the various references already given, the reader is referred to articles on "The Ancient Dress of the Irish," in "The Celt" for 1858, pp. 46 and 65; and in the *Ulster Journal of Archæology*, vol. v., p. 93, and vol. vi., p. 316.

* Wearing the beard long, as we know the ancient Irish did, serves to account for the circumstance of no ancient bronze razors having been discovered in this country, while such articles, as well as tweezers, are found in Denmark in the greatest abundance. They decrease in frequency as they approach the north.

hoods of their cloaks drawn over their heads, they present all the characters of the fiercest Bedouin tribes.*

One ancient specimen of native art still remains in the country; the curious fresco painted on the wall of the Abbey of Knockmoy, near Tuam, county of Galway; a full-sized copy of which, made by Mr. Macmanus for the Dublin Exhibition in 1853, now hangs in the tea-room of the Academy. It consists of two portions: the lower represents the oft-repeated scene of the martyrdom of St. Sebastian, naked, bound to a tree, and pierced with arrows; with two archers in the act of drawing their bows. To the right of the centre there is a very fine sitting figure, representing the Almighty, having on the head an *animbus*, resembling one of our golden semilunar ornaments; the right hand is raised in the act of benediction, and in the left is some square object, believed to be part of a cross. Beyond this figure is an imperfect one of a recording angel, holding a balance, but its outlines are much effaced. An opinion, first promulgated by Ledwich, has long existed, that this scene represents the execution of young Diarmaid, the son of Mac Murrough, King of Leinster, when he was a hostage with Roderic O'Conor, King of Connaught, at the time

* It is more than probable that all the inhabitants of the British isles wore a costume common to the Gauls and Germans at the same period; for Tacitus, writing in the first century, says of the Germans, they wear "a loose mantle (*sagum*), made fast with a clasp, or, when that cannot be had, with a thorn. The rich wear a garment, not, indeed, displayed and flowing, like the Parthians or the people of Sarmatia, but drawn so tight that the form of the limbs is palpably expressed."—*De Mor. Ger.*, sec. xvii.—Here we have a perfect description of the brat or mantle, and the braccæ or trews; and the former, moreover, fastened, like the Irish, with a thorn or *dealg*. Again, the same author, in his *History*, describing Cæcina, the Vitellian general, says, he wore a party-coloured mantle, and breeches, used only by savage nations, and not by the Romans. In the twelfth century, we read in Johnstone's edition of the "*Antiquitates Celto-Scandicæ*," that Harold Gillius wore an Irish cloak: "*Hibernico fere utebatur amictu veste nimirum curta cuique*."—p. 246. This chieftain, it is said, generally wore the Irish dress, viz., "a shirt, and braccæ extending to the ankles, bound by latches beneath the soles of the feet; an Irish cap on his head; besides, he carried a spear in his hand."—p. 248. See also Laing's translation of "*The Heimskringla*," vol. iii., p. 194.

of the Anglo-Norman invasion in 1172. When, however, the question was brought under the notice of the Academy in 1853, Dr. Todd showed clearly that the subject of the painting was the martyrdom of St. Sebastian,* and not the execution of one of the hostages at Athlone, 230 years before the picture was painted. See "Proceedings," vol. vi., p. 3.

In the upper compartment there are six crowned figures,—three skeletons, and three draped kings,—the popular mediæval *Moralité*, entitled "*Le dit des trois morts et des trois vifs*;" but believed by Irish antiquaries to represent living and extinct members of the O'Conor line.† It has been proved that this work was executed about the year 1400, by Connor O'Eddichan, a native artist, for Malachy O'Kelly, chieftain of Hy-Many, who also caused a monument to be erected in that abbey, to the memory of himself and his wife, Finola. If the original interpretation of Ledwich and others were correct, we should here have undisputed evidence of the costume of the Irish in three grades of society,—king, brehon, and soldier,—either of the period which the drawing was intended to illustrate, or the day of the artist who designed it; but that has not been proved. With, however, the exception of the principal figure in the lower compartment, which is undoubtedly that of the Deity, the garb of all the others appears to be Irish.

The archers are clad in tight yellow hose or braccæ, and short, greenish jackets, fastened round the waist with a belt,

* In the famous fresco painting by Pietro Perugino, in the church of Panicali, in Italy, representing the martyrdom of St. Sebastian, there is a figure of the Deity in precisely the same attitude as that in the Knockmoy fresco; and even the colouring of the robe is the same: yet Pietro did not flourish till the end of the fifteenth century. See the Chromo-Lithograph, published by the Arundel Society in 1856.

† See Mr. Curry's letter to Dr. Todd, printed in the Proceedings, vol. v., p. 3. See, also, Dr. Petrie's description of the fresco, in the Dublin Penny Journal, vol. i., p. 2. The public are indebted for the preservation and exhibition of this ancient monument of Irish art to the zeal of Dr. Lentaigne. A somewhat similar mural painting, and of about the same age, exists in the church of Ditchingham, Norfolk.—See the Archæological Journal, vol. v., p. 69.

which also holds the quiver. One is bare-headed, and the other wears a small conical head-dress, known as the Phrygian cap, in which the Anglo-Saxon peasantry are occasionally represented (see Fig. 198). Their bows resemble those used in England in the eighth century, in which the strings are "not made fast to the extremities, but permitted to play at some distance from them."* This figure measures 5 feet 3 inches; the left arm and part of the bow have been effaced.



Fig. 198.



Fig. 199.

The royal personages, of whom the central figure, 5 feet 11 inches high, including the crown, is represented above, are also partially obliterated. They are dressed mostly alike; each wears a loose green tunic, with a white border, gathered round the waist by a belt, and also a short, green cloak, together with a thick roll of stuff round the neck. The artist evidently intended to represent a hawking scene. In this figure there are indistinct indications of the bird which was held on the left wrist; while the right hand appears to have been raised, as if in the act of caressing it. The dress of the third

* Strutt's "Sports and Pastimes of the People of England," London, 1845, p. 49.

king, who is armed with a sword, differs slightly from that of his companions; he appears to have just flown his hawk, a fragment of the painting of which still remains, as shown in the foregoing cut, Fig. 199. Each of the figures in this painting, kings and archers, wears precisely the same description of buskin or half boot, slit at the side.

As regards costume, the most remarkable features connected with these figures are the crowns. They appear to be merely emblematical, in accordance with the conventional mode of representing a king at that period. Those on the heads of the kings are evidently the same as the contemporaneous English crowns of the time of Edward III., when, indeed, the current coin of this country bore that image. Those on the skeletons are of an earlier date. Moreover, no proof has yet been adduced to show that the Irish kings or chieftains ever wore crowns of this description, or that coronæ, or any such insignia of royalty, were used at their inauguration.* The magnificent golden diadems, which we still possess, are of a totally different description from those of British crowns. For the further consideration of this subject, see the section on Gold.†

* The crowns of gold and silver, with precious stones, used as decorations of our early shrines, or placed upon the heads of figures of the Virgin, &c., &c., or suspended in various parts of our early churches, afford no proof whatever of such articles having been used as emblems of royalty by any of the Irish kings. See Petrie's "Ecclesiastical Architecture of Ireland and Round Towers, &c.," in the Transactions, R. I. A., vol. xx., pp. 196, 204.

† As a good example of the pleonastic, inflated style of historical romance-writers, as well as to afford an idea of the traditional Irish costume, the following description of the dress of Conn of the Hundred Battles, extracted from Mr. Curry's "Translation of the Battle of Magh Leana," said to have been fought before our Christian era, will serve as an illustration of the foregoing text:—"Then Conn arose, and put upon his fair skin and beautiful body his battle-axe and combat suit, namely, his dark-gray, flowing, long, wide, skin shirt, with its three beautiful, varied, well-coloured wheels [brooches] of gold in it. He put on his well-fitting coat of distinction, made of wonderful cloth of the flock-abounding, beautiful land of promise, bound with girdles and buttons, and with embroidered borders of red gold, so that it fitted to every part

Both sides of the large, bone book-cover, referred to at page 255, are elaborately carved with quaint devices; and on the external surface is displayed a shield, bearing the heraldic device of the Fitzgeralds, beneath which is a group of figures, which, by permission of the owner of the article, we are here enabled to present, as another illustration of Irish costume, of about the same period as that of the Knockmoy fresco just described. It represents five figures engaged in some sort of game; each is clothed with a short jerkin or tunic, made full, and plaited below the waist, with slashed sleeves, which are also striped and parti-coloured. They also wear striped and plaited vests, and two of them have knee-breeches. All may have been intended to be so clad; but there are three not so

which could be touched by the sharp point of a hard needle, from the top of his head to the calves of his legs. Outside this, he put on a heavy, firm, strong-ringed coat of mail, with its firm head-piece of the same kind. He put his light, strong leg-armour, made of fine spun-thread of finndruine, upon his legs, giving a dignity to his noble carriage, and being a protection against cutting, and a support in resistance. He put his two lacerating gloves upon his hands, having the colour of snow freely to be seen upon them, and possessing the attribute of victory in the field of battle, and that no erring cast should be thrown from them, by day or by night. He put upon his neck his easy, thick, noble, light collar, and upon his head his diadem [*minn*] of a chief king, in which were fifty carbuncle gems of the beautiful rare stones of eastern India, artistically set with beautiful, bright silver, and with well-coloured gold, and with other precious stones. He placed his blue, sharp-edged, rich-hilted sword at his convenience, and his strong, triumphant, wonderful, firm, embossed shield, of beautiful devices, upon the convex slope of his back. He grasped his two thick-headed, wide-socketed, battle spears, with their rings of gold upon their necks."—See "*Cath Mhuighe Leana*," published by the Celtic Society, p. 111.

Of the same class, both in style and description, is the following account, written in 1459, of Donagh Mac Namara, chief of Clann Cuilen, in Thomond, harnessing himself for battle:—"His noble garment was first brought to him, viz., a strong, well-formed, close-ridged, defensively-furrowed, terrific, neat-bordered, new-made, and scarlet-red cassock, of fidelity; he expertly put on that gold-bordered garment [or cotun], which covered him as far from the lower part of his soft, fine, red-white neck, to the upper part of his expert, snow-white, round-knotted knee. Over that mantle he put on a full-strong, white-topped, wide-round, gold-bordered, straight, and parti-coloured coat of mail, well-fitting, and ornamented with many devices of exquisite workmanship. He put on a beautiful, narrow, thick, and saffron-coloured belt of

highly finished as the two others. They have all long, flowing hair; two are bare-headed; two wear round hats with up-



Fig. 200.

turned brims,* and the fifth is crowned with a peculiar head-dress, possibly belonging to the game, and decorated with

war, embellished with clasps and buckles, set with precious stones, and hung with golden tassels; to this belt was hung his active and trusty lance, regularly cased in a tubic sheath, but that it was somewhat greater in height than the height of the sheath; he squeezed the brilliant, gilt, and starry belt about the coat of mail; and a long, blue-edged, bright-steeled, sharp-pointed, broad-sided, active, white-backed, half-polished, monstrous, smooth-bladed, small-thick, and well-fashioned dagger was fixed in the tie of that embroidered and parti-coloured belt; a white-embroidered, full-wide, strong, and well-wove hood (*r̄gabul*) was put on him over his golden mail; he himself laid on his head a strong-cased, spherical-towering, polished-shining, branch-engraved, long-enduring helmet; he took his edged, smooth-bladed, letter-graved, destructive, sharp-pointed, fight-taming, sheathed, gold-guarded, and girded sword, which he tied fast in haste to his side; he took his expert, keen-pointed, blue-coloured, and neat-engraved dart in his active right hand, in order to cast it at the valiant troops, his enemies; and last, he took his vast-clubbed, strong-eyed, straight-lanced, fierce-smoking, and usual spear in his left, pushing and smiting therewith."—See O'Donovan's Introduction to the Archæological edition of the *Battle of Magh Rath*, p. 13.

Our Irish historians have not done much towards the elucidation of early national costume, and no native novelist has yet appeared with the Scott-like power of blending fiction with fact, or fusing history with romance. One of the few attempts at the introduction of Irish costume into such a work is that made by Maturin, in his romance of "*The Milesian Chief*,"—vol. i., p. 127.

* In the sketch of the Irish Court of Exchequer, engraved from an original drawn in the reign of Henry IV., which is in the Red Book in the Chief Remembrancer's

three feathers. The external figures are represented in the act of throwing rings or quoits, and the central one is armed with a short, straight sword, like No. 158, on Tray **H**, in the Collection of Iron Articles. Although but rudely sketched, this group possesses much character, and is, most likely, accurate in costume.

Upon the reverse side, the ornamental engraving is peculiarly Irish. This bone, which is $19\frac{1}{4}$ inches long, $11\frac{1}{4}$ wide, and $\frac{1}{4}$ thick, was found in the neighbourhood of Swords, county of Dublin. The figures are drawn to scale, and in the original the tallest is $2\frac{3}{4}$ inches in height.

On the old seal of the Corporation of Dublin there are several figures, whose costume, possibly that of the fifteenth century, merits inspection. Enlarged drawings of three of these, figured below, from gutta percha impressions in the Academy's collection, afford examples of the dress, arms, and musical instruments of that period. The first (Fig. 201) is that of the steersman seated in the stern of the ancient galley,



Fig. 201.



Fig. 202.



Fig. 203.

which forms a portion of the City Arms; and in which, figures representing the Mayor, the Recorder, and the Corporation cup-bearer, are seated. The head-dress is evidently the hood or cowl of the ancient cohall cloak. The second illustration (Fig. 102) is that of a soldier firing a cross-bow from the

office, two of the figures, apparently officers of the court, wear hats similarly shaped. See "Proceedings and Transactions of the Kilkenny and South-East of Ireland Archæological Society," vol. iii., p. 46.

top of one of the turrets over the city gate. His arm projects from the surcoat commonly worn at that period, and on his head is a conical cap or helmet, strengthened with radiating bars of iron, and in shape combining the form of the Phrygian cap, the high barread, and the pointed galloglass helmet.* The mode of pressing the spring trigger of the cross-bow is well shown in the old seal, which exhibits much greater accuracy both in design and execution than the modern one now in use. The third figure (103), which wears a cap somewhat similar to the foregoing, is that of a warder on the topmost tower, blowing a short, curved horn. Other figures, bare-headed, are represented on the lower towers, blowing long and nearly straight horns.†

The caricatures attached to Derricke's doggrel "Image of Ireland," written in 1578, apparently to pander to the worst tastes of the times of Sydney, Fynes Morrison, and Spenser, are not of much value as specimens of the costume of the "Irish Wood-Kearne;" they were drawn to ridicule.‡ In these drawings, published in 1581, we find four varieties of costume. The English soldiers are depicted with breastplates and head-pieces of iron. The Irish peasantry wear two different kinds of dress: in one we have, in the words of the author, "the coate of strange device which fancie first did breade,"—the jerkin with short skirts having "pleates set thicke abot" the waist, and open-work sleeves after the Spanish fashion. Beneath the jacket depend the plaits of what appears to be the shirt, hanging like a kilt, "with pleates on pleates as thick as pleates may lye, whose sleeves hang trailing doune almost unto the shoe." Other figures of the "meer Irish karne"

* A precisely similar cap covers a figure in the "Norman dress of the twelfth century, from Harl. MS., 1526 or 1527." See Fosbrook's *Encyclopedia of Antiquities*, vol. ii., p. 835.

† This seal has been engraved in Malton's *Views of Dublin*, and there is also a rude representation of it in the *Dublin Penny Journal*, vol. ii., p. 4.

‡ See the *Somers Collection of Tracts* edited by Sir Walter Scott in 1809, vol. i.

given by Derricke, are only clad in the cloak or mantle, and some are armed with galloglass axes. The Irish chieftains are all in long loose cloaks, deeply fringed round the neck, and down the breast, wear chequered vests, and have tall, conical barread caps, also cross-barred, and covered with plumes of cocks' feathers. The Irish cavalry are clad in shirts of ring-mail, and are armed with long spears, broad-pointed falchion-shaped swords, and small round shields.

Of about the same period is the unique print said to be "drawn after the *quicke*" now in the Douce collection of the Bodleian Library, for which painting a number of Irish chieftains were, it would seem, good enough to stand in melodramatic attitudes, with drawn swords and uplifted poniards, in the act of stabbing each other, to be sketched by the artist! Although the legs and feet are bare, their jackets are beautifully ornamented, and they are enveloped in long flowing robes and voluminous shirts. Their swords, however, are Grecian in the blade, and Roman in the handle. If such were used in the time of Elizabeth, no vestige of them has come down to the present day, and it is not likely that the Irish bronze, leaf-shaped sword, which some of these weapons resemble, was in use so late as three centuries ago.

As stated at page 304, most of our sculptured sepulchral monuments of note, of a later date than the thirteenth century, are those of Anglo-Irish. Still, there are some others which illustrate native costume, and, of these, one of the most remarkable is the effigy of O'Cahan, styled "Cooe-na-ngall," in the old church of Dungiven, county of Derry, dressed in a tunic or surcoat, which covers his armour, and wearing a high barread-shaped steel cap or helmet. This chieftain died in 1385.*

* A drawing of the tomb of Cooe-na-ngall was engraved for the intended Ordnance Memoir of the county of Derry, for a copy of which the author is indebted to General Larcom, R. E. The monument is also figured in the Dublin Penny Journal, vol. i., p. 405. Neither of these, however, exhibits the costume of the chieftain so well as an original drawing kindly lent the author by Mr. G. V. Du Noyer.

Of the same class of tomb is that of Donough O'Brien, King of Thomond, in the Abbey of Corcomroe, in the county of Clare.* He was killed in 1267, and is represented in a loose chequered mantle, which reached below the knees. The tombs of the O'Conors, in the Abbeys of Sligo and Roscommon, and the monuments at Kilcullen, county of Kildare, also afford specimens of Irish costume. But as most of the effigies on Irish tombs of the fifteenth and sixteenth centuries are those of mailed soldiers wearing the armour common to their rank, and are not peculiarly Irish, they do not serve to illustrate this part of the Catalogue.

Of the same class of monuments as the foregoing is that of Richard de Burgo, "The Red Earl of Ulster," in the Abbey of Athassel, county of Tipperary, who died in 1326. Of this example of the civil costume of the nobility of Ireland during the early part of the fourteenth century, Mr. Du Noyer says: "The effigy represents the Earl without any cap or covering on the head; the hair is divided on the forehead, and falls over the ears in short curls, whilst on the upper lip are seen moustaches. The dress consists of a loose robe girded around the waist, and falling to the ankles in straight folds. The shoulders are covered by a small cape or tippet, which is fastened to the breast by a circular brooch. This cape is apparently attached to a mantle which falls over the left shoulder."† This was probably his official, and not his domestic dress.

Without a knowledge of our early costume, such as that sketched in the foregoing section, we could not well understand the uses and mode of wearing many of those ornaments and weapons described in the following pages.

The dress of the galloglass, or Irish foot-soldier, of the

* See the Dublin Penny Journal, vol. ii., p. 341, and also Mr. Samuel Ferguson's paper on "Clonmacnoise, Clare, and Aran," Part ii., in the Dublin University Magazine for April, 1853, vol. xli.

† See Archæological Journal, vol. ii., p. 124.

fifteenth and sixteenth centuries, will be considered in the description of the Iron Collection.

We fortunately possess one full suit and several fragments of woollen clothing in the Academy's Collection. Figure 204, drawn the natural size, from a portion of thick, coarse, but soft woollen cloth, of a mottled brown colour. No. 7, in Rail-case H, in the southern gallery, presents us with an example of one of the most ancient specimens of native weaving which has come down to modern times. It is woven with a twill, and, when carefully examined in a good light, the warp is found to be composed of

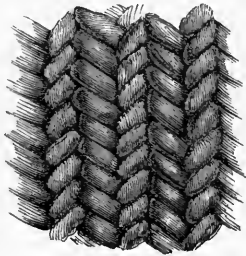


Fig. 204.



Fig. 205.

three plies twisted together, while the weft consists of the untwisted woollen staple. This remarkable peculiarity of the twill or diaper resembles so exactly that figured in the cloak of the "Wild Irishman," engraved in Speed's map of 1610, that a facsimile thereof is placed in juxtaposition with it (Fig. 205), which likewise shows the glibb-fashion of wearing the hair, and also the kind of leggings or long boots used by the peasantry at that time.* The piece of cloth figured above, and which appears

* "The men wore linen shirts, exceedingly large, stained with saffron, the sleeves wide, and hanging to their knees, straight and short trusses, pleted thicke in the skirts, their breeches close to the thighs; a short skeine hanging point downe before, and a mantle most times cast over their heads. The women wore their haire plated in curious manner, hanging down their backs and shoulders, from under foulden wreathes of fine linnen, rolled about their heads, rather loading the wearer than delighting the

to have been part of a cloak or coarse rug mantle, was discovered in 1848, in Carne bog, parish of Coolbanagher, Queen's County, and was—*Presented by the Rev. Sir Erasmus Borrows, Bart.*

Although Spenser denounced the mode of wearing the hair in rather disparaging terms, and Speed represented it as above in Fig. 205, their exaggerations may be corrected by reference to the accompanying figure, drawn by a native artist in 1400.



Fig. 206.

It is an accurate representation of the uncovered head and yellow flowing locks of the second archer in the Knockmoy fresco, already described, and accords with the description of O'Neill's galloglasses, who accompanied their chief to the court of Elizabeth.

In the year 1783 the Countess of Moira gave a description of a female dress, of coarse woollen material, found in a bog in the county of Down; and Mr. R. Lovel Edgeworth also recorded the discovery of a woollen coat fifteen feet below the surface of a turf-bog in the county of Longford, along with some iron arrow-heads (see *Archæologia*, vol. vii., pp. 90, 111), but no vestiges of either are now known to exist.

In 1824, a male body, completely clad in woollen garments of antique fashion, was found in a bog, six feet beneath the surface, in the parish of Killery, county of Sligo. In 1843 the dress of a female, also in the costume of some centuries back, was dug out of a bog in the county of Tipperary, and in 1847 a woollen cap was discovered in the county of Kerry. From these articles, all of which are in an astonishingly

beholder; for, as the one was most seemly, so the other was unsightly; their necks were hung with chains and carkaneths, their arms wreathed with many bracelets, and over their side, garments of shagge rug mantles, purfled with a deep fringe of divers colours; both sexes accounting idleness their only liberty, and ease their greatest riches." See "*The Theatre of the Empire of Great Britain, presenting an exact Geography of the Kingdom of England, Scotland, Ireland, and the Isles adjoining.* By John Speed. London, 1611." The Map bears this inscription, "Performed by John Speede, and are to be sold in Pope's-head-alley, by John Seedbury and George Humble, and privileged A. D. 1610."

perfect state of preservation, and placed in the first compartment of the southern gallery of the Museum, we can form a very good idea of our ancient dress and manufactures of about the fifteenth and sixteenth centuries. No weapon was discovered near the body found in the county of Sligo, but a long staff lay under it, and attached to the hand by a leather thong was said to have been a small bag of untanned leather, containing a ball



Fig. 207.

of worsted thread, and also a small silver coin, which was unfortunately lost. The head-dress, which soon fell to pieces, is said to have been a conical cap of sheep-skin, probably the ancient *barread*.* So perfect was the body when first discovered, that a magistrate was called upon to hold an inquest on it. In the accompanying figure, drawn from a photograph of a person clad in this antique suit (except the shoes, which are too small for an adult of even medium size) we are enabled to present the reader with a fair representation of the costume of the native Irish of about the fifteenth century. The cloak or mantle, composed of brown soft cloth, closely woven with a twill (but not so fine as that in the coat), is straight on the upper edge, which is nine feet long, but cut into nearly a segment of a circle on the

* "But though the Irish," says Lynch, "wore their hair flowing down their shoulders, the head was not uncovered. They wore a cap, precisely the same head-dress as that of the Gauls, namely, an oblong cap, of somewhat conical form, which in Irish is called *Barred*, probably from the Latin word, *Biretum*, though its derivation could also be Irish, from the Irish *Barr*, a cone, and *Eda*, a dress, which, in combination, signify a conical covering or dress."—*Cambrensis Eversus*, cap. xiii., pp. 220.

lower. In the centre, where it is almost four feet across, it consists of two breadths, and a small lower fragment; the upper breadth is fifteen, and the lower twenty inches wide. It is a particularly graceful garment, and is in a wonderfully good state of preservation.

In texture, the coat consists of a coarse brown woollen cloth or flannel, with a diagonal twill, or diaper. In make it is a sort of frock or tunic, and has been much worn in the sleeves. The back is formed out of one piece, extending into the skirt, which latter is two feet long, and made very full all round, by a number of gussets, like the slashed doublets of Spanish fashion. It measures 8 feet in circumference at the bottom. Gussets, broad at the top, are also inserted between the back and breast, below the armpits, and meet the gores of the skirt gussets at the waist. It is single-breasted, and has fourteen circular buttons ingeniously formed out of the same material as the coat itself, and worked with woollen thread. The breadth of the back is 18 inches, which was probably the width of the cloth. The collar is narrow, as in some of the most fashionable frock-coats of the present day. The sleeve consists of two portions joined at an angle across the elbow, below which it is open like that of the modern Greek or Albanian jacket, and has twelve small buttons extending along the outer flap. Where the sleeve joins the back, a full gusset is inserted, and the cuff consists of a slight turn-in, an inch and a half wide. The inside and lower portion of each sleeve has been much worn, and is patched with a coarse felt-like material of black and orange plaid, similar to that in the trowsers found on the same body. All the seams of this garment are sewn with a woollen thread of three plies.

The trowsers or trews are of a coarser material than the coat, and consists of two distinct parts, of different colours and textures. The upper is a bag of thick, coarse, yellowish-brown cloth, 19 inches deep, doubled below, and passing for some way down on the thighs. It is sewn up at the sides, and made

full behind. The legs are composed of a brown and orange yellow (or saffron colour) plaid, in equal squares of about an inch wide, and woven straight across; but each leg-piece has been cut bias, so as to bring the diagonal of the plaid along the length of the limb, and it is inserted into a slit in the front of the bag, extending inwards and upwards from the outer angle. The legs are as narrow as those of a pair of modern pantaloons, and must have fitted the limbs tightly; they are sewn up behind, with the seam outside, while in the bag portion the seams are inside. Below, the legs are scolloped or cut out both over the instep and the heel, the extremities coming down to points at the sides. The angle in front is strengthened by an ingenious piece of needlework like that used in working button-holes. It is said that these ends were attached behind to the uppers of the shoes, Nos. 16 and 17, described at page 291. All the sewing in this garment was also effected with woollen thread, but of only two plies. These close-fitting trowsers are evidently the ancient Celtic *braccæ* or chequered many-coloured lower garment, the *triubhais* or *truis*, now drawn from nature, and explaining by the way they were attached to the sacculated portion above, and the shoes below, many hitherto unaccountable expressions in Giraldus, especially when he says, "The Irish wear breeches ending in shoes, or shoes ending in breeches." Archdeacon Lynch, in his *Cambrensis Eversus*, writing in 1662, says on this subject, "The breeches used by the Irish was a long garment, not cut at the knees, but comprising in itself the sandals, the stocking, and the drawers, and drawn by one pull over the feet and thighs. [They] cover the groin, but not sufficiently, if the long skirts of the tunic were not wrapped over them."—(Vol. II., chap. iii., p. 209, Rev. M. Kelly's Translation for the Celtic Society.)

All the foregoing articles, numbered 1, 2, and 3, in the Southern Gallery, together with the shoes found upon the body, were—*Presented to the Academy by His Grace the Duke of*

Northumberland, who purchased them with the collection of the late R. C. Walker, Esq., Q. C.

A woollen cap of a knitted or woven texture, circular in shape, like the Scotch bonnet, and of a lightish-brown or tan colour, was found ten spit deep under the surface, in 1847, at the butt of a large tree in a bog near Ballybunnion, county of Kerry, between Knockanforais mountain and the sea. It is marked No. 4 in the same case as the other woollen garments, in the southern gallery, and was *presented by William Smith O'Brien, Esq.* When it was found, it is said to have had a gold band round it.

On the chimney-piece of the old castle of Dunkerron, county of Cork, near Kenmare, there is a sculpture of the sixteenth century, representing, it is supposed, O'Sullivan More, whose dress is a "close-fitting tunic, belted round the waist, and extending to half-way above the knees; his cap very closely resembled a Glenagarry bonnet in the twisted band surrounding the lower part over the forehead; what appears to be a small feather hangs gracefully drooping from the back of the cap."*

The foregoing description of early Irish costume mostly refers to male dresses. We have no pictorial representations of women's costume earlier than the fourteenth or fifteenth centuries, from which period about to the middle of the last century a few sculptured figures on tombs afford examples of the Anglo-Irish female dress of the upper classes. Without entering minutely into the subject, the costume on these effigies may be divided into the loose flowing robe, and the stiff-plaited skirt and tight-fitting boddice. Of the former class, examples may be seen in the tombs of females at Cashel, figured by Mr. Du Noyer, in vol. ii., p. 127, of the *Archæological Journal*, and which present the remarkable peculiarity of being cross-legged. Of the latter we have examples

* See Mr. Du Noyer's Paper in the *Kilkenny Archæological Journal* for March, 1859, p. 291.

in the St. Lawrence tomb, in the old Abbey of Howth; the tomb of the Butlers at Clonmel; in the Fitz Eustace monument at Kilcullen; and in many other localities throughout the country. The greatest variety in female costume consisted in the head-dress, which from time to time partook, both in dimensions and design, of the ruling fashions of the day.

Of the second form of dress, we possess a specimen of coarse woollen cloth, in a wonderful state of preservation—see No. 5, in the first compartment of the Southern Gallery. It consists of a boddice with a long waist, open in front, and attached to a full plaited skirt, not unlike that figured by Lady Moira, and already referred to at page 326. The skirt, which resembles the Albanian fustanell, consists of several narrow breadths, gathered into small plaits at top, and spreads into a broad quilling at the bottom, each plait being stitched on the inside to preserve the form, and continue the fulness from the waist throughout. The bottom of this skirt at present measures $22\frac{1}{2}$ feet, and consists of ninety-two plaits, each about 3 inches wide at the bottom, and 2 at the top; the quilling being so arranged as to bring the joining of each pair of breadths into a plait. In texture, the cloth of this curious piece of costume is somewhat coarser, thicker, and harder, and its colour a much darker brown than any of the other woollen garments in the collection. It was found, in the spring of 1843, in a bog near Shinrone, county of Tipperary, and was procured by Dr. Aquilla Smith, for the late Mr. R. C. Walker, from whose collection, when purchased by *the Duke of Northumberland*, it was presented to the Academy.

BONE CLOAK OR MANTLE PINS (*Dealga*).—The Academy possesses one of the largest collection of cloak and mantle pins of animal material which has yet been made in any part of Europe. It is arranged upon Trays **A** and **B**, in the End-case of the Eastern Gallery; on Trays **C** and **D** in the South-

ern Gallery ; in Rail-case **H** ; and on the "Find" Trays **A** and **B** in the lower compartment of the Museum. It now amounts to no less than 280 specimens.*

Taking bone and horn as preceding metal in the ordinary process of art consequent upon human culture and civilization, we may suppose that some of the original designs of breast-pins were fashioned in this material, although few of the specimens in the Museum can be of as great antiquity as those of metal. Many of these bone pins would also appear to have been used as piercers, and some as needles and bodkins, but the great majority of them were evidently employed as fasteners.

As stated at page 312, a large iron pin or skewer, having a decorated or looped head, is used by the lower classes to fasten their cloaks, so that this kind of fibula may be said to have come down to the present time.

These bone pins and bodkins vary in length from two to nine inches, and present divers patterns and forms of ornamentation, but were all evidently used as fasteners for the cloak or mantle, or for holding up the hair. Some of them are formed out of the bones of fowl ; others, of the fibulæ, or small leg-bones of quadrupeds ; many are perfectly plain ; and others decorated at the head, where the natural enlargement of the bone afforded surface for artistic display. About one-third of these varieties have been perforated at the top, and were possibly attached to the person by a string, or had a ring or some form of ornament passed through the aperture. Some of these, as Nos. 41, 42, 108, and 114, on Tray **A**, have enlargements about half-way down the shaft, as if for retaining them in position, after they had been passed through a loop or eyelet-hole in the soft woollen textures of the mantle or coarse outer

* *Dealg* is also a thorn, as well as a skewer pin or bodkin. Some of these pins and other bone articles were procured by the Academy after the original arrangement and registration had been completed, and therefore do not follow in successive order on the different Trays.

garments. Crannoges and street-cuttings have been the fruitful mines from which these small bone articles have been excavated. The simplest form of pin, as shown in the accompanying cut, figured from No. 97, on Tray **A**, is drawn the natural size. The head is very rude, but perforated, and ornamented by diagonal lines. In the six following illustrations we have typical examples of the most curious bone pins in the Collection. Fig. 209, No. 19, on Tray **A**, is a large, dark-coloured bone pin, 9 inches long, and $1\frac{1}{2}$ thick at the head, found in the River Shannon, at Grosses Island, county of Leitrim, and—*Presented by the Shannon Commissioners*. What its precise use may have been, has not yet been fully determined. Fig. 210, No. 110, on Tray **A**, is the most highly decorated pin in the Collection; it is flat, $7\frac{1}{2}$ inches in length, and figured all over the shank as well as the head, where it is perforated with five holes; it affords a good example of the style of circular domino ornament common to nearly all the bone articles in the Collection. Fig. 211, No. 114, on the same Tray, is $8\frac{3}{4}$ inches in length, and resembles, in the lower portion, a long

Fig. 208.
No. 97.

Fig. 209. No. 19. Fig. 210. No. 110. Fig. 211. No. 114. Fig. 212. No. 304.

narrow knife-blade; it is highly decorated all over the blade and top. Figs. 212 and 213, from Nos. 304 and 305, on Tray **C**,

are not only very curious specimens in themselves, but, having attached heads, afford a clue to the uses of some of the small decorated plates upon Tray **B**, which came from the Ballinderry crannoge, the same locality where these were found. The first is $3\frac{1}{8}$ inches long, and has an oblong bone head,



Fig. 213. No. 305.



Fig. 214. No. 13.



Fig. 215. No. 248.

ornamented with four indentations, as shown in the cut. The shank is provided with a shoulder, upon which the top plate rests. No. 305, in the accompanying cut (Fig. 213), is $4\frac{1}{2}$ inches long, has a circular head one inch in diameter, and is fastened to the shank in the same manner as the foregoing. Several pins are curved in the blade or shank (see Nos. 56 and 102, on Tray **A**; 62, 63, 69, 70, and 72, on Tray **B**, and 311, on Tray **C**). One of the most remarkable specimens of this variety is No. 13, in Rail-case **H**, here figured the natural size (Fig. 214). The head is exceedingly well carved into the representation of a grotesque sitting figure, like some of those architectural embellishments seen in mediæval buildings. It was found in a field near Newbridge,

county of Kildare, and was—*Presented by Frederick Groome, Esq.* (See Proceedings, vol. vii., p. 121.) Fig. 215, No. 348, on Tray **C**, is square in the shank, and has a looped head, through which is passed a ring, also of bone. This pin, which is $5\frac{1}{2}$ inches long, is highly decorated all over, and so sharp both in the carvings and at the angles, as to lead to the belief that it had never been in use;—it was found in the Ballinderry crannoge, county of Westmeath, together with Nos. 349 to 353, and 356 and 357, also arranged on Tray **C**. The similarity of design and execution, as well as the apparent freshness of these articles, lends probability to the supposition that a manufacture of them existed in that locality. No other bone pins of this class have heretofore been recorded.

Varied as are the forms of these mantle and hair-pins, taken as a portion of the great collection of articles of all materials in the Museum, denominated brooches, they do not present more variety, nor a greater degree of inaptitude, than objects manufactured for a like purpose in the present day. The following is a catalogue of all the bone pins in the Collection, except those upon the “Find” Trays, already referred to at page 332.

Tray A, second row.—No. 41 is a bone pin, 9 inches long, much ornamented, with a flat head, and a protuberance on the centre of the shank. No. 42, ditto, is $7\frac{1}{2}$ inches long, with a round, ornamented head, and a square projection, perforated in the centre of the shank. Nos. 43 to 50 are bone pins, averaging $5\frac{1}{2}$ inches long. No. 51 is a rude bone pin, apparently one of the long bones of a fowl. It was found in Clonfree crannoge, and was—*Presented by the Rev. Peter Brown.* Nos. 52 to 59 are eight bone pins, averaging 5 inches in length. No. 56 is curved on the shank like No. 102, and Nos. 62, 69, 70, and 72, on Tray **B**. Nos. 57 and 58 are enlarged at the points. No. 60 is $3\frac{3}{4}$ inches long, and was found at Magherally, county of Donegal. Nos. 61 to 73 decrease gradually in length from $3\frac{3}{4}$ to $2\frac{3}{4}$ inches. No. 74 was found with No. 83, in

Clonfinlough crannoge, and—*Presented by the Board of Works.* Nos. 75 to 82 are bone pins of the smallest size on the Tray. (All the other specimens, from 79 to 115, are perforated at the head.) No. 79 is a bone needle or bodkin, about 4 inches long. No. 80, a perforated bone pin, found with No. 96 in Ardakillen crannoge, and—*Presented by the Board of Works.* Nos. 81, 82, and 83 are small perforated pins. No. 84 is a small bone needle. No. 85 is a circular-headed pin, $3\frac{1}{4}$ inches long. No. 88 is very broad at top, and $3\frac{1}{2}$ inches in length. Nos. 87 to 97 are bone pins, perforated at top. No. 98, which is 4 inches long, has a copper ring passed through the aperture in the head. Of the remaining seventeen pins, from 99 to 115, which vary from 4 to 9 inches in length, No. 102 is remarkable for its curvature and square head. No. 108 is also square-headed, and has a rise in the centre of the shank. No. 110 is shown in the woodcut, Fig. 210, p. 333. No. 113 swells at the point like 57. No. 114 has the shank formed like a knife-blade, with a rise near the top, (see Fig. 211, p. 333). The majority of these pins were found in the Strokestown and Ballinderry crannoges, already described at page 226, &c., and were purchased by the Academy from persons residing in their neighbourhoods.

For the catalogue of other articles on Tray **A**, see pages 258, 262, and 273, &c. &c.

Tray B, Second and third rows.—On this Tray have been arranged two rows of pins, divided in the centre by a collection of miscellaneous articles. They amount to 153, and are numbered from 33 to 185. In length, they vary from little more than 1 to 5 inches, and are, for the most part, undecorated, and generally inferior in workmanship to those on Tray **A**. A few are curved, as stated at p. 334, and twenty-eight are perforated. No. 68 is worthy of observation, from its having a knotted fillet round the head. The majority of these pins came from the crannoges in the neighbourhood of Strokestown. Nos. 33 and 34, from that locality, were—*Presented by Dr. R. R. Madden*, and No. 37 by *A. Lawder, Esq.* (See Proceedings, vol. v., p. 219.) Nos. 42, 57, 61, 62, 79, 97, 164, and 139, were found in the Ardkillen crannoge (see p. 226). Nos. 66 to 72, and 75, 78, 80, 81, 82, 83, and 87, were found in Christchurch-place, Dublin city. All the other pins on this Tray were

obtained from some of the crannoges mentioned above, and described at page 225.

For the catalogue of the other articles on Tray **B**, see pages 264 and 274, &c.

Tray C, Miscellaneous Bone Articles, Pins, Knives, and Ornamented Plates.—The top row consists of fifteen pins, numbered from 304 to 318, and varying in length from the first, which is a little more than 3 inches, to No. 311, which is above 9 inches long. Nos. 304 and 305 are small bone pins, having decorated and attached heads (see Figs. 212, on p. 333, and 213, at p. 334). Nos. 306 to 309 have oblong heads, perforated and ornamented. No. 310 is $8\frac{1}{4}$ inches long, and has a round, perforated head. No. 311 is $9\frac{1}{8}$ inches in length, and ornamented with small indentations all over the shank as well as the head. No. 312 has a plain, square, perforated head. No. 313, ditto, the shank ornamented. No. 314 is a plain bone pin, $6\frac{1}{2}$ inches long, with a perforated head. No. 315, ditto, with oblong, ornamented head. No. 316 is a very rude bone pin, $4\frac{1}{4}$ inches long, with a perforated head. No. 317, ditto. No. 318, ditto, and only $3\frac{3}{4}$ inches long. All these bone pins, together with the other articles on this Tray, to No. 345, were found in the Ballinderry crannoges, described at p. 226, and were purchased by the Academy from a collector in the summer of 1858. No. 319 is a bone knife, $7\frac{1}{2}$ inches long, decorated upon the blade and handle.

Here the bone plates, numbered 320 to 345, described at page 342, intervene, and, with No. 319, occupy the second, third, and fourth lines on this Tray. Nos. 346 and 347 are two thin, bone pins, each about 8 inches long, formed out of mammal fibulæ, in which the natural enlargements of the bones at one extremity have been formed into oval heads. Their shanks have been scraped down to very thin, fine spikes. They are of the natural colour of the bone. No. 348, and the five following pins, procured, through a collector, from the Ballinderry crannoge, county of Westmeath, in March, 1860, present an entirely new character of bone pin, and no other specimens, resembling them either in form or ornamentation, have come into the Museum. They are all stained of a dark colour, apparently by artificial means, and four of them have bone rings, thinned at one point for passing through a slit in the

looped head, thus showing that this loop is not a turn over of the bone when in a softened state, or owing to any chemical process. No. 348, figured on page 334, represents all the peculiarities of these pins so faithfully as not to require any further description. No. 349, a dark-coloured, round pin, $5\frac{1}{2}$ inches long, decorated in the shank, and having a square-edged ring-head like the foregoing. No. 350, ditto, 4 inches long, with a four-sided, ornamented shank, and a ring passed through a loop in the head. No. 351, ditto, 5 inches long, has a ring passed through the head. No. 352, a dark-coloured, circular, bone pin, $4\frac{1}{2}$ inches long, in which the hole for the head appears to have been cut through, without a slit for passing in the ring. No. 353, a dark-coloured, bone pin, 5 inches in length, decorated, square in the shank, and having a double perforation at the top, like some of the bronze pins on Tray **XX**. No. 354, a plain, bone pin, perforated, and $2\frac{1}{2}$ inches long. No. 358 and 359, a dark-brown-coloured bone knife and fork, referred to at page 267; the former is $6\frac{1}{2}$, and the latter $7\frac{1}{2}$ inches long. They are in the most perfect state of preservation, and do not appear to have ever been used; they were found, along with the bone pins in the same row, in the Ballinderry crannoge, and, from the sharpness of the angles and the extreme similarity in the ornamentation, it would seem that there was a manufactory of such articles there. Their handles are square, and decorated with the domino-ornament. The fork has five prongs, and measures $1\frac{1}{4}$ inches across the blade. The handle of the knife bears some resemblance to the large, hollow bone, No. 36 on Tray **A**, figured and described at page 343. The blades of both these articles are formed of separate pieces, fastened by tangs into the handles, and originally secured with cross-rivets. No. 360, a bone bead, $\frac{1}{2}$ an inch wide. No. 361, ditto, $\frac{7}{8}$ ths in diameter; both were found in the River Glyde, below Castle Bellingham, county of Louth, and were—*Presented by the Board of Works.* (See Proceedings, vol. vii., p. 180.)

Pendants of the teeth of animals, decorated bones, shells, coral, and glittering objects of all kinds, have been used by the human race, either singly, or attached to necklaces, in all countries from the earliest period. A few objects, apparently

belonging to this variety of ornament, may be seen on the centre of Tray **B**, numbered from 194 to 198, both inclusive. That represented the full size in the accompanying illustration is of ivory, perforated at the small end, carved and pleasingly decorated on the sides, like some of our gold ornaments.

The following is a list of the other articles of this

description on Tray **B**.

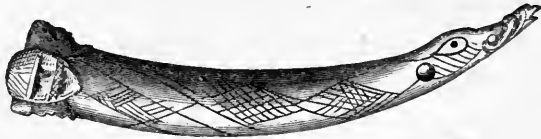


Fig. 216. No. 197.

Nos. 194 and 195 are curved walrus tooth pendants, each about $4\frac{1}{2}$ inches long, and perforated at top; they were found in Ballygoran Bog, parish of Laraghbryan, county of Kildare. No. 196 is a perforated bear's tusk. No. 197, the ivory pendant, 3 inches long, figured above (216). No. 198, a piece of highly polished bone, 4 inches long, and $\frac{1}{4}$ inch thick, like a slender knife handle, but solid. It was found in one of the chambers of the great tumulus at Dowth, on the Boyne, county of Meath, opened in 1847.

Beads and rings of bone and horn have been found in several of our crannoges, but have not been preserved by the collectors as well as the pins and combs. At the bottom of Tray **C** may be seen two small turned bone beads, Nos. 360 and 361 (see page 338). Such objects are generally barrel-shaped, and either formed parts of necklaces, or "beads" used for religious purposes.

SPECIES VI.—AMUSEMENTS.

Chess, *Fithcheall*, was a game well known to the ancient Irish, and is frequently alluded to in our histories; but there are not as yet in the Museum of the Academy any specimens of ancient chess-men sufficiently characterized by their carvings, to determine their precise use, although the bone junks forming the last row on Tray **B**, from No. 287 to 303, may have been used as pawns in that game. These seventeen

pieces of bone, which from their smoothness appear to have been much handled, average about an inch in height. In Dr. O'Donovan's introduction to the "Book of Rights"* may be found many curious references to the game of chess amongst the Irish, and also an engraving of an antique chess-king from the collection of Dr. Petrie. Chess furniture, such as the checkered board, and also the pieces, are frequently referred to in ancient Irish works; and we read that when Muirchertach of the Leather Cloaks carried off the body of Cerbhall, King of Leinster, he caused a chess-board to be formed out of his bones.†

The flat decorated disks, in the penultimate row of Tray **B**, from No. 264 to 273, both inclusive, were either used as draughtsmen, or employed as marking counters.

SPECIES VII.—MUSIC.

ALTHOUGH the hollow cuticular horns of oxen must have been in common use as musical instruments among the early Irish,‡ the perishable nature of the material would preclude the possibility of those of any great antiquity coming down to the present day; so that the only articles of this species in the Museum of unquestionable use, are the harp-pins found in the Strokestown crannoge, and one of which is here figured the natural size (see No. 2, on "Find" Tray **C**, on the ground-floor).



Fig. 217. No. 2.

* Chess-men were also enumerated amongst the articles presented by sovereigns to their chieftains in this most interesting historic document,—a work, beyond all others of its class, descriptive of the social condition of Ireland—its state policy—the manners and customs of its inhabitants—their dress and manufactures,—as well as the luxury and artistic tastes of the times to which it refers. See also page 265.

† Annals of Clonmacnoise. See also Miscellany of the Celtic Society, page 161.

‡ O'Sullivan Mór is represented on the sculptured stone at Dunkerron Castle, Co. Cork, blowing a horn of this description. (See "Kilkenny Archæological Society's Journal," referred to at p. 330.)

The perforated metacarpal bone, No. 39, on Tray **A**, figured and described among the miscellaneous articles at page 344, may have been part of a musical instrument; but its precise use is as yet undetermined.

SPECIES VIII.—MONEY, AND THE MEANS OF BARTER; and SPECIES IX.—
MEDICINE—

HAVE no representative articles among the antiquities composed of animal materials; and those objects of that class devoted to Religious purposes (SPECIES X.), will be considered under the head of Ecclesiastical remains.

SPECIES XI.—SEPULTURE.

WITH most of the cinerary Urns, where any care has been taken in their removal, or with which we have received a faithful account, fragments of burned bones have been discovered, as already stated in the description of these articles at page 173. Where sufficient anatomical evidence remains, we find that the great bulk of these incinerated bones are human; but in some instances, we have also been able to detect those of both mammals and birds. (See Proceedings, vol. iii., page 262.) In some cases, the bones, both of men and animals, in a partially torrifed state, together with fragments of charcoal, have been found outside the urn in the stone chamber, and occasionally in the ground adjoining; and were evidently the remains of sacrificial ceremonial. A quantity of these incinerated bones, forwarded from time to time to the Academy, and chiefly along with urns, are placed in the wooden model of a tomb in the bottom of the end glass-case of the Eastern gallery (referred to at pages 85 and 268).

SPECIES XII.—MISCELLANEOUS.

AMONG the miscellaneous articles in the collection of manufactured animal remains are eighty thin plates of bone of a great

variety of shapes, and possibly some diversity of purpose. They have been arranged on Tray **B**, from Nos. 199 to 252 inclusive, and on Tray **C**, from Nos. 320 to 345. In length they vary from one to five and a half inches; some are triangular, others nearly square, and several very irregular; but the majority are oblong, and all more or less decorated on the outer smooth, convex surface with a number of circular indentations and dotted lines. Each object has also several perforations; and the accompanying illustrations (drawn two-thirds the natural size) show the great variety which exists in the form of these plates. While in some respects they resemble in size, shape, and ornamentation the small stone articles de-

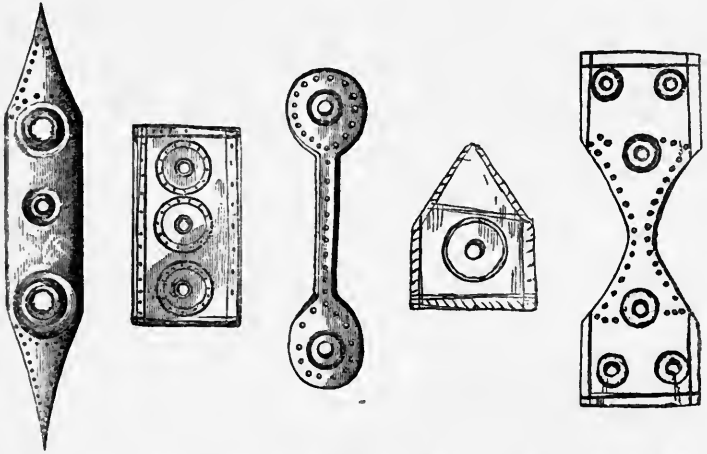


Fig. 218. No. 223. Fig. 219. No. 323. Fig. 220. No. 215. Fig. 221. No. 199. Fig. 222. No. 341.

scribed at p. 125, and which would appear to have been used, either as toys, amulets, or in some description of game, a more probable use may be assigned to these bone plates—that of the decoration of small boxes or caskets. The Abbé Cochet has described similar articles which were found attached to small boxes in excavations recently made in Normandy.*

* *Sepultures Gauloises, Romaines, Franques, et Normandes.* Paris. 1857. P. 244.

One of the rudest articles of this description in the Museum is the spatula-shaped bone, here figured one-half the natural size, and perforated with four holes, as shown in the accompanying illustration, Figure 223. We do not possess any precise information as to the circumstances under which these bone objects were obtained, beyond the fact that the majority of them were procured from the debris of the Ballinderry and Strokestown crannoges.

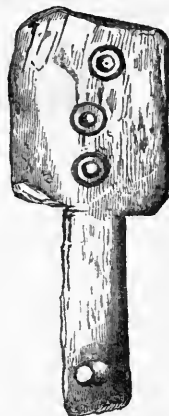


Fig. 223. No. 223.

Amongst the miscellaneous articles upon Tray **B** is a curious ovoid piece of hard, polished bone, No. 226, shown in the accompanying woodcut (Fig. 224). It is $2\frac{1}{2}$ inches in the longest diameter; is perforated with ten holes of different sizes, and may have been used for passing threads or cords through, either in weaving, netting, or lace working. It was procured along with the bone plates enumerated above. Nos. 229, 230, and 231, on Tray **B**, are the epiphyses, or centres of ossification on the articulating surfaces of the long bones of animals, and which are unconsolidated with the shaft during very early life. They are perforated, and may have been used either for ornamental or utile purposes, such as those suggested for No. 226. Nos. 232 to 252 are small decorated bone plates of a dark-brown colour, apparently identical in purpose with those already figured on page 342.



Fig. 224. No. 226.

Although the perforated bone, No. 36 on Tray **A**, already mentioned at pages 263 and 341, was, in all probability, used as a musical instrument, still, as we want authority for this assertion, it is safest to arrange and describe it among the articles of a miscellaneous or as yet undetermined character. The accompanying figure of this bone is drawn one-third the natural size, the original being 8 inches long. It is apparently

the shank of a deer, is hollowed artificially throughout, and perforated with nine holes, which pass from one side to the other, and are decorated with circular indentations; the upper



Fig. 225. No. 39.

hole, which is larger than any of the others, is surrounded with a double ring. This bone is likewise decorated with dots and lines. If it was the top member of a lute, or small, rude harp, these holes might have been used for holding the pins to which the strings were fastened.

In Rail-case **H** may be seen three decorated bones, the precise use or object of which being as yet conjectural, they have been placed in this species. Few objects in the Academy can compare with them in interest, and, so far as published records are available, they are unique. No. 28, Fig. 226, a leg bone, probably of a deer, $8\frac{1}{2}$ inches long, covered with carving, and highly polished, was procured from one of the Strokes-town crannoges. No. 29, Fig. 227, is also a leg bone, but stained of a dark-brown colour, apparently from lying in peat, and is in the natural state in all respects, with the exception of the carvings on its side. It was found in the Lagore crannoge, county of Meath, and was procured through Mr. Wakeman. Its polished surface shows how much it had been handled. In addition to the well-cut illustrations represented the natural size by Figures 236, 237, and 238, on page 346, there are various devices traced upon the under concave surface of this bone with a graver or other sharp tool—the original sketches or unfinished drawings of the artist at the time this article was lost. No. 28 has also carvings on the convex side, similar to the foregoing; but the designs are somewhat different, although not inferior in workmanship; the surface of the bone is not, however, in such a good state of preservation as in No. 29. No. 30, Fig. 228, is a fragment of

the scapula of a sheep or deer, carved on the inferior surface; it is 7 inches long, and marked "G. 316" in the old manuscript registry of the Museum. The engravings upon it, although well drawn, are not so carefully executed as on either of the foregoing, and, as may be seen by Figures 239 to 244, on page 347, they are of a totally different character. They are shallower,—the texture and thinness of the bone not per-



Fig. 226. No. 28.



Fig. 227. No. 29.



Fig. 228. No. 30.

mitting of deeper cutting. In addition to the carvings shown by Fig. 228, there are several others upon the lower side of the crest of this bone. To those engaged in the study of Irish decorative art these articles are of very great interest. From the carvings on No. 29 may be printed very clear, sharp, and accurate impressions, in the same way that proofs are taken from a woodcut.

While the foregoing illustrations afford us good ideas of these bones themselves, and of the situation, relative position, and comparative size of the carvings, which are all deeply cut in with a graver, the following fac-similes present us with the details, as well as the differences in artistic style, in each va-

riety of ornament. These illustrations are fac-similes of those embossed patterns on No. 28, Fig. 226. They are included



Fig. 229.

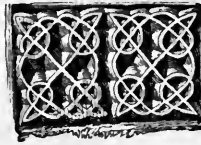


Fig. 230.



Fig. 231.

within straight lines, forming portions of squares or triangles.

A few of the engravings on the bone, marked No. 29 (Fig. 227) are somewhat of the same class of ornament, as shown in the four following cuts, which, with those already described, afford the modern artist good specimens of that peculiar



Fig. 232.



Fig. 233.



Fig. 234.



Fig. 235.

scroll-work and interlacement for which Ireland was distinguished in the middle ages. But others, shown below, are included within deeply indented curved lines, and represent



Fig. 236.



Fig. 237.



Fig. 238.

animals, and that special form of spiral ornamentation and twisted strap-work, believed to be of Celtic origin,—examples of which are to be found in the initial letters and emblazonry of some of our illuminated manuscripts, and of which the Books of Kells and Durrow, already referred to at page 298, as well as some of the Irish manuscripts on the Continent, afford many beautiful specimens.*

* See Dr. Ferdinand Keller's "*Bilder und Schriftzüge in den irischen Manuscripten der Schweizerischen Bibliotheken*," in Transactions of Antiquarian Society of Zurich, 1853.

Upon the blade bone (No. 30, Fig. 228) there are thirteen devices in a more or less finished state, but differing in character and style of engraving from any of the foregoing. The



Fig. 239.



Fig. 240.



Fig. 241.



Fig. 242.

nature of this bone would not permit of as deep cutting as that employed in the two others already described. Three of these, figured above, are triangular, and two of them show that form of knotted interlacement seen in such variety and abundance, not only in our manuscripts, but upon several of our sculptured crosses and metal shrines, or worked into the tracery of early Irish ecclesiastical architecture. The other



Fig. 243.



Fig. 244.

carvings on No. 30 chiefly represent animals, of which the two annexed cuts are highly characteristic.

The artists do not appear to have followed any order or plan in the arrangement of these carvings, but simply chose the hardest and smoothest portions of the bone, and the thickest also when it was necessary to cut in deeply.

Besides the foregoing bone articles, there is, in Rail-case H, the fragment of a scapula, No. 31, probably a portion of No. 30, and which is also rudely marked on the surface.

In considering the object or uses of these decorated bones,

we must fall back on conjecture, that earliest resource in many antiquarian investigations; and the most probable one is that they were intended merely as specimens of the designer's and engraver's art; although it is possible that these patterns may have been transferred to parchment by some process with which we are not now acquainted. Impressions in relief may also have been taken from them by some plastic or soft putty-like substance, although melted metal could not have been used for that purpose without injury to the bone.

Rail-case H—at the commencement of the Southern Gallery—contains a number of articles of a miscellaneous character, which could not well be displayed on Trays. No. 1 is the mineralized horn described and figured at p. 260. No. 2, a powder flask formed out of a flattened cow's horn, and marked with the date 1691. No. 3, a small bone drinking horn, $2\frac{3}{4}$ inches long, from Dunshaughlin: see p. 265. No. 4, a small scabbard, 5 inches long, referred to as No. 1, at p. 279. No. 5, several specimens of deerskin clothing, described and figured at p. 277. No. 6, portions of tied or woven goat's-hair fringe: see p. 295, Fig. 188. No. 7, a fine, woollen, plaited band: see Fig. 189, p. 295. No. 8, two specimens of coarse, woollen cloth, described and figured at p. 295. No. 9, an ornamented bone comb (marked No. 159 in continuation of the numbering of such articles on Tray **A**) described and figured at p. 271. No. 10, a decorated bone comb, like the foregoing, from Ballinderry (No. 160). No. 11, fragment of a bone comb (No. 161). No. 12, fragment of a bone comb (No. 162). Besides the combs on Tray **A**, and these in this Rail-case, there are fragments of five others on "Find" Tray **A**, from Ballinderry, seven on "Find" Tray **B**, procured from Dunshaughlin, and twenty-two on "Find" Tray **D**, found in the Strokestown crannoges, now making the entire number of combs, either complete or fragmentary, in the Museum, at this date (June, 1860), to be eighty-two. No. 13, a small decorated bone pin, described and figured at p. 334. No. 14, a plain bone pin. No. 15, a small, circular, bone box, probably the end of a pepper-caster, $1\frac{1}{2}$ inch high, decorated with domino ornament, bottom inserted like that of a mether. No. 16, a thin, flat, decorated bone plate, like those described at p. 342. No. 17, a large,

decorated bone whorl, like those on Tray **B**. No. 18, ditto, thick. No. 19, ditto, much ornamented. No. 20, a small bone whorl. Nos. 21 and 22, two bone spoons, described and figured at p. 267. No. 23, a bone whorl. No. 24, ditto, turned white by chemical change. No. 25, a decorated bone ring, 1 inch across, and nearly half an inch wide. No. 26, a small bone junk. Nos. 15 to 20, and 23 to 26, were found in the debris of Ballinderry crannoge. No. 27, an oval horn box, shaped like the bottom of a powder horn, $3\frac{3}{4}$ inches long, 2 high, and $1\frac{1}{4}$ broad, ingeniously carved all over with a variety of devices, interlacements, and figures of birds and quadrupeds. Some of the tracings are very intricate, and well-executed, although the drawing of the animals is very rude. On one side is the date 1583. The bottom is of timber, fastened in with wooden pegs, some of which have been replaced by iron rivets. It was evidently furnished with a lid, the rivet-holes of which remain round the top edge, and the notches in the margin of the rim show how a portion of the lid might have been opened. No. 28, a decorated shank bone, Fig. 226. No. 29, ditto, Fig. 227. No. 30, a decorated scapula, Fig. 228, p. 345. No. 31 is the fragment of a scapula, also decorated. No. 32, a much-worn, woollen-sewn shoe, 9 inches long. No. 33, ditto, sewn with a thong, 9 inches long. The former was found at Knock-na-common, county of Roscommon; the latter in the bog of the Great Down, four miles east of Mullingar, county of Westmeath, and both *presented by Mr. Richard Murray*. These increase the number of shoes in the Collection to thirty-six.

The total number of articles composed of animal materials now in the Museum (June, 1860), is six hundred.



CLASS V.—METALLIC MATERIALS.

REVIEW having been made of the different articles composed of stone, earthen, vegetable, and animal material in use amongst the primitive inhabitants of Ireland, we now pass to that more advanced grade of civilization when metal became known to the Irish, and was used for weapons, tools, and personal ornaments. The introduction of metal was an era in our history, yet no record exists of the manner or period when such knowledge was acquired. Its adoption, however, was neither sudden nor universal, for, so late as the ninth century, stone weapons were still used in Ireland, and stone implements were fabricated with metal, probably even with iron tools. (See p. 74.)

The transition from the first rude instruments of flint stone or bone to the rare and costly articles of metal, must have been very gradual, and possibly extended over many centuries. At first, perhaps, the use of metal was limited to the kings and chiefs, and may have served as an indication of rank.

Neither sacred nor classical writers afford any clue to the discoveries of the ancients in metallurgy, beyond the fact that Tubal-Cain was "an instructor of all those that work in brass and iron;" that the Greeks preserved the tradition in the person and name of Vulcan the smith; and that, when Homer wrote, gold, silver, and also copper and tin, with their compound, brass, were well known, and brought to a high degree of perfection in the arts. But such discoveries were pre-

historic in Greece, Asia Minor, and Egypt; and it is remarkable that, while vague traditions respecting the inventors of other arts and sciences float through ancient history, there is not the slightest reference, of even a mythological nature, respecting the *discovery* of metals, to be found throughout the writings of the ancients.

When and how the Irish people discovered metals and their uses, together with the art of smelting and casting, has not been determined by archæologists. Whether the knowledge spread from any particular country, by the distribution of mankind, and the intercourse of nations throughout the earth, or that the Irish made the discovery for themselves independently, are questions of great interest, but on which we possess very imperfect means of deciding.

To attribute to a people so inquiring, energetic, and ingenious as the early Celtic inhabitants of Ireland, the discovery of some of our vast mineral resources, as well as the uses and properties of metals,—the mode of smelting, and afterwards the art of casting,—is allowable, when we possess no evidence to the contrary.

Traditional notions respecting the aboriginal inhabitants of Ireland are to be found in early Irish history, but chiefly in the *Leabhar Gabhala*, or Book of Invasions. Numerous extravagant reports are there given; but of the actual habits or arts of the primeval people of Ireland, we really know nothing, except what may be gleaned from their monuments, and those remains preserved in the Museum of our Academy, and other similar antiquarian collections.

The first wave of population most probably reached these shores from the nearest land of Britain or Scotland in the process of the general diffusion of mankind, after the British Isles had passed through those geological, vegetable, and zoological transitions which finally rendered them habitable to man. Whether that early race, starting from the cradle of mankind, and wandering along the shores of the Mediterranean,

passed round the coasts of Spain, Portugal, and Gaul, till they arrived at the nearest point from which the cliffs of Albion might be discerned; or, following the course of the great rivers, such as the Danube, Rhine, Elbe, Seine, and Oder, &c., that traversed the primeval forests of Europe, came by a more direct, though less easy path; or whether they reached these islands by a northern route, or crossed direct from Spain,—are mere conjectures.

It would, however, appear that various colonists, or conquerors, such as Partholon and Milesius, at different times pursuing the destiny of their race, sought the “Far West,” and finally rested in Erin, the extreme point of the old world in that direction; but no historian has shown that even the earliest of those adventurers found the island uninhabited. The two earliest of these colonists were the Firlbolgs and the Tuatha de Danann, to both of which a Grecian origin has been assigned by our bardic annalists. Shortly after the arrival of the latter, the two first memorable battles recorded in Irish history were fought,—those of the northern and southern Moytura, in the counties of Sligo and Mayo, the memorials on the fields of which, to this day, attest the truth of the statements made by the historians. In these battles the superior skill and weapons of the Tuatha de Danann prevailed, and drove the Firlbolgs to the southern isles of Aran, where those stupendous barbaric monuments of unhewn stone, erected without mortar, tend to prove that these people had then no knowledge of lime or of metal tools, although they, probably, had some copper or bronze weapons. At one of these engagements it is said that in the rear of the Tuatha de Danann army the smith was at work renewing and sharpening the weapons of the combatants. It is also related by the antiquary, Duald Mac Firbis, in his history of that people, that they knew how to smelt metals; but further, we may say with Tighernagh, the most faithful of the annalists,—“*Omnia monumenta Scotorum ante Kimbaeth incerta erant.*” In an ancient

poem, quoted by Keating, it is said that the Tuatha de Danann brought with them to Ireland the *Lia Fail*, or Stone of Destiny (now supposed to be underneath the Coronation Chair in Westminster Abbey), the sword of Lughaidh Lamhfhada, a spear, and the cauldron called *Coire-an-Daghdha*; so that it may safely be inferred they had a knowledge of metals, and hence were styled necromancers. (See Haliday's Translation of Keating, p. 199.) There are also divers indications in the oldest annals of the application of metals to the arts, where we read of Credne, the artificer, who constructed the silver hand for Nuada Airgeat-Lamh, the hero of the battle of Moytura; of Goibhnen, the smith, over whose wife the great sepulchral monument at Drogheda was erected; of Diancecht, the Irish Æsculapius; and, in somewhat later times, of the Gobban Saer, the great primeval Christian builder, to whom is traditionally attributed the erection of several of our ancient stone structures.

Unlike England, where the Roman, Saxon, Norse, and Norman invaders, each in succession, ruled for centuries, and left their remains in such abundance as nearly to obliterate all vestiges of its primeval inhabitants,—Ireland has remained, notwithstanding all her vicissitudes, in possession of her ancient language, and a greater amount of the vestiges of her early people, than any other nation in north-western Europe.

Whether gold, silver, copper, tin, lead, or iron, was first discovered by mankind in general, is questionable; but it is usually conceded that iron was the latest. Presuming that the Irish made the discovery for themselves, and became educated to a certain extent in the metallurgic art, a question arises,—which was their first discovery, gold or copper? for silver, not being found here in any considerable quantity in a pure or native state, is less likely to have attracted attention.

Gold,—in Irish, *Oz*,—which is usually found in the purest condition in grains or nodules, and frequently on the surface, often washed down the beds of streams, and by attrition kept

bright, would naturally, the soonest of all the metals, attract attention. In such a state there is every reason to believe it existed abundantly in Ireland in former times, and is even still found in small quantities in Wicklow. It is also quite possible that it existed in several rivers in Europe in very early times. Such is the condition in which it is at present obtained in many parts of Africa, where the inhabitants who gather it and bring it to the coast possess no knowledge of the manufacture of it or any other metal. The most uncultivated savage lighting on a glittering gold nugget would naturally add it to his string of decorations, and then, by simply hammering it between two stones, could flatten and shape it into any form he pleased. Thence by accident or his own ingenuity, he might learn how to smelt so very fusible as well as ductile and malleable a metal, and thus the second stage would have been achieved. Therefore, where gold existed, it may fairly be presumed that it was the metal with which men first became acquainted; and, once upon the high road to discovery, there was no limit (by means of the hammer and crucible) to the extent to which gold might be worked.

Did manufactured gold and stone weapons and tools coexist? Our history is silent on this point, and as yet, well authenticated notices of the discovery of any such combination have not been recorded. It is, however, remarkable that the first historic notice of any metal in Ireland refers to gold: for under A. M. 3656, we read in the Annals of Clonmacnois, and those of the Four Masters, that in the reign of Tighernmas, "gold was first smelted in Ireland, in Fotharta-Airthir-Liffe," or the territory of Fotharta, a woody district in Cualann or Wicklow, to the east of the River Liffey, and that the artificer's name was Ueadan. It is also stated that by him "goblets and brooches were first covered with [made of?] gold and silver in Ireland;" but that would only prove the knowledge of gilding, either in the liquid form, or, what is more probable, by plates of gold laid over the article, such as we

observe in counterfeit rings of great antiquity, and in some antique fibulæ which have come down to the present time. A similar application of gold may be seen in some of the Scandinavian breast-pins. It is, moreover, remarkable that most of the early forms of ornamentation, consisting of lozenge-shaped, chevron, zig-zag, or straight-lined patterns, together with volutes, concentric circles, and spiral lines, found upon our earliest stone monuments, and clay urns, of undoubted heathen origin, are also the forms of decorations chiefly observed in our earliest and simplest golden ornaments and bronze celts.

Topographers have not yet determined the precise limits of the Fotharta Cualann, but it was undoubtedly near and probably to the east of the source of the Liffey. Upwards of three-and-thirty centuries elapsed without any further reference to native gold occurring, in either our ancient Annals or modern history ; not even the most extravagant of the Fenian romances alluding to the existence of the metal in Ireland, although the authors decorated the heroes of these tales with oriental splendour. In the year 1796, however, in the same part of Wicklow, perhaps on the very site of the furnace of Ucadan, upwards of £10,000 worth of unwrought native gold was obtained in about two months, and small quantities have, from time to time, been gathered there ever since. The subject of gold-working shall be considered in detail, when describing the collection of ornaments of that metal. Moreover, although gold was, for the reason assigned, in all probability, the metal first known to the Irish, the wrought specimens thereof which have come down to the present time do not exhibit the same simplicity of design and workmanship as those of copper and bronze ; and, being all objects of personal decoration, the weapons formed out of other metals claim a prior attention in the order of this Collection.

COPPER, *Umha*.—As yet scarcely any notice has been

taken of our Irish copper weapons, apparently the forerunners of the mixed metal—bronze or brass. The only copper implements of very great antiquity in the Academy's collection are some celts, evidently of the very earliest pattern and greatest simplicity in construction, a couple of battle-axes, a sword-blade of the curved broad shape, usually denominated scythes, a trumpet, a few fibulæ, and some rudely formed tools. There can be little doubt that these copper celts are the very oldest metal articles in the Collection, and were probably the immediate successors of a similar class of implement of stone. They may, however, be considered along with those of bronze.

We have no notice of the discovery or first working of copper in Ireland, although it is found here in small quantities in a native state; but there are traditions of copper mines having existed from a very early period, and traces thereof have been found in the counties of Kerry and Cork, to which allusion has already been made at page 85, in describing the stone tools discovered therein. Both copper and cobalt are still found at Mucross. And among the wonders of Ireland related in the edition of the Irish Nennius, published by the Archæological Society, we read of Lough Lein, now the lake of Killarney, being surrounded by four circles, viz.:—one of copper, one of tin, one of lead, and one of iron. (See p. 220.) In the present day copper abounds in Ireland, and is chiefly obtained from the counties of Wicklow, Waterford, Cork, Kerry, Tipperary, and Galway: and in the year 1855 as much as 1157 tons of that metal, exported from Ireland, were sold at Swansea.*

Although we do not possess sufficiently large quantities

* Gray copper ore is chiefly found in Cork and Kerry, and the yellow ore, or copper pyrites, in Wicklow, Waterford, Kerry, Cork, and Tipperary; native copper is even still found in small quantity in the mines at Bonmahon, county of Waterford. The art of smelting copper, though now more complete than that of any other metal, has been only very recently brought to perfection.

of pure native copper, such as the Greenlander, Esquimaux, and certain North American tribes cut and hammer, without smelting, into arrow-heads, nails, and other tools and weapons, still the copper ore, as it here exists, is sufficiently attractive to call the attention of the inquiring eye of a half civilized man. It would, however, be mere speculation to consider now the question of breaking the ore and its matrix into small fragments,—roasting it, and then, by means of a flux, a powerful heat, and a peculiarly constructed furnace, smelting and casting it, as employed in the present day. We are quite in the dark as to the method employed by our ancestors. Upon the steppes of Tartary, and in some of the wildest parts of Russia, the remains of very ancient copper furnaces of small size, and of the most rude construction, have been discovered. It is remarkable that so few antique copper implements have been found, although a knowledge of that metal must have been the preliminary stage in the manufacture of bronze. The circumstance may be accounted for, either by supposing that but a short time elapsed between the knowledge of smelting and casting copper ore, and the introduction of tin, and subsequent manufacture and use of bronze; or from the probability of nearly all such articles having been recast and converted into bronze, subsequent to the introduction of tin, which renders them harder, sharper, and more valuable.

The softness of unalloyed copper was thus, in process of time, corrected by the admixture of tin, of which, together with minute quantities of lead, all our ancient bronze articles are composed. When this discovery was made, or this art first introduced, is unknown; but the circumstance of our proximity and early intercourse with Cornwall, the great emporium of that metal for the ancient world, as well as the fact of tin-stone being found in small quantities in Ireland, points to abundant sources from whence the hardening element of bronze could have been with facility obtained.

The Irish name for copper is *umha*, a pure Celtic word,

and that for tin is *stan*, like the Latin *stannum*. Whether we had originally sufficient native tin, or imported it from England, is uncertain, but there was a period when, according to the comparative value of the two metals, the one must have been nearly as plentiful in the Irish market as the other. Thus in a very ancient manuscript in the library of Trinity College, we read that “ a pinguinn is the value of an unga of white bronze [*bán umha*, probably tin]; and half a pinguinn is the value of an unga of red bronze [*derg umha* or copper]; and the unga of bronze [*umha*] is the same weight as the unga of silver [*airgead*], and the red bronze is the same value as the tin [*stan*]; and eight grains of wheat is the weight of a pinguinn.”*

Dr. Charles Smith, in his “History of Kerry,” page 125, says he collected tin in that locality. Sir Robert Kane has returned the following answer to a question respecting Irish tin:—“Tinstone is found in small quantities in the sand and gravel of the rivers in Wicklow, to the south and west of Avoca, principally those streams coming from Croghan Moira into it, as the Aughrim and its branches. The quantity is not large, and the supply uncertain, and hence, at the present prices of tin, quite useless. It appears in that place as in most other countries curiously associated with native gold. The tin-stone, or native peroxide of tin, or stannic acid, is the usual ore of tin, worked from similar sources in Cornwall.”

The earliest notice of silver related in our Annals is that given at page 354, where it is associated with gold. A brilliant white metal much used in jewellery, and denominated *Findruine*, was known to the Irish in early times, the composition of which will be considered in the description of articles composed of that substance. There are a few trivial articles of lead in the Museum, but not of any great age.

Several chemical examinations of metal objects of anti-

* Extract supplied by Mr. Curry from MS. H, 4, 22, T. C. D.

quity have been made at different times during the past century, both in this country and in England, with the results of which the learned are acquainted; but, for the purposes of this Catalogue, the very careful analysis made by Mr. J. W. Mallet, of articles in the museum of the Academy, published in vol. xxii. of the Transactions, will suffice. The papers of the late President Dr. Robinson, as also those of Mr. Donovan, Dr. Sullivan, and Mr. Cooke, in vol. iv. of the Proceedings, may be referred to with profit by those anxious to be more particularly informed upon this subject.*

In sixteen specimens of antique bronze, consisting of celts, spear-heads, swords, daggers, chisels, rings and bells, examined by Mr. Mallet, it would appear that the amount of tin varied from 1 to as much as 13·88 per cent., and there does not appear to have been any fixed proportion maintained between it and the copper. Small quantities of lead were found in some. No. 16, on Tray **A**, is the celt referred to as No. 2 in Mr. Mallet's analysis, in which there was only 1·09 per cent. of tin:—"A proportion," says the author, "so small that it might be supposed to be derived from the addition of fragments of old bronze to the copper, or from imperfect reduction of the ore." Mr. Phillips obtained as much as 97·71 per cent. of copper, and 0·28 of sulphur, from an Irish spear-head; therefore, it must have been like our copper celts, almost entirely composed of that metal. Leaving the question as to how 1 or 2 per cent. of any foreign metal became mixed with the copper to chemists to decide, and taking the physical properties and ostensible colour of the metal as our guide, the copper celts have, with few exceptions, been separated and arranged on

* See also Dr. George Pearson's careful analysis of "ancient metallic arms and utensils," some of which were Irish, published in the Philosophical Transactions for 1796; Mr. Alchorn's Analysis, in 1774, printed in Lort's paper on Celts, in the *Archæologia*, vol. iii.; see also vol. xviii. of that work; likewise "The Pre-Historic Annals of Scotland," Edinburgh, Sutherland and Knox; and Mr. Phillips' learned paper in the "Quarterly Journal of the Chemical Society," for October, 1851.

Tray **A**, and thereon amount to 26. It is remarkable that almost all these copper celts appear to have been formed upon two types. There are 30 copper celts altogether.

A special description of bronze, of a peculiar golden lustre, depending, it is supposed, on the admixture of a certain proportion of lead, having been observed in a collection of articles found at Dowris, in the King's County, it has since received the name of "Dowris Bronze." The Romans, we know, imported from Cyprus a copper called *coronarium*, which was given a golden colour by means of ox-gall. Zinc was mixed with copper for making some of the brazen articles in the Collection, especially the culinary utensils of later times. See also description of No. 9, Class II., page 158.

The Metallic Collection commences with the copper and bronze specimens in the third Compartment of the Southern Gallery, occupies all the Western Gallery, and passes down from thence throughout the whole of the lower story—the bronzes ending at the northern door of the Library.

ORDER I.—COPPER, BRONZE, AND BRASS.

SPECIES I.—WEAPONS, AND WEAPON TOOLS.—BRONZE I.

COPPER and bronze Celts, axes, and palstaves, occupy the entire of the third Compartment in the Southern Gallery, and also Rail-cases **K** and **L**. They form one of the most complete collections in the Museum, and are undoubtedly the most numerous assemblage of such implements known to the learned in Europe. When the stone-weaponed people acquired a knowledge of the metallurgic art, it would appear that they still retained the same principles of design, were influenced by similar habits of thought, and adopted the same mode of warfare,—the type of the old stone celt being preserved in the form of the newly introduced and gradually adopted metal weapon. Both stone and copper, or bronze, were, in all probability, for a long time coexistent, the former slowly giving way to the latter, as the matchlock was replaced by the musket, and,

after many years, by the rifle. In no other class of implement is the process of development more truly represented than in the gradual transition of the metal celt, and palstave, from the rudest and simplest to the most perfect form.

The term *Celt*, from *celtis*, a chisel,* is quite conventional, but, having been adopted more than a century ago to designate those weapon-tools in the shape of axes, hatchets, adzes, and chisels (formerly called chip-axes), and preserved by authors since, it would be attended with much inconvenience to alter it now.† That they are the most ancient weapons, next to those of stone, may be gleaned from the fact of their being almost the only antique implements of any kind formed out of copper; from their great similarity, both in shape, use, and mode of adjustment, to the stone celts; and from there being as yet no name discovered for them, and no reference to them to be found in Irish history, as there is to swords and spears.

The entire Collection at present (July, 1860) amounts to 688, of all forms and sizes, including deposits, but not the celt-shaped tools on Tray QQ.

Upon careful examination, it has been found that thirty of the rudest, and apparently the very oldest celts, are of red, almost unalloyed copper.

The term *paalstab* or *palstave*—applied to the long, narrow-winged celt—is of modern introduction, and still of very limited acceptance; it is of Scandinavian origin, and said to have designated the weapons employed by some northern tribes for battering the shields of their enemies. (See Worsaae's "Primeval Antiquities.") Iron implements, like our *loys*, and called

* See the Rev. Dr. Todd's notice of the word "*Celt*," in his translation of Baron Bonstettin's paper, in the "Proceedings," vol. vii. p. 42.

† See Plot's History of Staffordshire; Neville's Paper in the Philosophical Transactions for 1732; Borlace's History of Cornwall; and Lort's Paper on Celts, A. D. 1779, published in the fifth volume of the Archæologia. Vallancey, and some Irish writers of his school, called these Celts *Tuagh Snaighte*, but on what authority they do not say. See *Collectanea*, vol. iv., p. 55.

paalstabs, are still used in Iceland, either for digging the ground or breaking the ice. When, however, we stand—as in the Gallery of this Museum—before a collection of some hundreds of these implements, considered either as simple articles of war, or, like their predecessors in stone, as weapon-tools, and pass each series in review, we perceive that these so-called *paalstabs* are but a necessary and gradual link from the simple flat axe-blade, passed through a wooden handle, to the highly finished socketed celt, richly ornamented, and supplied with a loop for securing it to the shaft, which was inserted into it.

The simplest form of celt is a cuneiform or wedge-shaped piece of metal, evidently formed on the type of the large stone celt; longer than it is broad; curved on its sharp-cutting, hatchet face, and square or rounded at the opposite, narrow, and blunted extremely. In length, this weapon varies from upwards of 12 inches, as in No. 27, Tray **B**, shown by Fig. 247, on page 364, which is the largest yet discovered in Ireland, to No. 524 on Tray **R**, a small socketed celt, figured at page 386, which is scarcely one inch long.

For the sake of arrangement, the celts in the Academy's Collection, although presenting more than a dozen varieties of form, may all be classed under three different heads: first, the plain hatchet-shaped piece of metal which passed into and probably through its wooden handle—this may be denominated the *Simple flat celt*; secondly, the *Winged celt*, or *Palstave*, which mutually received and was received into the handle; and thirdly, the *Socketed celt*, into which the handle was inserted, as shall be explained hereafter. These three varieties pass insensibly into each other. The following illustrations represent typical forms of the simple flat celt, of which there are now in the Collection about 60 well-marked specimens, chiefly arranged on Trays **A**, **B**, and **C**, on the top shelf of the third Compartment of the Southern Gallery, and in Rail-case **K**.

COPPER CELTS.—Figures 245 and 246, drawn from Nos. 1 and 10, on Tray **A**, present us with the two principal va-

rieties of the pure copper celt, and both of them bear a great similarity to their stone predecessors of the rudest description, like those found in the Shannon, and described at pages 49 and 69. No. 1, cleaned and drawn one-half the size of the

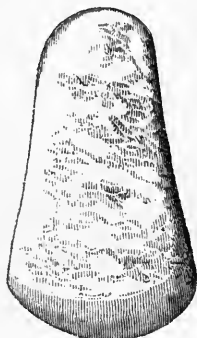


Fig. 245. No. 1.

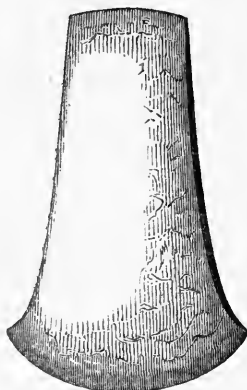


Fig. 246. No. 10.

original, is only $\frac{5}{16}$ ths of an inch across the thickest portion, and fines off to the edge all round. It was—*Presented by Lord Farnham*. No. 10, Fig. 246, which is in good preservation, is 6 inches long, $3\frac{3}{4}$ wide across the broad and remarkably sharp-cutting edge, and $1\frac{7}{8}$ at the smaller end, which is about the sixteenth of an inch thick, while in the central portion it is upwards of a quarter of an inch in thickness. One side is a little fuller than the other, but in all other respects it is marvellously symmetrical, a circumstance observable, with few exceptions, throughout the entire Collection of metal celts. Like all the other copper celts, it is totally unornamented, but it has been cleaned for the purpose of showing the colour of the material, having had, when it came into the Collection, the usual brown crust or oxidation peculiar to these copper specimens, and, for the most part, distinguishing them from the greenish verdigris hue on many of the bronzes. It was found in the county of Waterford, and presented by the Mayor of Waterford in 1853.

Proportionate to its size, the copper celt is usually thicker and rougher on the surface than that made of bronze, and nearly all the former have one side smoother than the other, as if they had been cast in single-stone moulds. A few of these copper celts are lunette-edged, as Nos. 15 and 19, but others are only simple wedges of cast metal. The cleansed specimens show that considerable variety of colour exists among them. For the details of these copper celts, see the descriptions of Tray **A**, at page 396.

BRONZE CELTS, of the first variety, are well represented by the accompanying illustration, Fig. 247, from No. 27, on

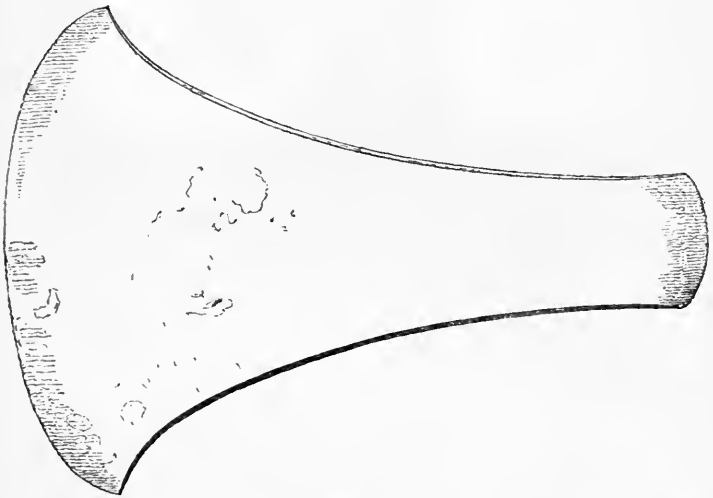


Fig. 247. No. 27.

Tray **B**, the largest specimen which has yet been recorded. It is $12\frac{1}{4}$ inches long, $8\frac{1}{2}$ broad in the widest part, three-eighths of an inch thick, and weighs 4 lbs. 14 oz.; it is a good type of a number of axe-shaped celts arranged beneath it on Tray **B**. It was found in the ruins of Kilcrea Castle, county of Cork, and—*Presented by Sir Matthew Barrington, Bart.*

The long, narrow celt, made by prolonging the hinder part which passed into the wood, is well shown by the accom-

panying illustration, drawn one-half the natural size, from No. 72, on Tray D, a beautiful cleaned specimen, composed

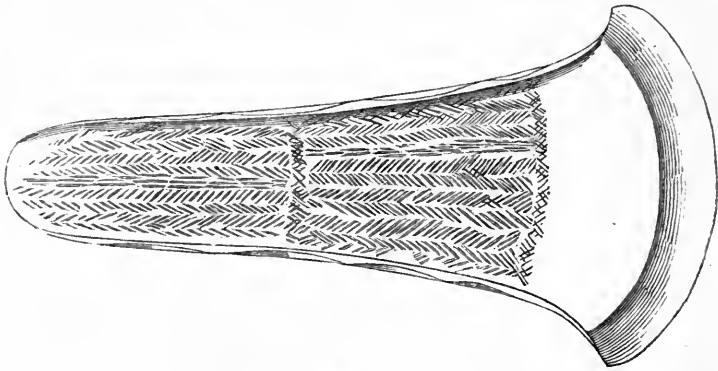


Fig. 248. No. 72.

of gold-coloured bronze, and ornamented both on its sides and edges; $7\frac{1}{2}$ inches long and $3\frac{3}{4}$ thick. Of the same variety of the long, narrow celt, are the three specimens shown below, two of which likewise present us with types of orna-

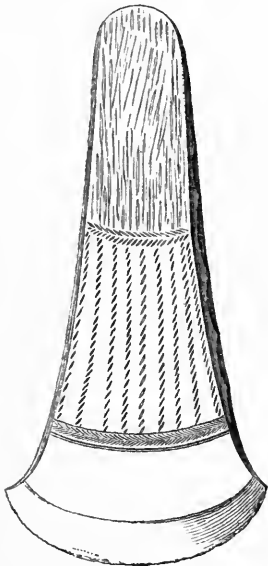


Fig. 249. No. 608.

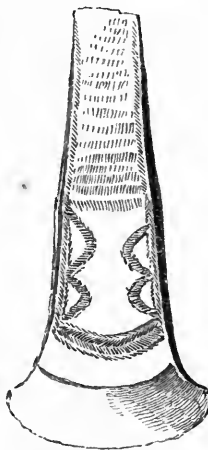


Fig. 250. No. 135.

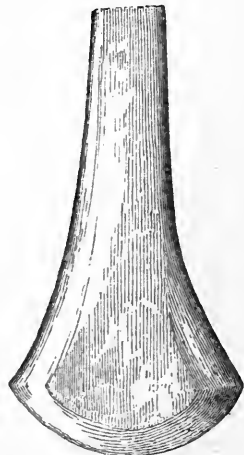


Fig. 251. No. 145.

mentation, to be referred to hereafter in the general description of the decoration of celts. Fig. 249, from No. 608, in Rail-

case K, represents a very perfect specimen, of a light green colour, $8\frac{1}{2}$ inches long, 4 wide at the blade end, half an inch thick, and decorated on both sides and edges. The patina on its surface has preserved all the sharpness of the ornamentation. Fig. 250, from a specimen of the same class, No. 135, on Tray G, is 7 inches long, 3 wide, and highly decorated; it was found at Glencullen, county of Dublin. But No. 145, Fig. 251, on Tray G, although it may be classed among the long, narrow celts, is very peculiar, and, until a portion of it was cleaned, presented all the external appearance of copper. The alloy of tin is, perhaps, very slight, and it would appear to belong to a rude and early type; like several of the copper celts, it fines down to a rounded edge along the entire margin. It is 7 inches long, and $3\frac{1}{2}$ broad in the widest portion. We possess two others, No. 43 on Tray C, and No. 144 on Tray G, of precisely the same form. The number of long, narrow celts in the Collection is 132: of these, 126, from No. 57 to No. 173, are displayed on Trays D to H, and 8 are placed in Rail-case K.

As this classification is founded on the mode of fixing these implements in their handles, it is necessary to digress, and explain that process, before we examine the two other varieties,—the winged and the socketed celts.

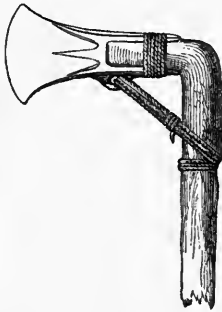
Left without historic reference, and with but few pictorial illustrations, we are thrown back upon conjecture as to the mode of hafting and using the metal celt. As already stated, this weapon-tool is but the stone implement reproduced in another form; and, having once obtained a better material, the people who acquired this knowledge repeated the form they were best acquainted with; but economized the metal, and lessened the bulk, by flattening the sides. In proof of this repetition in metal of the ancient form of the stone celt, may be adduced the fact of a copper celt of the precise outline, both in shape and thickness, of one of our ordinary stone im-

plements having been found in an Etruscan tomb, and now preserved in the Museum of Berlin. (See Etruscan Collection there, No. 3244.) It is 6 inches long, and $2\frac{1}{2}$ wide in the thickest portion. (See Fig. 310, p. 395.)

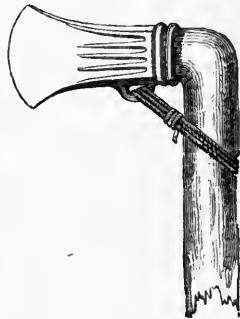
The three following illustrations, A, B, and C, serve as types of the different forms of celts, and the mode in which they were hafted. A, Fig. 252, represents a simple, flat, wedge-shaped celt, passed through a wooden handle, and secured by a ligature, possibly of hide or gut. This implement is evidently the type of our modern axe. By use, however, as a



A. Fig. 252.



B.* Fig 253.



C.* Fig. 254.

tool or weapon, it must, in process of time, have either split the handle or passed through it. To remedy this defect, a stop or slight ridge was raised upon the flat surface of the metal, generally at the junction of the posterior and middle thirds, as in Nos. 64, 72, 134, 137, &c. Still, this must have been a very imperfect barrier to the passage of the implement through the handle, and, therefore, a new plan was adopted, that of making the metal and wood pass one into the other, and thus arose what is termed the winged celt, or palstave, of which there are 211 specimens in our Collection, from No. 174, on

* Figures B and C, drawn by Mr. Du Noyer, after the pattern of those published by him in the *Archæological Journal*, vol. iv. pp. 5 and 6, have the curved portions of their handles rather too angular for the ordinary natural growth of the wood.

Tray **I**, to No. 356, on Tray **N**, and from No. 632 to No. 659, in Rail-cases **K** and **L**. Here a curved piece of wood, like a hurl or an ordinary crooked walking-stick,* was split or cut, so as to receive the metal weapon, which had a slight wing or flange raised upon the upper and lower edges of the narrow portion, to prevent its joggling or slipping up and down; and the parts, thus adjusted, must have been bound round after the fashion shown by **B**, Fig. 253. That the winged celt had, however, originally no stop, is shown by Fig. 258, on page 373. Still, a hard blow with this implement was apt to split the wooden handle, and so man's ingenuity devised a larger stop or elevated ridge near the middle, at the junction between the axe-blade, or cutting portion, and the parts which passed into and received the sides of the handle, against which they abutted. Nevertheless, the implement was imperfect, and still liable to split; and so, in process of time, the third great step in celt manufacture was achieved,—that of making the metal the sole recipient of the wooden handle, by developing the wings, enlarging and bringing up the stop, and gradually removing the septum that divided the blades of the handle, until the implement became what is called a socketed celt, of which an example is given in the illustration, **C**, Fig. 254.

This was a great step in advance; yet the implement was imperfect, because, as every person acquainted with the working of such like tools is aware, it was apt to kick, the blade or cutting edge turning upwards at each repeated blow, until it finally flew off the handle, as any badly fitted hammer, hatchet, or adze would do. To obviate this defect, a loop was added to the lower edge, on both winged and socketed varieties, and to this was attached a stay either of metal or cordage, which occupied the angle between the celt and its handle where it

* See also Mr. J. M. Kemble's Address, in the Proceedings, R. I. A., vol. vi. p. 472.

was fastened ; but by what means, whether by a ring, staple, or tying, we at present know not. However, this additional security against the flying off of the metal head was not the discovery alone of the age when the socketed celt was invented, for it is very common amongst the palstaves. It is remarkable that we find no rivet holes in any of these hollow celts ; but in some rare specimens, in other countries, a notch, and sometimes a hole at the end of the septum of the palstave has been observed, to prevent its passing back too far, and splitting the handle, whether curved or straight. It is not certain that the palstave was always attached to a curved handle, although, from the existence of the loop or ring underneath, most of the Irish ones would appear to have been so ; some were probably attached to straight handles, like chisels, or the modern small instrument usually employed for cleaning the plough ; and, in the Scandinavian collections may be seen several long slender paalstabs, some with fragments of wood remaining, which proves the truth of this conjecture.* Such implements, many of which are highly decorated, may have been employed as spears in combat ; at the same time it is not improbable that some of our large, rude, winged celts, or palstaves, may have been employed for agricultural purposes, in turning up the surface of the soil, like the mattock or hoe still in use amongst the Egyptians and other half civilized people. Our own iron *loy*, or narrow, one-sided spade, is but a development of the ancient celt.

In this inquiry as to the mode of fixing the celt in its handle, we are not left altogether to conjecture, or forced to draw upon our imagination, for, as instances of handles of wood, bone, and horn, used with stone celts, have come to light within the last few years (see Figs. 53, 160, and 161, pages 46 and 251), so have some examples of the handles of metal celts turned up, as the following notices and illustrations

* See Worsaae's "*Nordiske Oldsager*," 1859, Pl. 37, Nos. 181, 182, and 183, drawn one-half the natural size.

attest. Figure 255 is reduced from the representation of a handled celt, 4 ft. 9 in. long, carved on one of the roofing stones

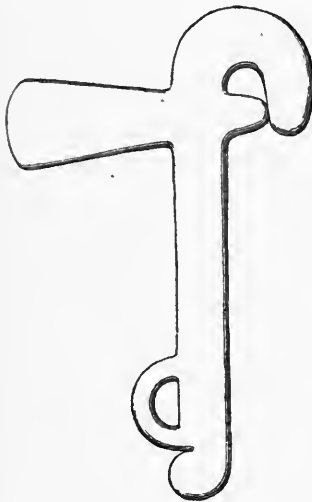


Fig. 255.



Fig. 256.



Fig. 257.

of a very ancient sepulchral monument at Lok-maria-ker, near Vannes in Brittany, for which the author is indebted to M. de Keranflech. This carving may, however, represent a stone celt, but the principle is the same.

Here the ancient Breton endeavoured to prevent the head splitting or passing through the wood by inserting the celt across the convex part of a curved stick, so that its small end rested against the concave portion of the crook. The guard, which was, probably, a flexible piece of wood fixed on the handle, evidently points to the warlike use of this implement. In the same locality was discovered another similarly sculptured stone, but without a guard. Figure 256 represents the model of a small celt attached to its handle, brought from "Little Fish River," in Africa, and exhibited to the Academy by the late Dr. Ball, in 1844. (See Proceedings, vol. ii. p. 511.) Figure 257 possesses great interest, as it is native, and is the only instance of the original handle of an ancient metallic celt

which has yet come to light. It is $13\frac{3}{4}$ inches long, and was found in the bed of the River Boyne, near Edenderry. The head metal is provided with a loop, which is worn through at one point. This curious relic is the property of Mr. Murray, of Edenderry, who has for the present deposited it in our Museum.*

Besides the foregoing, we have pictorial evidence of the celt and its curved handle in the figures carved in relief on the crosses at Monasterboice, where, from the style of drawing, they resemble the war clubs of the New Zealanders. (See Fig. 194, on page 304.†) Among the many uses to which the sharp-edged metallic celt could be applied was like that of the carpenter's mortice-chisel, as shown by the number of specimens hammered at the small end.

Some northern archaeologists hold that metal implements were introduced by a new and totally different race from those that worked only in stone. This may be true in Scandinavia, where there are no copper articles, and all the bronzes are well formed, highly finished, and many of them elaborately decorated; but it certainly is not applicable to the metallurgic art in Ireland, where the earliest implements of both these metals are of the rudest forms, and evidently copies of the stone articles of the same class; and the transition is so gradual that we can easily trace the process of development, of which no better example can be afforded than that of our grand collection of celts. Moreover, the composition of the alloy is said to be fixed and regular in Scandinavia, the metal being nine-tenths copper, and one-tenth tin, whereas in all those articles which have been analyzed in Ireland, the proportion varies exceed-

* See Rail-case L. The Academy is much indebted to Mr. Murray for the liberality with which he has allowed this and other articles from his collection to be drawn, for the purpose of illustrating our great national Museum. (See also p. 252.)

† Mr. G. V. Du Noyer has published two most ingenious papers in the *Archæological Journal*, vol. iv., upon the adaptation of the handles to both stone and metal celts, to which the reader is referred.

ingly, either because the early metallurgists had not hit off the right proportions, or had used different quantities to produce different effects in hardness, sharpness, colour, &c. Furthermore, as we pass northward, from Denmark to Norway and the top of Sweden, the amount of bronze gradually lessens, and in the former country is replaced by iron. Neither copper, tin, nor gold are found in Denmark, and no moulds of any kind for casting have been discovered there, although the spuds or *stöbeknold* are common. It would appear that the stone period was longer, and the metal one shorter and later in all these countries than in the British Isles, and Ireland in particular. In the Copenhagen Museum may be seen celts and paalstabs of iron, and of comparatively modern date; and in the central parts of Sweden the short iron hoe or pick, used by the peasantry in grubbing up roots of trees, is not much larger than, and greatly resembles some varieties of the ancient bronze celt.

With respect to the Phœnician origin of our warlike and decorative metal articles, assumed by some writers, until some proof either from authority, by argument, or by analogy, is produced in support of it, we need not discuss the question here.

The Winged Celt, or palstave, presents the greatest variety of all, as may be seen from the cuts on the adjoining page. Fig. 258 is from a simple, narrow, chisel-edged celt, No. 175, on Tray **I**, in which the side edges project into flanges, so as to form grooves for the reception of the cleft handle. It is $4\frac{1}{4}$ inches long, is perfectly plain, and not provided with a stop; the breadth of the wing is seven-eighths of an inch. Fig. 259, drawn from No. 234, on Tray **J**, $5\frac{5}{8}$ inches in length, shows both wings and stop very perfectly, the former being elliptical, and the latter rising nearly to the level of the wing. The cutting edge looks as if it had been frequently ground, and on the flat surface there is a raised cast ornament. It was *Presented by the executors of Leslie Ogilby, Esq.* Fig. 260, from No. 248, on Tray **K**, is the broadest specimen in the Col-

lection, and measures, across the centre of the straight-edged, lozenge-shaped wing, $1\frac{3}{4}$ of an inch. The stops are but slightly developed, and must have been bedded into the sides of the



Fig. 258. No. 175.

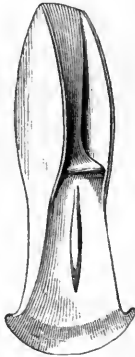


Fig. 259. No. 234.



Fig. 260. No. 248.

handle, which appear to have passed below them; and, where the wings merge into the edges of the blade, a deep, well-defined groove spreads down on its surface. Upon the external face of each wing is an oblique elevated ridge, intended, probably, to keep the tying in its place.

Among this very extensive class of celts we find many remarkable varieties, two of which are well represented by the subjoined illustrations. Fig. 261, from No. 167, on Tray **H**, $4\frac{7}{8}$ inches long by $2\frac{3}{4}$ across the broad semilunar blade, is

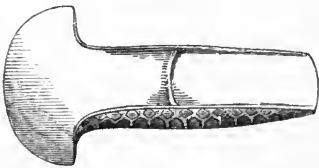


Fig. 261. No. 167.

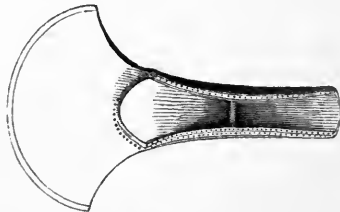


Fig. 262. No. 632.

typical of one of these subdivisions. The rounded side edges, which are beautifully ornamented in the casting with a raised hexagon pattern, project somewhat above the level of

the flat surface of the implement; and the curved stops (which, with the wings, are but rudimentary) have, like all such parts, their concavities facing the handle. There are about fifty specimens of this kind of celt in the Museum, and which are for the most part attached to Trays **G** and **H**. One of the most graceful in form, and the most perfect celt of its kind in this or any other Collection, is that represented by Fig. 262, from No. 632, in Rail-case **K**: it is $6\frac{3}{4}$ inches long, by $4\frac{1}{4}$ wide in the blade, and has been cleaned* to exhibit the beautiful golden colour of the bronze, and the fineness of its decorations. The shank portion is very narrow; the wing or flange is well developed, but the oblique stop is only rudimentary, and not likely to serve the usual purpose of that addition to the winged celt. The blade is semicircular on the cutting edge, which is beautifully sharp, and does not appear to have ever been ground or hammered; the decoration consists of minute dots, apparently formed in the mould; and nothing can exceed the fineness of the casting. It was found in the county Westmeath, and presented by Dr. Dillon Kelly, of Mullingar. This is the special form of Irish celt that was, in all probability, attached to a straight handle. It may originally have been a badge of office. There are several specimens of the same type on Tray **I** (see in particular Nos. 181, 187, 198, and 203 to 215), but they are not so large, or in such perfect preservation.

* The cleansing process employed in this and other bright bronze articles in the Museum is by carefully dipping them in a weak acid, in the same manner as a modern brass casting is cleaned after it comes from the mould. When the article has been much encrusted, it is necessary to hold it over the fire for a few minutes. The Academy is much indebted to Mr. Mooney, the brass-founder, of Ormond-quay, for much civility in this matter. Some antiquaries may think it a desecration to clean an antique metal article, as well as to remove a small fragment, for the purpose of analysis. Without, however, resorting, in some instances, to such processes, we should remain ignorant on two most interesting subjects,—the composition of the metal, and the peculiar colour and general appearance of the weapon or ornament when it came from the hands of the maker. Moreover, it is probable that all these articles were originally varnished or lacquered, like modern brasses, and that for many years such varnish preserved the golden lustre of the bronze.

Following out the theory of development in these articles, it is necessary at this stage of the inquiry to examine into the six following points separately:—The cutting edge, the stop, the wing, the side or profile view, the loop, and the socket.

The *Cutting Edge* presents great diversity, from a very slightly curved line to that of the segment of a circle, the centre of which would be about the junction of the lower and middle thirds of the length of the instrument. In the simple axe-shaped celts, and also in the socketed variety, it is seldom much curved, and in some of the latter is almost straight, or resembles that of the furmer used in turning. But in the palstave or flanged celt, we find three well-marked varieties: the saddler's knife-shape, in which the blade spreads out, sometimes to three times the width of the shaft, from which it occasionally springs at an angle (see Fig. 261, on p. 373); the lunette or semilunar form, as in Figs. 259 and 260 on that page, the former of which shows the recurved peculiarity, in which the extremities form hooked terminations, and many illustrative examples of which may be seen on Trays **G**, **I**, and **J**; and the fan-shaped, as in Fig. 262, and many specimens on Tray **I**. As in every other peculiar feature of the celt, these diversified forms of the cutting edge shade one into the other imperceptibly. Hammering would increase the hardness of this description of metal, but we do not observe any marks of such upon the cutting edges of those celts which are in a good state of preservation. They all appear to have come, like the swords, perfectly sharp from the mould. Some few, however, bear the marks of grinding and sharpening, perhaps with a whetstone, like those to be seen on Tray **MM**, in the Stone Collection, with holes at the extremities for attaching them to the person, but particularly by means of those shuttle-shaped stones, so numerous in Scandinavian collections, and which are now generally believed to have been used as rub-stones.* Some of the celts are notched, worn, or broken on

* See Nos. 58 and 59 in Scandinavian Collection, p. 133. Since that portion of

the cutting edge, but they are usually such as had remained some time in the hands of the finders, or of dealers. See remarks on No. 149, Tray **H**, p. 406.

The *Stop* commences in a rudimentary form even on plain, narrow, triangular celts, and where it could not have been of much use, as on No. 35, and as shown in No. 72, Fig. 248; but it is not seen on any of the copper specimens. It seems to have proceeded *pari passu* with the development of the wing, and is particularly manifest in the specimens on Trays **F**, **G**, and **H**. It also seems to have been coeval with the ornamentation, which in most instances it separated from the upper portion of the weapon; there are, however, exceptions to this in Nos. 72 and 136, &c. Even when the wing was fully developed, the stop still remained rudimentary, as in Nos. 187, 198, and 204, on Tray **I**; but on Tray **J** we perceive the direct object of this improvement, particularly in Nos. 212, 225, and 230. It was not of necessity associated in all instances with the wing, as Nos. 179, 196, 197, also 175, Fig. 257, page 373, have well-formed wings and no stops. At first it was a slightly raised bar, almost straight, and placed much nearer the point or small end than the hatchet face of the instrument, as in Nos. 124 and 125, on Tray **G**; it then became curved, as in Nos. 132 and 133, the concavity being always towards the handle; and in some cases it is nearer the cutting edge than the small end, as in Nos. 181, 202, and 233, on Trays **I** and **J**; also in many specimens on Tray **M**, as Nos. 300, 309, &c.; but these are rather the exceptions. As the flange or wing became fully developed, the stop was generally attached to it at the junction between its anterior and middle third. In a long series of specimens it does not rise

the Catalogue descriptive of the Stone Articles was printed, I have seen some of these shuttle-shaped stones in Scandinavian collections, encircled round the narrow edge with a band of metal, having a ring at one extremity; they were evidently used for the purpose described in the text; such an article, probably, hung at the side of every soldier, for sharpening his sword or battle-axe.

as high as the level of the flange (see all the specimens on Tray **I**), but subsequently it rises to its full height, and in some instances a little above it (see particularly Nos. 225 and 254 on Trays **J** and **K**, together with several specimens on Tray **M**). Finally, the stop assumed the character of a pocket or small side socket, into which the wood passed, the first examples of which are Nos. 249 and 252, on Tray **K**. On Tray **L** there are many specimens showing this peculiarity, as Nos. 274, 275, 276, and 284, and also some on Trays **M** and **N**, to those on the latter of which the loop had been added (see Nos. 344, 347, 349, and 351); so that, by bringing up the stop a little more between the wings, in order to close the open of the latter, and at the same time removing the septum, the socketed or recipient celt was at once formed. Of this we

have a very good example in No. 276, on Tray **L**, here figured one-third the natural size. The wings and stop form

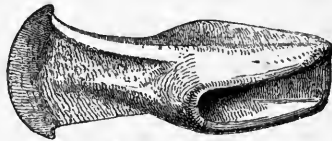


Fig. 263. No. 276.

a pouch, with a semicircular margin on each side, into which the blades of the handle fitted. Either the stop itself or the part immediately in front of it towards the blade, became ornamented in a very rudimentary state, as in Nos. 186 and 189, on Tray **I**, Nos. 212 and 230 on Tray **J**, Nos. 235 and 250 on Tray **K**, and No. 317 on Tray **M**. As the stop rose into the socket, the projection caused thereby produced a form of ornament, as may be seen in Nos. 275, 276, and 284, on Tray **L**, and No. 314 on Tray **M**. Even after the loop was added to the long-winged celt, the stop was occasionally omitted, as in No. 341 on Tray **N**. In some instances the stop is oblique, as in No. 60 on Tray **D**, and No. 632 in Rail-case **K**.

The *Flange* or *Wing*.—By raising the side edge of the simple celt over the level of the flat surface, either in casting or by hammering it into an ornament, we perceive some rudi-

ment of what afterwards formed the flange or wing, as in Nos. 29, 32, and 34, on Tray **C**, and Nos. 57, 69, and 72, on Tray **D**, but it does not take a decided shape until we come to examine the specimens on Tray **G**, when the celt itself had altered its outline from the simple, triangular, hatchet form, to the long, narrow sub-variety, with the semilunar, lunette, fan-shaped, or saddler's knife blade:—see for example, Nos. 123, 125, 128, and 133, on Tray **G**, where we find it connected with the rudimental stop, and an advanced style of ornamentation. In most cases it occupies the greater length of the shaft, and, although found among the lunette-edged celts, it more truly belongs to the long palstave variety, as shown on all the specimens between Nos. 206 and 356 on Trays **J** to **N**. In the accompanying cut, Fig. 264, drawn one-third the natural size, from No. 128, on Tray **G**, the shortest celt of its kind in the Collection, the flanges, or rudimental wings, slightly overlap the central grooved portion above, and run down into the broad, lunette, cutting edge below. It has no stop. See also No. 197, Tray **J**.

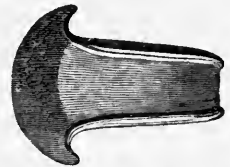


Fig. 264. No. 128.

When fully developed, the wing presents a lozenge shape on its lateral aspect, and is sometimes an inch and a half broad, as in several specimens on Tray **K**; in No. 248, of which it is $1\frac{3}{4}$ inches across, see Fig. 260, p. 373. Its edge is generally thin, so as slightly to overlap or sink into the handle, and in most instances it passes a short way below the stop, except in some of the rude specimens on Tray **J**, viz., No. 220. The most elevated portion of the wing is generally immediately below the stop, but sometimes is united with it so as to form a shallow socket. Towards the small extremity the wing fined off into a point; but in front it frequently passed down the side of the blade and was lost in the edge of that portion; or by turning inwards it as-

sisted with the stop to form the lower ornament. In most of the saddler's knife shaped specimens a semilunar ridge united the ends of the wing (see Nos. 179, 180, and 182, on Tray **I**).

In Nos. 241, Tray **K**; 303, 314, 316, 329, Tray **M**; 341, 342, 343, and 350, Tray **N**, the lower extremities of the thin high wings were turned in and hammered over the low narrow stop, to assist in completing the rudimentary side socket, as shown in the annexed illustration, drawn one-fourth the natural size, from a short chisel-shaped palstave, No. 342 on Tray **N**. In others of the same variety this peculiarity was evidently produced, in whole or in part, by the mould, as may be seen in Nos. 315 and 316 on Tray **M**. In this particular these specimens resemble the Etruscan celts.



Fig. 265. No. 342.

The *Side Edge*, or narrow profile view of the celt, presents great diversity, chiefly dependent on the full-faced shape and general character of the individual specimen. Several of these figured in the preceding part of this section afford examples of the side outline, see especially all those represented on page 373. The following cuts, together with those already

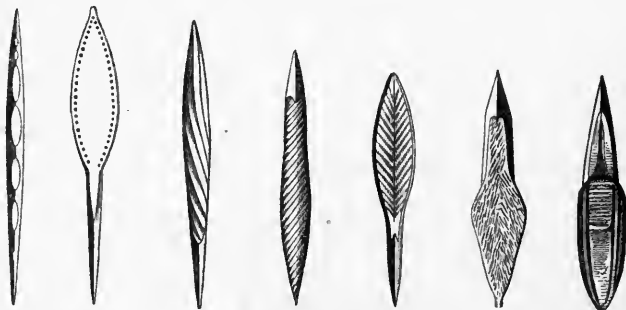


Fig. 266.

Fig. 267.

Fig. 268.

Fig. 269.

Fig. 270.

Fig. 271.

Fig. 272.

referred to, comprise nearly all the examples of side outline, and serve at the same time to illustrate the form of ornamentation common to that space. The profiles of plain copper,

or flat axe-shaped celts, such as those shown at pages 363 and 364, are, for the most part, simple ellipses, and do not require illustration. Of the same description are the long narrow celts; but many of them present a hammered ornament, of which Figures 248 and 249, on page 365, are good illustrations. The side view of the former is represented above by Fig. 266, and in its style of ornamentation resembles the carving on the edge of the long horizontal stone jutting out from the mound some feet above the present entrance to the great Pagan tumulus at New Grange. This side ornament would appear to have been produced by hammering, although the spaces between the lines are wonderfully symmetrical. Figure 267 is a side-view of the beautiful fan-shaped celt, No. 632, represented at page 373. Figs. 268 and 269, drawn from Nos. 621 and 132, afford profile views of two kinds of roping or twisted ornament on the sides of short, thick, slightly flanged, and lunette-edged celts, in which the broadest portion is about the site of the stop. Fig. 270 is the profile view of the beautiful, cleaned, fan-shaped celt, No. 633, in Rail-case **K** (see page 433), having a foliate cast ornament on the outside of the broad wing. Fig. 271, the side aspect of No. 209, on Tray **J**, shows a very peculiar form of cast leaf ornament on the outer surface of a broad-winged palstave enumerated at page 410. Fig. 272 exhibits a rude form of ornament, with raised hammered bars, as if for fixing the tying that passed round the wings and sides of the handle at this part of No. 225. See page 411.

The Loop.—For the reasons already stated, and to secure the celt to the handle more effectively, a loop or eye was added in the casting to the inferior edge of both the winged and socketed celt, as shown in 19 specimens of the former, and all but 3 of the latter in this Collection, the object being evidently to provide against the flying off of the head, by securing it to the shaft by a stay between points where the greatest stress

would come when a heavy blow was given with the instrument, as explained at page 368. There is little variety observable in this addition to the perfecting of the celt, except where, in some instances, it became mixed with the ornamentation in its vicinity. What the brace was made of, or how fastened below to the handle, has not yet come to light, the only instance in which that part of the instrument was discovered being where a large bronze ring passed through the loop, in a celt found in Yorkshire, and now in the British Museum, and engraved in the *Archæologia*, vol. xvi., and also in the *Archæological Journal*, vol. iv. That metal straps or rings played in the celt loops, in some of our Irish specimens, is manifest from the worn appearance of that shown in the looped specimen, Fig. 257, at page 370. But the great majority of the loops bear no marks of wearing on their internal faces; on the contrary, in a good many, the cast marks are as fresh as the day they came from the mould, thus evidently showing that the brace or stay had never been applied, or was, probably, formed of some flexible material, such as hide, gut, or vegetable fibre.

In the palstave celt the loop is usually placed beneath the stop, and in the socketed ones is always close to the top. Figure 273, drawn one-third the natural size, from No. 353, on Tray N, represents the usual position of the loop, in a long narrow specimen of the palstave variety, with a shallow groove, and a triple-cast ornament on each side below the point where the wings and stop coalesce to form the slight lateral socket. The lunette cutting edge, with much recurved points, has the appearance of having been ground.



Fig. 273. No. 353.

Fig. 274 is drawn from a very rare specimen of double-looped palstave, in the Collection of Lord Talbot de Malahide,

by whose permission this illustration is afforded. This curious celt is $6\frac{1}{2}$ inches long, has a chisel edge, and a shallow groove between the wings, which turn in below to form the curved stop. The loops are not quite symmetrical. It was,



Fig. 274.

probably, attached to a straight handle, to which it was bound both by circular and longitudinal ligatures.*

Without an actual examination of the various specimens alluded to, the force of the foregoing description cannot well be understood.

The Socketed Celt.—In the previous description and illustrations may be traced the successive and uninterrupted development of the third and final variety of celt, from the simple, flat, wedge-shaped piece of metal, to the hollow implement, formed to receive the end of the straight or crooked handle. As the stop became developed in the palstave variety, the enlarged wings merged into it, so as to form a socket on each side, as shown in Fig. 263, page 377. From this there was but one step more, that of bringing up the stop between the sides of the wings, and removing the thin and gradually decreased septum, when the true socketed celt was achieved.

Why our ancient celt-makers never conceived the idea of casting a wedge or axe-shaped piece of metal, with a hole in it, passing a handle through, and thus effecting the most common and useful instrument subsequently made of iron,—the hatchet, hammer, or battle-axe,—is remarkable. But although such articles have been discovered in Holstein, Saxony, and Denmark,—some of which are of great beauty, and highly decorated even with gold,—no implement of this description has yet, we believe, been found in the British Isles, certainly not in Ireland.

The simplest form of the socketed celt is that shown on

* See *Archæological Journal*, vol. ix. p. 194.

page 384, by Fig. 275, No. 510, on Tray **R**, perfectly plain and unornamented, without a loop, $2\frac{1}{16}$ inches long, $1\frac{5}{8}$ wide across the broad cutting edge, and $\frac{5}{8}$ ths in the clear of the oval socket. This is the scarcest form, there being but three specimens thereof in the Collection. The great majority of socketed celts have loops placed more or less near the socket margin, but always situated above the middle of the instrument. The socket itself is either circular, oval, or quadrilateral, and generally occupies about four-fifths of the length of the celt, ending in an acute angle, and in the majority of specimens having one, two, or three ridges, marking the joinings of the core-pieces used in casting. The particulars of many of these peculiarities are specified in the details of Trays **O** to **S**, at pages 418 to 429. When present, these raised cast marks served to retain the wooden handle when driven firmly into the socket;—see particulars of No. 408, at page 421, in which specimen a portion of the original handle still remains. In external shape the socket presents several varieties,—such as the circular, compressed or flattened, quadrangular, hexagon, and octagon, examples of all which are given in the accompanying illustrations. The cutting edge in the socket celt is generally semilunar, although in some instances nearly straight or chisel-shaped. A few specimens, Nos. 428, 436, and 446, on Tray **Q**, are axe-shaped, like those small iron hatchets of a later period, preserved in the Iron Collection. There are a few long, narrow, square, chisel-edged, socketed celts, on Tray **S** (see Nos. 549, 558, 568, and 569), which at first view would appear better adapted for tools than weapons; yet their graceful outlines, and, in some instances, elaborate ornamentation, would lead us to infer that they were all weapons.

In size the socketed celt varies, from No. 568, which is $5\frac{1}{8}$ inches long, to No. 524, the smallest celt of any description in the Collection, and possibly the least ever found in the British Isles, and represented by Fig. 285, at page 386.

The lip of the socket is generally ornamented, and very frequently surrounded by one or more raised bands or fillets; sometimes by a very well-cast roped ornament, evidently made to represent a cord of twisted gut. A special description of cast ornament, consisting of longitudinal raised bars, generally ending in annular or button-like projections, sometimes occupies the sides of this implement. In one rare instance, Fig. 280, on the next page, the ornamentation is more elaborate, but in no case is it produced either by the hammer, punch, or graver, as in the flat, simple celt. A similar description of ornament is found on long square socketed Breton celts. See *Archæologia Cambrensis* for June, 1860.

The following illustrations present types of the most remarkable varieties which the socketed celt assumes, in a collec-



Fig. 275. No. 510.



Fig. 276. No. 444.



Fig. 277. No. 466.

tion amounting to 201 specimens, including those in Rail-case L. Figure 275, one-half the natural size, has been already described at page 383. Figure 276, one-third the natural size, represents No. 444, on Tray Q, a specimen of narrow looped and socketed celt, 4 inches long, with a broad hatchet face, circular socket swelling into a trumpet mouth, and decorated with a raised rope ornament. Figure 277, of the same class, and also drawn one-third the size of nature, from No. 466, on Tray Q, is a slender socketed celt, $4\frac{1}{4}$ inches in length, of an irregular hexagon form in the middle, and circular in the slightly everted and decorated socket. It dif-

fers in the position of the loop, the breadth of the blade, the external shape of socket, and the ornament, from Fig. 276.

Of the same variety are Figs. 278 and 279, drawn one-fourth the natural size, from Nos. 411 and 417, Tray **P**, but differing slightly in ornament and shape of socket; while Fig. 280, No. 460, on Tray **Q**, a small, broad, com-



Fig. 278. No. 411.



Fig. 279. No. 417.



Fig. 280. No. 460.

pressed, highly decorated celt, is shown one-half the size of the original. By Fig. 281 is shown a good specimen of the axe-shaped, socketed celt, drawn one-third the size of nature, from No. 436, on Tray **Q**; it is $3\frac{3}{4}$ inches long by $3\frac{5}{8}$, measured along the cutting edge; although angular outside, the socket is rather oval internally. Fig. 282 shows



Fig. 281. No. 436.



Fig. 282. No. 468.



Fig. 283. No. 558.

the form of raised linear ornament peculiar to the socketed celt. The specimen from which this was drawn, one-third the natural size, No. 468, on Tray **Q**, is $4\frac{1}{2}$ inches long, flat and much compressed on the sides, oval in the socket internally, but irregular externally. Figure 283, No. 558, on Tray **S**, represents one of the finest specimens of the long, narrow,

quadrangular, socketed variety in the Collection, 5 inches long and $1\frac{3}{8}$ broad, with nearly parallel sides, and decorated on each surface as well as round the square socket edge.

Of this rare variety there are only five specimens in the Collection. (See page 429.) Of these, Fig. 284, one-fourth the size of nature, from No. 563, affords a good idea of a short and slightly different form of the same variety. In the following



Fig. 284.
No. 563.

cut (Fig. 285, No. 524), is shown, the exact size, the smallest celt in the Collection, already alluded to at pages 362 and 383.

The oval represented above shows the size of the opening of the socket. The article could not have been of any use either as a tool or weapon, and must be regarded in the light of either a toy or the representative of a socketed celt, made as a figurative emblem for placing in the tomb: numerous examples of such articles, chiefly swords, knives, and daggers, have been discovered in Denmark. (See Worsaae's *Nordiske Oldsager*, last edition, Plate 33.) Another very small soc-



Fig. 285. No 524.

cketed celt, although not so minute, forms part of the deposit of antiquities recently made with the Academy by the Royal Dublin Society. (See No. 686, in Rail-case L.)

It now remains but to consider the style and variety of ornamentation, and the method of casting these ancient weapons and tools. All nations, no matter how rude and uncivilized, according to our present acceptation of these terms, had some special characteristic and peculiar form of ornament or design. Thus the ancient Scandinavians carved figures of boats, and rude representations of men and animals engaged in battle or the chase, upon the surface of the natural rock.* The North American Indians also indented upon the faces of

* See Holmberg's *Nordbon under Hednatiden*. Stockholm: 1852-4.

large blocks of stone certain characters, consisting of circles, involuted and wavy lines, and other marks resembling the spider's web; and towards Central America the Mexicans carved the figures of men, both on the rocks, *in situ*, and on rude stones, carried to their position by human agency. Upon several of the pillar-stones and monolithic monuments of the world may be found ancient carvings. In Egypt these were a literature, either alphabetical or ideagraphic: but whether, in other instances, these curious engravings, not illustrative of men, animals, or plants, but consisting of mere lines assuming different shapes, and cut into the stone, possibly with a flint and hammer, or with another stone harder than the one acted upon,—were intended simply for ornamentation, or were hieroglyphs having a certain occult meaning like a cypher, and known only to a few persons in the secret, is now but matter of speculation.

Writers on the primeval arts of different nations have left unnoticed those characteristic of the Celtic Irish people, in Pagan and very early Christian times, except such as belong to the architecture, stone tracery, and shrine decoration of the latter period. The abundant supply afforded by the remains of the former epoch in the carvings on the Pagan sepulchres of New Grange, Dowth, and other similar monuments; the various decorations on cinerary urns, and the ornamentation on our earliest metal articles of either gold or bronze, have as yet been overlooked. The carvings upon those ancient sepulchres alluded to consist of zig-zag, chevron, lozenge, fern-leaf, and other straight-lined indentations, apparently cut in with a pick, and in some instances forming intaglios. Another form of marking consists in a number of concentric circles, or highly convoluted spires and volutes, turning one into the other; or of semicircles, pinked, or scolloped patterns, also hollowed from beneath the original surface of the stone. In some instances these spires or volutes are double, the looped end of

the coil forming an obtuse curve within. The spire was subsequently repeated in enamel, as shown by the bead (Fig. 123, at page 165). Wheel-like ornaments are also not uncommon. In a few rare cases both the straight line and spire ornament are beautifully and accurately carved in relief, of which the great stone beneath the mouth of the cave at New Grange is a fine example.* Upon the natural surface of several rocks in the county of Kerry have been noticed small cupped indentations, evidently artificial, and in some instances surrounded by concentric circles, which the Rev. C. Graves, Secretary to the Academy, in a most ingenious paper, read 28th February, 1859, surmised to be plans or maps of forts, although as yet none of them have been identified with existing monuments. The collineation, however, observed both on the artificial indentations on those stones, and the position of the mounds and raths themselves, as may be seen by a reference to the Ordnance Maps, is very remarkable.†

Infinite is the variety of ornament impressed upon the surface of our sun-dried or half-burnt clay urns, as shown by those typical illustrations given from page 177 to 183 of this work, and as shall be again referred to in considering the ornamentation of the precious metals.

The *Ornamentation* on metal celts is of three kinds:—that effected by hammering, or with a punch; by the graver; and in casting. The hammered ornament was introduced very early in what may be termed the infancy of metal celt-making, and is well illustrated by the ornamentation on Figs. 248, 249, and 250, given at page 365. It was apparently effected

* See the engravings of the different varieties of ornament alluded to in the text, given in the Author's "Beauties of the Boyne," from page 192 to 201.

† The plaster cast of one of these indented rocks, called in Kerry *Vousheens*, made many years ago from a stone in the vicinity of Staigue Fort, and presented to the Academy on May 22, 1854, by Dr. Robert Smith, now stands in the hall near the Museum door. See Proceedings, vol. vi., p. 94.

with a sharp-edged tool, and might have been done with a flint or sharp stone celt. It wants the regularity subsequently effected by the punch, but generally consists of a number of oblique indentations, assuming the form of a fern-leaf, or what is termed in masonry herring-bone. Sometimes the hammered decoration took a more definite form, as in Figs. 249 and 250; occasionally it was included within straight lines made by a graver; but that instrument was much less frequently used with the celt than with articles composed of the precious metals, such as the gold ornaments, &c.

The following illustrations afford a good idea of those hammered, punched, engraved, and cast ornaments. The punchings were effected either with a straight chisel, a small round-faced tool, which left a circular indentation on the metal, or an oval or elliptical instrument, hollowed in the centre.



Fig. 286.



Fig. 287.



Fig. 288.

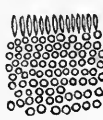


Fig. 289.



Fig. 290.



Fig. 291.

Fig. 286, from No. 141, and Fig. 287, from No. 138, show the full size, the fern-leaf or herring-bone ornament, the latter having also an engraved line at top. Figure 288, shows the elliptical form of punched decoration, and Figure 289 represents it, as well as the circular ornament, both exhibited on No. 606. Figure 290 illustrates that description of decoration where the dots are arranged in a definite shape, as in the double looped line of the beautiful green celt, No. 607, in Rail-case **K**. The small final cut, Fig. 291, illustrates the combination of the engraved line with the circular dotted ornament on each side of it, from a portion of the decoration on No. 621. Fig. 292 shows the ornamentation on No. 620, where three rows of triangular punched indentations, surrounded by engraved lines, occupy the front of each side.

Figure 293, shows a portion of the lightning-shaped ornament on No. 625, in Rail-case **K**, and of which that on Fig. 297 is another specimen. The three following cuts, Figs. 294, 295, and 296, drawn the natural size, exhibit forms

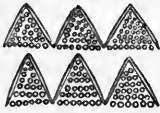


Fig. 292.



Fig. 293.



Fig. 294.



Fig. 295.



Fig. 296.

of grooved and roped cast ornament, to be seen on the side of No. 616, and the edges of Nos. 143, and 132. Another description of decoration was achieved by hammering the narrow edge of the celt into a series of lozenge-shaped indentations, as shown on Nos. 72 and 608, page 365.

In the annexed engravings may be seen the relative position which the ornamentation most usually occupies, as well as the general form of the decoration, the details of which have been represented, the natural size, in the foregoing illustrations.



Fig. 297

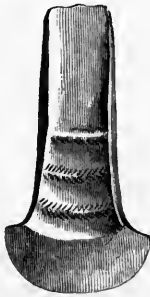


Fig. 298.

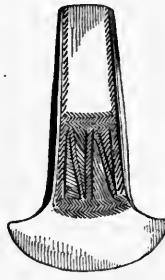


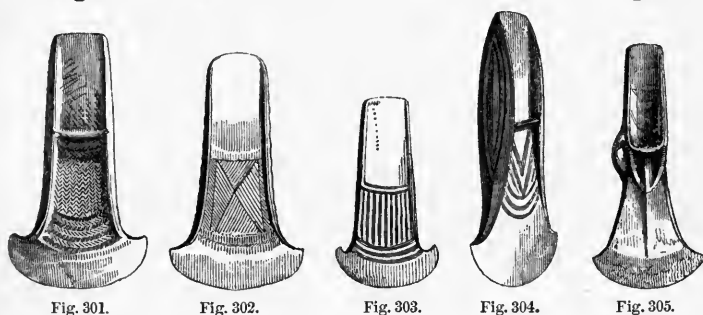
Fig. 299.



Fig. 300.

Fig. 297, from No. 132, on Tray **G**, presents the same description of ornament as Fig. 293 from another specimen in Rail-case **K**. Fig. 298, from No. 124 on Tray **G**, presents a combination of cast and engraved ornament, having transverse raised ridges below the stop, like some of the markings

on the upright stones of the passage entering New Grange, the summits of these ridges have been tooled with the usual fern-mark, as shown in the illustration. Fig. 299, from the gold-coloured cleaned celt, No. 627, in Rail-case **K**, presents a different form of engraving on each side. This is not an uncommon occurrence with the engraved celts; but although the pattern may differ slightly on each face, the style of workmanship and general character of the ornament remains the same. Figure 300, from No. 142, Tray **G**, shows a form of herring-bone ornament, like that the natural size in Fig. 287.



Of the same class is Fig. 301, from No. 141. Fig. 302, from No. 140, resembles No. 627, already described, and figured.

The three next illustrations are good specimens of the forms of cast ornament on three descriptions of celts;—the simple long and narrow, having slight flanges and a lunette edge, with recurved points, as shown by Fig. 303, from No. 169; the broad-winged celt without a loop, Fig. 304, from No. 204, Tray **I**, which shows both the side and front decoration; and Fig. 305, from No. 346, on Tray **N**, a narrow looped side-socketed palstave, with a bow-and-arrow ornament below the stop, common to the great majority of decorated celts of this variety. The dimensions and other circumstances relating to the different specimens from which the foregoing illustrations have been taken, will be found in the details of the different Trays and Rail-cases in which they are placed.

The ornamentation upon the socketed celts has been already referred to at page 384, and illustrated by Figs. 282 and

283; and, as previously stated, it is always cast, and in no instance has a tooled ornament been observed upon a celt of this description. Nos. 558, 562 to 566, and 569, Tray **s**, show the form of raised line, ending either in a circle or a series of small elevated knobs which specially characterize that implement. Occasionally the insertions of the loop spread out in an ornamental fashion for a short way over the sides of the socket, and in No. 379, on Tray **o**, the profile view of which is shown in the accompanying wood-cut, may be observed a number of raised lines like cast-marks, but presenting too great regularity to suppose such to be the case.



Fig. 306.

Moulds.—The celts were made in three kinds of moulds, viz.:—Of stone; of sand or clay, in the same manner as modern castings; and in those of metal. The ancient stone celt moulds which have come to light are of two kinds,—the single, consisting of an indentation cut on the side of a block of stone, and without a counterpart; and the double, formed of two portions fitted together, and usually employed for casting celts of the palstave variety, while the former were chiefly employed for making the simple flat axe-shaped variety. The Academy possesses specimens of both these kinds of celt moulds, and two of them are represented and described at

page 91: see Figs. 72 and 73. Another double celt mould has been recently purchased by the Academy; it is of the same description as No. 84, already referred to at page 91. There is also one in the Museum of Trinity College: and others are in

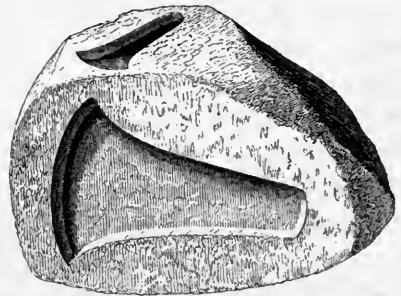


Fig. 307.

private Collections. The accompanying cut is drawn from a plaster cast, the original of which was found at Ballynahinch, county of Down, and now in the Museum at Belfast. It con-

tains moulds for four celts (see *Archæological Journal*, vol. iv. p. 327), the largest of which is 6 inches long by $4\frac{1}{4}$ broad.

The second method was in temporary moulds of clay, sand, or marl, to which, in the case of socketed celts, a core must have been adjusted; but no vestige of such a mode of working could have come down to the present time. Models in wood or clay must have been made for these sand moulds. It is, however, remarkable that of the 686 celts in our Collection, no two appear to have been cast in the same mould; there are no exact duplicates.

The third method of casting celts was in a bronze mould, of which there are six specimens in the British Museum: that figured below, one-third the natural size, was found in England, and described by Borlace and Lort in the *Archæologia*, vol. v.; but they supposed it to have been a celt-case. Vallancey, with all his faults, had a clear perception of what these so-called metal "celt-cases" were, and says:—"I cannot conceive why these gentlemen hesitate to call them moulds; as a certain proof that they were manufactured in Ireland, where the Romans came not either as friends or foes, the moulds are found in our bogs; they are of brass also, mixed with a greater quantity of iron, or in some manner tempered much harder than the instruments."—"Collectanea," vol. iv., p. 59. He also figures a bronze mould. Mr. Du Noyer has also in his paper, already referred to, shown that it was a true celt-mould, and explained the way in which metal could be cast from metal, by greasing or even coating the interior with lamp-black. Both these cuts represent the inner and outer faces of the same side; and the raised ornamental loops on the latter



Fig. 308.

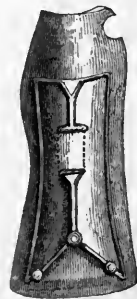


Fig. 309.

are believed to have been intended for securing the tying when the moulds were joined preparatory to casting. As already explained at page 383, and also in the detailed descrip-

tion of Trays **O** and **P**, two or more cores, possibly of wood, were employed in casting socketed celts.*

In *colour* the celts afford, in their present condition, but little variety: the copper ones are of a light brown, and, when perfect, are smooth and uniform on the surface. Besides their peculiarity of form, they can be easily distinguished from the æruginous green hue of the bronze. Most of the perfect bronze celts have this tint in a more or less degree, according to their amount of preservation, but some more than others: for example, those beautiful specimens, Nos. 607 and 608 in Rail-case **K**. This beautiful dark green, smooth, and polished surface is produced by artificial malachite or carbonate of copper, into which the external lamina of the surface has, in process of centuries, been converted; and which, having once formed, serves to prevent oxidation, and admits of a high polish.† Many specimens, especially of the socketed variety, are covered with a brown coating of considerable thickness, and so complete as to obscure all traces of the original surface of the bronze; this, upon analysis, is proved to be chiefly iron, and was probably deposited on the surface of the implement while lying for a length of years in peat, which is frequently much impregnated with ochre or bog iron.‡ In some instances,—for example, No. 153, on Tray **H**, the brown ochrey crust has been deposited like a varnish on the surface of the previously formed carbonate of copper.

* Also see the "Archæology and Prehistoric Annals of Scotland," pp. 222 to 225, where several authorities bearing on the subject are quoted.

† M. Alphonse Gages, Curator of the Industrial Museum, has examined several of these green celts, and proved the existence of artificial malachite in each.

‡ No. 455, on Tray **Q**, has four Irish letters rudely graven on one side, where it is thickly coated with brown iron incrustation, which can easily be cut with a knife, and as these letters must have been cut after the article had, by lying for ages in bog, acquired this deposit, it shows that they are of modern date compared with the age of the weapon. Professor W. Barker first informed me that this deposit was iron. A similar celt, No. 665, in Rail-case **K**, covered with a like natural deposit, has been carefully analyzed by M. Gages, and found to present the following composition:—Traces of organic matter; silica and alumina; hydrous oxide of iron, or brown iron ore; oxide of copper.

Several of the best preserved and most highly decorated celts in the Collection are covered with a patina, or thin layer, or what would appear at first sight to be a lacquer or varnish, like that applied over modern brass, to protect it from the oxidizing effects of the atmosphere.* It would be interesting to find that our ancient metallurgists adopted means for defending the surface from oxidation.

In order to show the true colour of the metal, such as it must have appeared when the instruments were new, several of them have been cleaned, and these generally exhibit the finest gold colour, the hue probably differing slightly according to the amount of tin, lead, or sulphur in their composition.

From the great number, variety, and general distribution of these articles, Ireland may be said to be, *par excellence*, the country of the metal celt, as Scandinavia is of that of flint and stone. We know of upwards of two thousand metal celts now in this country; and the British Museum, as well as many other collections in England and Scotland, is enriched with Irish specimens. Like its predecessor in stone, the metal celt had a very wide distribution, and has been found in every country in Europe, from the River Tiber to the Malar Lake, but differing slightly in shape and ornamentation from those found in the British Isles.

In the adjoining cut is figured the remarkable and unique bronze celt, and referred to at page 367, cast apparently in a mould formed upon a stone implement of the same class of weapon.† Among the antiquities procured with the Dawson Collection is one side of a bronze

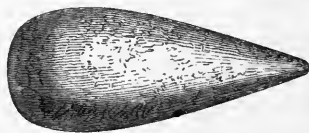


Fig. 310.

* On a celt which I submitted to Dr. Aldridge some years ago, he found the patina or varnish to be of a vegetable nature, resembling a gum resin. This organic matter may, however, have been derived from the locality where the article lay.

† The Author is indebted to Herr Olfers, Director of the Royal Museum at Berlin, for the beautiful cast of this celt, now in the Academy's Collection; and also to Professor Magnus for his great civility in forwarding it in time for publication here.

mould, $4\frac{1}{8}$ inches long and $3\frac{1}{8}$ wide, and here represented one-fourth the natural size, Fig. 311. By Figure 312 is shown in profile a plaster cast from this mould. Although shorter it belongs to the same class of object as the Etruscan celt figured above. Such pellets, formed of hard clay or brick, may have been used as offensive weapons, and projected either from the sling or some other engine, of which we have at present no record. (See Nos. 2 and 3 in Rail-case L.)



Fig. 311.

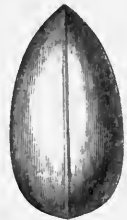


Fig. 312.

The following is a detailed catalogue of all the bronze celts in the Museum:—

SOUTHERN GALLERY.—BRONZE I.

THIRD COMPARTMENT, END-CASE.—SHELF I., *Tray A*, contains twenty-six flat, rude, Copper Celts, numbered from 1 to 26.—No. 1, a plain celt of red copper, figured and described at p. 363. No. 2, a plain cuneiform celt, much corroded, 4 inches long. No. 3, a cuneiform celt of the same variety as No. 10, figured and described at p. 363, and which the great bulk of the celts on this Tray resembles; it is $3\frac{3}{4}$ inches long by $2\frac{1}{8}$ wide; it was found in the River Bann, at the Cutts, near Coleraine, and was—*Presented by the Board of Works*. No. 4, a small, rude celt, from which the mould markings have never been removed; it is 3 inches long, $1\frac{7}{8}$ wide in the broadest part, and is marked “Killala, county of Mayo.” No. 5, a triangular celt, narrower at the small end than any other specimen in the Museum, $4\frac{3}{4}$ by $2\frac{3}{4}$ across the broadest edge. No. 6, rude and imperfect, 3 by $2\frac{1}{2}$. No. 7, imperfect at small end, $3\frac{1}{2}$ by $2\frac{3}{4}$. No. 8, a very good specimen, in excellent preservation, and the most perfect of the specially-formed copper celts; very sharp at both extremities, bearing marks of sharpening on lower cutting face; $4\frac{1}{4}$ by 3. No. 9, of the same variety, but proportionally longer; corroded, $4\frac{1}{2}$ by $2\frac{3}{4}$. No. 10, a very perfect specimen, and

typical of its class, of red metal, cleaned, figured, and described at p. 363. No. 11, a very perfect specimen of the same variety, but broader in the cutting face, $5\frac{1}{4}$ by $3\frac{1}{2}$; it has become green on the surface, and probably contains some tin.—*Deposited by the Royal Dublin Society*, and marked No. 4. No. 12, one of the largest of the copper celts, round in the cutting face, $6\frac{1}{4}$ by 4. No. 13 is of the same variety, cleaned, $6\frac{1}{4}$ by $3\frac{3}{4}$; it shows the bad casting and want of closeness in the metal. No. 14, ditto, 6 by $3\frac{3}{4}$.—*Deposited by the Royal Dublin Society*. No. 15, a fine specimen, in good preservation, of same variety as No. 8; it is 5 by $3\frac{3}{4}$.—*Deposited by the Royal Dublin Society*. No. 16, a small, imperfect celt, $4\frac{1}{2}$ by $3\frac{1}{4}$, marked 395, a portion was removed at upper end for analysis by Mr. Mallet (see No. 2, in 'Transactions, vol. xxii., p. 322). No. 17, a very perfect specimen of the broad variety, like No. 8, slightly corroded on surface, $4\frac{1}{4}$ by $3\frac{1}{2}$. No. 18, simple, wedge-shaped, rude, like a stone celt, slightly corroded, $4\frac{3}{4}$ long by $2\frac{3}{4}$ on cutting face, and 2 inches at narrow end. No. 19, thick, short, lunette-edged, imperfect at small end, marked on surface by mould, $4\frac{1}{8}$ by $3\frac{1}{4}$.—*Presented by the Board of Works*. No. 20, a smooth, and tolerably good specimen, $4\frac{3}{4}$ by $3\frac{1}{4}$; unsymmetrical, like 25,—for, as placed upon the Tray, the upper edge is longer than the lower.—*Presented by R. M. Carnegie, Esq.*, in 1852 (see Proceedings, vol. v., p. 295). No. 21, perfect, small, slightly corroded, thick like the generality of copper celts, which are thicker than those of bronze, $3\frac{1}{2}$ by $2\frac{3}{8}$, (from Major Sirr's Collection). No. 22, a good specimen, slightly imperfect on cutting edge, thick, $4\frac{3}{8}$ by $2\frac{3}{4}$. No. 23, perfect and in good preservation; surface marked by mould, 4 by $2\frac{3}{4}$.—*Presented by the Executors of Leslie Ogilby, Esq.* No. 24, a good specimen, well preserved, thin and flat, 4 by $2\frac{3}{4}$. No. 25, very rude and much corroded, unsymmetrical like No. 20, $4\frac{1}{2}$ by $2\frac{3}{4}$. No. 26, perfect and in good preservation, with narrow upper end, 4 by 3.

For the remainder of the copper celts, see description of Rail-case **K**, described at p. 431.

SHELF I., Tray **B**, contains eleven Bronze Celts of the largest size, plain and axe-shaped; numbered from No. 27 to 37.—No. 27 is the largest specimen in the Collection, figured and described at p. 364; in fine preservation, except a few small gaps in the hatchet face, and a small, circular hole, caused by a flaw in the metal on the side at

the broad end; the cutting edge bears marks of sharpening. It is $\frac{3}{8}$ ths of an inch thick, and very flat on the surface. No. 28, of the same class, but smaller, and proportionably shorter; is slightly imperfect at upper extremity, where it spreads a little outwards on each side, $6\frac{1}{8}$ inches long, by 5 wide across cutting edge, found at Keelogue Ford, between the counties of Galway and Tipperary.—*Presented by the Shannon Commissioners.* No. 29, a very fine specimen, and in tolerably good preservation; of the true hatchet shape; some slight remains of raised ridges appear on the surface; side edge angular; a little more than 9 inches long, by $6\frac{3}{4}$ broad across the blade, and $1\frac{3}{4}$ at the narrow end. No. 30, a good specimen, thin, flat, the upper edge somewhat longer than the lower, thus resembling with its neighbour, No. 31, some of the iron axes of later times $7\frac{3}{8}$ by $5\frac{1}{2}$. No. 31, a large specimen, unsymmetrical, slightly corroded on surface, $7\frac{3}{4}$ by $6\frac{1}{2}$. No. 32, tolerably perfect in shape, but corroded on surface, $6\frac{3}{8}$ by $4\frac{3}{4}$. No. 33, a very perfect specimen, and in good preservation, rounded at small end, $6\frac{3}{8}$ by $4\frac{5}{8}$, (from the Dawson Collection). No. 34, a small but perfect specimen of this variety, and resembling the former in shape, 6 by $4\frac{3}{8}$. No. 35, a very remarkable specimen, although imperfect, and not in good preservation; it has been decorated with a double dotted line, like that represented by Fig. 290, page 389; it is also slightly unsymmetrical, $5\frac{7}{8}$ by $4\frac{3}{8}$. No. 36, a fine specimen in good preservation, 6 by $4\frac{3}{4}$. No. 37, a very fine specimen, and in admirable preservation, the metal resembling in colour the Dowris bronze; $7\frac{1}{8}$ by $5\frac{1}{2}$; found at Cornacarrow, in the Shannon workings, and—*Presented by the Shannon Commissioners.*

SHELF I., Tray C, contains nineteen bronze celts, axe-shaped plain, large and small; numbered from 38 to 56. No. 38, a good typical specimen, and in fine preservation, $5\frac{1}{2}$ inches long by $4\frac{1}{4}$ wide. No. 39, narrow at small end, worn at both extremities, $4\frac{1}{2}$ by $3\frac{1}{4}$.—*Presented by Lord Farnham.* No. 40, a small but perfect specimen, $3\frac{3}{4}$ by $2\frac{3}{4}$. No. 41, a very rude specimen, apparently cast in one of the early stone moulds, flat, thin, 4 by $2\frac{1}{2}$, at broad end, and $1\frac{1}{2}$ at small extremity.—*Deposit Royal Dublin Society.* No. 42, a smaller specimen of this variety, a portion removed at upper end, $2\frac{3}{4}$ by $2\frac{1}{4}$, marked "Tipperary," (from the Sirr Collection). No. 43, of a peculiar form, like Nos. 144 and 145, on Tray G, the latter figured

at p. 365; edges sharp; sides rounded off; a portion of the small end has been cleaned to show the colour of the bronze, it is 4 inches long by $3\frac{1}{4}$ broad. No. 44, a very fine specimen, forming part of the deposit of the Royal Dublin Society; an elevated marginal ridge runs along the sides. This is a rare peculiarity. A portion of the small extremity has, however, been removed; it now measures 6 long by $5\frac{1}{8}$ across the width of the blade. No. 45, a small, rude, imperfect specimen, 3 by $2\frac{1}{4}$; of the same character as No. 41. No. 46, rude, flat, thin, triangular, corroded, the cutting edge rounding off into the sides, $4\frac{3}{4}$ by $3\frac{1}{4}$. No. 47, much corroded, rude in shape rather circular in cutting face, $5\frac{1}{2}$ by $3\frac{1}{4}$, "found, in the year 1840, in the bed of the Carrhen River, barony of Iveragh, county of Kerry." This, together with Nos. 49, 53, and 55, were—*Presented by Maurice O'Connell, M. P.* (See Proceedings, vol. iv., p. 166). The oxidation on these bronzes shows the effect of that process when such articles are exposed to the action of water. No. 48, slightly imperfect at top, thin, flat, with round edges, $4\frac{1}{2}$ by 4. No. 49, long, much corroded, imperfect at top, 6 by $3\frac{3}{4}$; found in the Carrhen river with No. 47. No. 50, a good specimen, in fine preservation, of bright yellow bronze, triangular, 5 by $3\frac{3}{4}$. No. 51, imperfect at small extremity, surface not in good preservation, of a coppery hue, $5\frac{1}{2}$ by $4\frac{3}{4}$. No. 52, long, slightly imperfect, $5\frac{1}{2}$ by $3\frac{1}{2}$. No. 53, long, much corroded from lying together with Nos. 47, 49, and 55, in the Carrhen River; $6\frac{3}{4}$ by $4\frac{1}{4}$. No. 54, a good specimen of the axe-shaped celt, slightly imperfect, corroded, $6\frac{1}{4}$ by 5.—*Presented by the Executors of Leslie Ogilby, Esq.* (see old Museum register, MS., vol. i., p. 226). No. 55, an axe-shaped celt, thick, corroded from lying in the water, $7\frac{1}{4}$ by $5\frac{1}{4}$. No. 56, a large specimen of axe-shaped celt, thin, and much indented on surface as if from imperfect casting, 7 by $5\frac{1}{4}$.

SHELF I., *Tray D*, contains sixteen long celts, some ornamented, —numbered from 57 to 72. The long variety described at page 365 commences on this Tray, on which there are several very fine specimens. No. 57, the largest long, narrow celt in the Collection, is slightly imperfect on the cutting edge, has a rudimental stop ridge, side edges slightly elevated above the flat, as if by hammering, by which process also a rude form of decoration has been produced on them like No. 72, Fig. 248, p. 365. The small extremity on this,

and all the other celts of the same variety, is sharp and slightly rounded, as if for use when passed through the handle. It is $8\frac{3}{4}$ inches long, $4\frac{1}{2}$ across the face of the blade, $1\frac{1}{2}$ at the small extremity, and $\frac{1}{2}$ thick.—*Presented by W. R. Wilde, Esq.* (see Proceedings, vol. iii., p. 539). No. 58 is slightly ornamented with fern-leaf markings towards the small extremity, and radiating grooves near the blade, $7\frac{1}{4}$ by $4\frac{1}{4}$.—*Presented by W. R. Wilde, Esq.* No. 59, a perfect specimen, in good preservation, plain, flat, and thin, $7\frac{1}{4}$ by $4\frac{1}{4}$. No. 60, plain, thin, flat, slightly unsymmetrical, $7\frac{1}{2}$ by 4. No. 61, perfect, narrow, with rudimental stop-ridge, and remains of crust, $6\frac{3}{8}$ by $3\frac{1}{4}$, (from Sirr Collection). No. 62, a fine specimen of the long variety, coated with a brownish-red crust, has a grooved decoration on the flat surface, like No. 58; the indentations radiating from the centre towards the cutting edge, $8\frac{1}{4}$ by $4\frac{3}{4}$. No. 63, a perfect specimen; cutting edge rather straight; 7 by $3\frac{1}{4}$. No. 64, of bright yellow bronze, imperfect at extremities, rudimental stop, side edges elevated; presents the remains of two forms of ornamentation; below the stop are a series of linear indentations, apparently produced by a hammer or punch, and at the small extremity may be seen clusters of small circles like the domino decorations observed on bone articles; 7 by $3\frac{1}{4}$. No. 65, rude, plain, flat, bearing some marks of hammered ornament, covered with patina about the centre, marked "Sligo," $6\frac{3}{8}$ by 3. No. 66, in tolerable preservation, of bright yellow bronze; some traces of fern-leaf ornamentation on side, not unlike that on one of the stones at New Grange, $7\frac{1}{4}$ by $3\frac{1}{2}$.—*Presented by the Shannon Commissioners.* No. 67, a perfect specimen, apparently ground on the hatchet face, and covered all over the lower two-thirds of the side with hammered indentations, $6\frac{1}{4}$ by $3\frac{3}{8}$. No. 68, very rude, corroded, round in the hatchet face like No. 46, on Tray C, and narrow in the shaft, $6\frac{1}{4}$ by $2\frac{3}{8}$ ths. No. 69, perfect, and ornamented on the sides and edges, the former with six ribs, each half an inch apart, the latter with the same form of ornament placed obliquely, so as to give it a roped appearance; has some remains of patina at the sides; $6\frac{3}{4}$ by $3\frac{3}{4}$. No. 70, long, narrow, slightly imperfect at small extremity, much hammered on the flat of the edges, 7 by $3\frac{1}{2}$. No. 71, broad, tolerably perfect, $6\frac{1}{2}$ by $4\frac{1}{8}$. No. 72, a very beautiful long celt, figured and described at page 365, ornamented on both sides

and edges; cleaned to show the beautiful golden lustre of the bronze.

SHELF I., Tray E, contains eighteen celts, chiefly of the long, narrow variety; numbered from 73 to 90. No. 73, a small, flat celt, rather thick in the middle, $4\frac{1}{2}$ inches long by $2\frac{3}{4}$ wide in the blade; in fine preservation, a slight hammered ornament on the edges. Found at Newington, county of Kildare, and—*Presented by James Forbes, Esq.* No. 74, a good specimen of this variety, of yellow bronze, rather straight in the cutting edge, and round at the top, $5\frac{1}{4}$ by $2\frac{7}{8}$; procured, with a number of others, from Mr. Murray, of Mullingar. No. 75, of bright yellow bronze, slightly imperfect at small extremity; a rude hammered ornament, radiating toward the cutting edge, spreads over the side; it is also irregularly hammered above the edge; 5 by $3\frac{1}{4}$. No. 76, rude, flat, perfect, presenting all the appearance of the copper type, both in shape, surface, and colour, the admixture of tin being probably very slight, $5\frac{3}{8}$ by $3\frac{1}{4}$. No. 77, plain, flat, rather broad, rude in shape but in perfect preservation; $4\frac{5}{8}$ by 3. No. 78, long, narrow, corroded; imperfect at top, where a portion has been cut off; $5\frac{3}{4}$ by $3\frac{3}{8}$. No. 79, long, narrow, round-faced, $5\frac{3}{4}$ by $2\frac{1}{2}$. No. 80, a perfect specimen of the long, narrow variety; 6 by $3\frac{1}{8}$.—*Presented by the executors of Leslie Ogilby, Esq.* No. 81, a perfect specimen, plain, rather broad, like those on Trays **B** and **C**, slightly corroded, $5\frac{1}{4}$ by $3\frac{3}{4}$. No. 82, long and narrow, imperfect at both extremities, dark coloured; a punched or hammered ornamentation occupies the middle of the sides and the edges, somewhat like No. 72; $6\frac{1}{4}$ by $2\frac{3}{4}$. No. 83, a perfect specimen of the long, narrow celt; of bright yellow bronze, half an inch thick in the middle, a punched or hammered ornament occupies the side, and spreads out into a fork towards the cutting edge, leaving a large interspace free from decoration; several of the elliptical decorations which produce this ornament are half an inch long; $5\frac{3}{4}$ by $3\frac{1}{8}$. A rare peculiarity in this celt consists of what is technically termed a *wind* in the cutting edge, somewhat like that observed in most of the stone celts. No. 84, a good large specimen of the long, narrow celt, and, except some gaps in the cutting edge, in fine preservation; a slight rudimentary stop, immediately behind which the sides are compressed, and afterwards spread out into the usual thin, curved extremity; pleasingly ornamented on the side

with greater regularity than that seen on those previously described, except No. 35 on Tray **B**; the ornamentation was effected with the punch or hammer, but with great regularity both in design and execution, and is worthy of illustration, $7\frac{3}{8}$ by $3\frac{1}{4}$.—*Presented by the executors of Leslie Ogilby, Esq.* No. 85, a plain celt, rather broad in comparison with the rest of this variety; 6 by $3\frac{1}{4}$. No. 86, long and narrow, imperfect at cutting edge; $7\frac{1}{2}$ by $3\frac{1}{8}$. No. 87, long and narrow, thin, rude, unsymmetrical, slightly imperfect from corrosion; $6\frac{3}{8}$ by $3\frac{1}{4}$. No. 88, long and narrow, very much corroded; 7 by $3\frac{5}{8}$. No. 89, a very perfect specimen of the long narrow celt; $7\frac{1}{2}$ by $3\frac{3}{4}$; found at Galway, and—*Presented by R. A. Gray, C. E.* No. 90, a long, narrow celt, thick and heavy, sharp at the small extremity; $7\frac{1}{2}$ by $4\frac{1}{4}$.

SHELF I., Tray **F**, contains thirty small, rude, slender, celts, chiefly of the long, narrow variety,—numbered from 91 to 120. No. 91, small, corroded, but with part of patina still remaining, $4\frac{1}{4}$ inches long, by $2\frac{1}{4}$ broad. No. 92, somewhat broader than the generality of this variety, brassy in appearance, grooved longitudinally on the surface, apparently in the mould, the only instance of that kind of decoration in the Collection, $4\frac{3}{4}$ inches by $2\frac{1}{2}$. No. 93, long and narrow, partly imperfect at top, has a rise in the shaft like a rudimentary stop; slightly unsymmetrical the upper edge being longer than the lower; $5\frac{3}{8}$ by 3, (from Dawson Collection). No. 94, long and narrow, tolerably perfect, and in good preservation, has an elevated ridge like the foregoing, $5\frac{1}{2}$ inches by $2\frac{5}{8}$, (Dawson). No. 95, long and narrow, broad in the blade, hammered at the small extremity, $5\frac{1}{2}$ by 3, (Dawson). No. 96, a rude specimen, badly cast, with a flaw on the surface, $5\frac{5}{8}$ by 3, (Dawson). No. 97, a perfect specimen, with a portion of the lacquer or patina remaining, $5\frac{3}{4}$ inches by 3, (from the Sirr Collection). No. 98, perfect, long and narrow, thick in the middle of the shaft, slightly decorated with an irregular punched or hammered ornament all over the surface from an inch above the cutting edge, $5\frac{7}{8}$ inches by 3; it appears to have been slightly bent in the casting. No. 99, rude, plain, and slightly corroded, $5\frac{1}{2}$ inches by $2\frac{1}{8}$, (Sirr). No. 100, a very rude and much corroded specimen, $5\frac{3}{4}$ inches by $2\frac{3}{4}$.—*Presented by Lord Farnham.* Nos. from 101 to 110, in the middle row of this Tray, are specimens of the longest variety of the long, narrow celt;

No. 101, in good preservation, small, thin, flat, 3 inches by $1\frac{1}{2}$; this and most of the other small specimens of the same class were, probably, stuck into, but not passed through, the knobbed end of a wooden handle, like the African specimen, Fig. 256, p. 370. Found in the bed of the Scariff River, county of Clare.—*Presented by the Shannon Commissioners.* No. 102, slightly imperfect, long and narrow, the sides being nearly parallel, 4 inches by $1\frac{1}{2}$. No. 103, of the same description, but more triangular, very thin, slightly corroded, cracked in the centre, $3\frac{3}{4}$ inches by $1\frac{3}{8}$. No. 104, ditto, but rather broader in the blade, $3\frac{1}{2}$ inches by $1\frac{3}{4}$. No. 105, long, imperfect, a slight stop ridge near the centre, $3\frac{7}{8}$ inches by $1\frac{1}{2}$. No. 106, thin and narrow, $3\frac{3}{4}$ inches by $1\frac{3}{4}$. No. 107, of very yellow bronze, round at the cutting edge, $3\frac{3}{8}$ inches by $1\frac{7}{8}$. No. 108, short, broad, flat, perfect, $3\frac{3}{8}$ inches by $2\frac{1}{8}$. No. 109, a small, perfect, long and narrow, thicker than usual, $4\frac{1}{8}$ inches by $2\frac{1}{8}$. No. 110, perfect, rather broad in the shaft and small end, $4\frac{1}{4}$ inches by 2; found in gravel, four feet under the surface of the bed of the Clare River, townland of Lehid, barony of Dunmore, county of Galway.—*Presented by the Board of Works.* The remaining specimens in the third row, from No. 111 to 120, are of the rudest description, some of them badly cast, and several much corroded. No. 111, long and narrow, corroded, 4 inches by $1\frac{7}{8}$. No. 112, very narrow in the shaft compared with its length, rather in imperfect preservation, contracted where the stop sometimes exists; $4\frac{1}{4}$ inches by $1\frac{5}{8}$ wide in the cutting edge, and $\frac{3}{4}$ across the narrowest part of the shaft, (Dawson). No. 113, thin, flat, somewhat triangular, rather straight in the cutting edge, corroded, $4\frac{1}{2}$ inches by $2\frac{3}{8}$. No. 114, thin, rude, much corroded, $4\frac{1}{2}$ inches by $2\frac{1}{4}$.—*Presented by Lord Farnham.* No. 115, ditto, very rude, and greatly corroded, as if from long immersion in water, 5 inches by $2\frac{1}{4}$. No. 116, imperfect and in bad preservation, $4\frac{3}{8}$ inches by $2\frac{1}{2}$. No. 117, long and narrow, round in the cutting edge, irregular on surface, a slight rudimental stop ridge; 5 inches by 2. No. 118, long and narrow, coppery on the surface, unsymmetrical, has a rude hammered ornament on the middle of flat surface, $5\frac{1}{4}$ inches by $2\frac{3}{8}$. No. 119, imperfect, slightly bent, the thinnest specimen for its size in the Collection; covered with verdigris; the cutting face nearly straight, the narrow end oblique, $5\frac{1}{2}$ inches by 3; this is one of the rudest specimens in the Museum,

except those on Tray **A**, it is either of great age or was made by a bad workman, (Sirr). No. 120, coppery, slightly corroded, $5\frac{1}{2}$ inches by $3\frac{1}{2}$.

SHELF I., Tray **G**, contains twenty-five celts, long and narrow, broad-edged, several ornamented; numbered from 121 to 145. Upon this Tray we first observe the lunette and saddler's knife-shaped face, described at page 375; the ornamentation also becomes more distinct, regular, and graceful. No. 121 a very small, rude, badly cast specimen of the thin, narrow, celt, but with a broad cutting face projecting considerably beyond the line of the shaft, the hatchet edge is quite blunt and round, apparently so in the original casting; only $2\frac{5}{8}$ inches long, by $1\frac{3}{8}$ across the blade. No. 122, long and narrow, sharp at the angles, slight rudimental stop, below which there is a broad, rudely hammered ornament, $4\frac{1}{4}$ inches by $1\frac{3}{4}$. No. 123, in imperfect preservation, long, narrow, slightly winged, with a rudimentary stop, saddler's knife-shape in the cutting edge; $4\frac{1}{4}$ inches by $1\frac{7}{8}$, and $\frac{1}{2}$ in depth across the centre of the wing; this is the first specimen, according to the arrangement of the Collection, in which we meet these three peculiarities combined. No. 124, a perfect specimen of the lunette-edged celt, in fine preservation, the flanges slightly developed; of a very dark green colour, either owing to the skin which has formed on it, or from the original lacquer; $4\frac{1}{2}$ inches by $2\frac{3}{8}$; it is beautifully decorated on the flat surface by four ridges, raised in the casting, the three uppermost of which are tooled with the fern-leaf marking; the edges are also decorated with a rope pattern (see Fig. 298, p. 390). No. 125, small, very rude, narrow, coppery, semicircular in the cutting face, $3\frac{3}{4}$ inches by $1\frac{3}{8}$. No. 126, ditto, very rude, unsymmetrical, but with the side edges partially raised into flanges, $3\frac{1}{2}$ inches by $1\frac{1}{4}$. No. 127, small, $4\frac{5}{8}$ by $2\frac{1}{2}$.—*Presented by R. A. Gray, C. E.* No. 128, remarkably short, recurved lunette-shaped, very thick, flanged; the only specimen of the kind in the Collection, $3\frac{1}{4}$ inches by $2\frac{3}{4}$ (see Fig. 264, p. 378), it was found in the cuttings at Keelogue ford, in 1843, and—*Presented by the Shannon Commissioners.* No. 129, small, rudimental stop, slightly grooved on surface by elevation of the flange-like edges, $2\frac{7}{8}$ inches by $1\frac{3}{8}$. No. 130, ungraceful in form, thick, $3\frac{5}{8}$ inches by $1\frac{1}{2}$. No. 131, brassy, in good preservation, but partaking more of the simple, flat, broad, hatchet-faced variety, than any of the other examples on

this Tray, $5\frac{1}{2}$ inches by $3\frac{1}{4}$.—*Presented by R. A. Gray, C. E.* No. 132, long, narrow, lunette-edged, with recurved extremities, rudimental stop and flange, decorated upon both flat surface and side edges, $5\frac{1}{8}$ inches by $2\frac{3}{8}$ (see Fig. 297, p. 390). No. 133, fractured in centre, punched ornament, slightly elevated edges, 5 inches by $3\frac{5}{8}$. No. 134, in fair preservation, long and narrow, an irregular hammered ornament on the lower and middle of flat surface, $5\frac{3}{4}$ inches by 3. No. 135, a good specimen of the long, narrow celt, slightly imperfect at small end, coated with a green patina, highly decorated, 7 inches by $3\frac{1}{8}$ (see Fig. 250, p. 365). No. 136, a good example of the saddler's knife-blade, rudimental curved stop, slight flanges, $6\frac{1}{4}$ inches by $2\frac{3}{4}$, and $\frac{1}{16}$ thick across the side of flange. No. 137, long and narrow, slightly corroded, round cutting edge, rudimental flange and stop, $6\frac{3}{4}$ inches by $3\frac{1}{4}$. No. 138, a fine specimen, in perfect preservation, delicately tooled with herring-bone marking all over surface of middle third; this specimen is well worthy of illustrations; $6\frac{1}{8}$ inches by $2\frac{5}{8}$. No. 139, imperfect in the cutting edge, rudimental flange and stop now $6\frac{1}{8}$ inches by $2\frac{3}{4}$. No. 140, very perfect, and in fine preservation, brassy in colour, slight stop and flange, appears to have been sharpened by grinding or whetting, decorated with a regular pattern upon the middle third of the flat, and a rope-like ornament on edge; 5 inches by $2\frac{7}{8}$ (see Fig. 302, p. 391). No. 141, a very fine specimen, lunette-edged, slightly corroded at small extremity, rudimental wings and stop beautifully decorated on surface, both in casting and by hand; $5\frac{3}{8}$ inches by $2\frac{1}{4}$ (see Figs. 286 and 301). No. 142, small, in perfect preservation, covered with a brownish patina, blade semilunar, slight flanges run over rudimentary stop ridge, decorated on sides and flat surface, both in casting and by hand; $4\frac{1}{4}$ inches by $2\frac{1}{2}$ (see Figs. 287 and 300, pp. 389 and 390). No. 143, narrow, rude, imperfect at small extremity; here the curved stop ridge rises to level of straight flanges, rudely hammered decoration on flat and edges; $4\frac{3}{4}$ inches by $2\frac{1}{4}$. No. 144, which is slightly unsymmetrical, is $5\frac{5}{8}$ inches long by $3\frac{1}{2}$ broad at the cutting face, and $1\frac{1}{4}$ across the small extremity; this celt, with 145, and No. 43, on Tray G, are remarkable and rare specimens of thin, flat, broad-faced, plain celts of which No. 145, the typical specimen, has been described, at p. 365, Fig. 251. No. 145 is a long specimen of the same variety, figured and described as above.

SHELF I., *Tray H*, contains twenty-eight specimens of the long, narrow celts, chiefly lunette-edged, some slightly ornamented; numbered from 146 to 173. No. 146, an encrusted, plain, flat specimen of the long, narrow variety, without flanges, but having a rudimental stop; has a slightly tooled decoration on middle third; $6\frac{1}{4}$ inches long by $3\frac{1}{4}$ broad at cutting face. No. 147, rude, small, lunette-edged; $3\frac{1}{2}$ by 2. No. 148, a fine, well-cast specimen, in good preservation, except a slight flaw at the small extremity, hatchet-faced, raised edges, slightly ornamented in the casting by elevated transverse bars; $6\frac{3}{4}$ by $3\frac{1}{2}$. No. 149, plain, long, and narrow, unsymmetrical, hammered at small extremity, slightly elevated at edges opposite rudimental stop, $5\frac{3}{4}$ by $2\frac{3}{4}$. The number of celts in which the small extremity has been blunted and hammered, without the cutting face being injured, leads one to believe that they were used like mortice chisels for cutting wood. No. 150, a good specimen, of bright yellow bronze, somewhat triangular, flat on the surface, and rudely decorated by hammered fan-tailed ornament radiating towards the blade, edge very sharp; $5\frac{3}{8}$ by $3\frac{1}{8}$; found in bed of the river at Ballyheedy Bridge, below Ballinamore, townland of Ardrum, parish of Oughteragh, county of Leitrim, and—*Presented by the Board of Works*. No. 151, a good specimen, in fair preservation, flat, long and narrow, plain; $5\frac{1}{8}$ by $2\frac{1}{2}$. No. 152, small, lunette-edged, $2\frac{1}{2}$ by $1\frac{3}{4}$. No. 153, long and narrow, imperfect in blade, slightly elevated at side edges, partially covered with remains of brown patina; $5\frac{1}{2}$ by $2\frac{1}{4}$. No. 154, lunette-edged, rudimental flange and stop, slightly corroded, decorated with slight cast cross ridges; $5\frac{3}{4}$ by $2\frac{1}{8}$. No. 155, rude in shape, narrow, slightly decorated below rudimental stop, and also on edges; $4\frac{3}{8}$ by 2. No. 156, rude, plain, flat; $4\frac{1}{2}$ by 2. No. 157, ditto; $4\frac{1}{4}$ by $2\frac{1}{8}$.—*Presented by Lord Farnham*. No. 158, ditto, imperfect from hammering on small extremity, blunt at cutting edge, slightly decorated with punched or hammered indentations on middle of flat surface; $4\frac{3}{4}$ by $1\frac{3}{8}$. No. 159, plain, flat, of a bright yellow colour, slightly decorated below rudimental stop with interrupted punched lines, $4\frac{3}{8}$ by $2\frac{3}{8}$; resembles No. 150.—*Presented by Lord Farnham*. No. 160, rude, corroded, saddler's knife-shaped blade, slight flanges and stop ridges; $4\frac{1}{8}$ by $2\frac{1}{8}$. No. 161, plain, flat, in shape and colour resembling No. 150, indented on side apparently from defect in cast-

ing; traces of hammered decoration; blunt on edge; $4\frac{7}{8}$ by $2\frac{3}{8}$. No. 162, rude, short, broad side edges raised into flanges, which turn over the small extremity, round in the cutting face; $4\frac{1}{8}$ by $2\frac{1}{4}$. No. 163, a good specimen, lunette-edged, with slight, sharp flanges; has a well-defined ornament on upper and lower edge; $5\frac{1}{4}$ by $2\frac{7}{8}$ (Dawson). No. 164, flat, lunette-edged, remarkably unsymmetrical towards small end; about a third of the middle decorated with a punch or hammer; $4\frac{1}{4}$ by $2\frac{1}{2}$. No. 165, lunette-edged; gaped in the face; slight flanges, decorated with curved cast ridges, and oblique tooled indentations; $4\frac{1}{2}$ by $2\frac{1}{2}$ (Dawson). No. 166, lunette-edged; appears to have been ground or sharpened, the extremities of the blades rounded off, remarkably sharp, rudimental stop and flange; $5\frac{1}{4}$ by $3\frac{1}{8}$. No. 167, saddler's knife-shaped blade, slight stop and flanges; $4\frac{7}{8}$ by $2\frac{3}{4}$ —*Presented by the executors of Leslie Ogilby, Esq.* No. 168, a good specimen, covered with a dark-brown patina, lunette-edged; $4\frac{1}{4}$ by $2\frac{1}{2}$ (Dawson). No. 169, narrow, recurved cutting face, blunted edge, slightly corroded, and also injured by hammering, decorated in casting like Fig. 294, in the illustrations of decoration, page 390; $4\frac{1}{8}$ by $2\frac{1}{8}$. No. 170, rude, narrow, long; much injured in face; rudimental stops and flanges; $5\frac{1}{2}$ by $2\frac{1}{2}$. No. 171, rude, unsymmetrical, unusual shape, long, narrow, lunette-edged, hammered at small extremity; 5 by $2\frac{1}{2}$. No. 172, small, narrow, lunette-edged, partially covered with brown patina; $3\frac{7}{8}$ by 2. No. 173, narrow, lunette recurved edge, slight flanges; $4\frac{1}{8}$ by $2\frac{1}{8}$.

SHELF I., *Tray I*, contains thirty-two bronze celts, chiefly of the long, narrow variety, with wings, rudimental stops, lunette and fan-tail edges, some decorated; numbered from 174 to 205. No. 174, small, narrow, in good preservation, slight flanges, no stop; $3\frac{7}{8}$ inches long by 2 across the width of the blade. No. 175, a very perfect specimen of the plain winged, chisel-edged celt, without a stop; $4\frac{7}{8}$ by $1\frac{3}{4}$; figured and described at p. 373. No. 176, a slightly imperfect specimen of the same variety, wings well developed, no stop; $4\frac{1}{2}$ by $1\frac{3}{4}$. No. 177, lunette-edged, winged, of bright-yellow metal, thick, has a very small rudimental stop, which could scarcely have been of any use in effecting the object of that portion of the implement; $5\frac{1}{4}$ by $2\frac{3}{4}$, and an inch wide across the broadest part of the wing. No. 178, very narrow, rude, slightly imperfect, with wings

and stop, sides nearly parallel; $4\frac{1}{2}$ by $1\frac{1}{4}$. No. 179, chisel-edged, with wing and stop, slightly corroded, has a cast semicircular ornament below stop, and transverse ridges on the side; $5\frac{3}{4}$ by $2\frac{1}{2}$; found in the Bog of Aghavalid, county of Cavan, and—*Presented by Lord Farnham*. No. 180, thick, massive, much worn and battered, as if it had been long used as a tool; blunted on all the edges; of bright-yellow metal; $5\frac{1}{4}$ by $2\frac{1}{2}$. No. 181, fan-shaped, slightly imperfect in blade, very narrow in shaft, slight flange and stop; cast ornament, consisting of a semicircular ridge above cutting edge, and rope on side; 5 by $2\frac{3}{8}$. No. 182, chisel-edged, with stop and wings, the latter much hammered on their edges; $5\frac{5}{8}$ by $2\frac{3}{4}$.—*Presented by Lord Farnham*. No. 183, broad, chisel-edged, rudimental stop, well-developed wing, ornamented with a semicircular indentation below extremities of wings, and a grooved ridging on their sides; $5\frac{7}{8}$ by $2\frac{5}{8}$. The peculiarity of this remarkable celt consists in the circumstance of the wings springing out from the line of the side, as shown in the representation alluded to. No. 184 resembles the former in all respects, except the decoration upon sides of wings, chisel-edged, rudimental stop; $5\frac{5}{8}$ by $2\frac{1}{2}$. No. 185, short, rude, narrow, slight flanges and sunken, rudimental stops, slightly imperfect at both extremities; $4\frac{1}{8}$ by $1\frac{7}{8}$. No. 186, a fine specimen in good preservation, lunette-edged, wings well developed, stops small, curved edge remarkably sharp; $5\frac{5}{8}$ by $2\frac{7}{8}$; found in Keelogue ford, upon the Shannon, encrusted with a brownish substance, like some of the stone celts already referred to.—*Presented by Shannon Commissioners*. No. 187, broad-face, imperfect in blade, rudimental stop, wings well developed; $5\frac{5}{8}$ by $3\frac{1}{8}$. No. 188, chisel-edged, wings well developed, no stop. This is the reverse of No. 183, for, viewed in profile, the wings sink beneath the side edges; it is $5\frac{5}{8}$ by $2\frac{1}{8}$. No. 189, of greenish-yellow bronze, lunette-edged, with wings and stop; below the stop may be seen two lateral and one central grooved cast ornament; $5\frac{3}{8}$ by $2\frac{1}{8}$. No. 190, saddler's knife-edged, much worn, rudimental stop and flanges, remains of cast decoration still exist on blade, and in the groove below the small end may be seen traces of a punched pattern; $4\frac{1}{4}$ by $2\frac{1}{4}$; found in the parish of Rasharkin, county of Antrim. No. 191, small, semicircular-edged, corroded, slight flange, rudimental stop; $4\frac{1}{4}$ by $2\frac{1}{2}$ (Dawson). No. 192, small, perfect sad-

dler's knife-edged, with well-developed wing and stop; $3\frac{5}{8}$ by $2\frac{1}{8}$. No. 193, narrow, chisel-edged, imperfect at top, wing, and stop; now $4\frac{1}{2}$ by $1\frac{5}{8}$.—*Presented by Lord Farnham.* No. 194, very short, slight flange and stop, cutting edge appears to have been ground down to its present dimensions, decorated on flat and sides, the former with a chevron, the latter with a rope ornamentation; $3\frac{1}{2}$ by $1\frac{3}{4}$. No. 195, small, lunette-edged, with recurved points, slight flanges and rudimental stop; $3\frac{3}{4}$ by $2\frac{1}{8}$. No. 196, short, fan-shaped in blade, thick, with wings and slight stop; $4\frac{1}{8}$ by $2\frac{5}{8}$. No. 197, in good preservation, short, thick, very much recurved in the blade, winged; $4\frac{1}{8}$ by $2\frac{3}{4}$. No. 198, fan-shaped in blade, like Fig. 262., p. 373, short, thick, slight wing and stop, perfect, and in good preservation; $4\frac{1}{4}$ by 3. No. 199, long and narrow, lunette and recurved cutting edge, flange rudimentary, but stop rising above the level of the blade, highly ornamented over a large portion of the flat surface with straight-lined grooved indentations, like Nos. 140 and 627, and on the edge by an oblique roped ornament; $5\frac{1}{8}$ by $2\frac{7}{8}$. No. 200, a good specimen, fan-shaped in the blade, slightly imperfect in the edge, slight flange and stop; a hammered decoration covers all the surface of the side; 5 by 3.—*Presented by executors of Leslie Ogilby, Esq.* No. 201, a very fine specimen of the fan-shaped variety, worthy of illustration; slight wing, stop, and semicircular raised ornament at junction of the blade and shaft; beautifully engraved on surface below stop, and with a regular feather-like cast ornament on side, hammered at small extremity; $4\frac{3}{4}$ by $2\frac{7}{8}$. No. 202, thick, massive, lunette recurved edged, full wings, and stop; external surface of former has a cast ornament, slightly hammered at small extremity; $4\frac{7}{8}$ by $2\frac{3}{4}$. No. 203, a fine specimen of the fan-shaped celt, with a narrow shaft, slight wings, small oblique stop, and curved line at junction of shaft with blade, like Fig. 262; slightly corroded on surface; $5\frac{1}{8}$ by $3\frac{1}{2}$. No. 204, long, semilunar-edged, with wings and stop, cast decoration on sides, and flat surface; $5\frac{3}{4}$ by $3\frac{1}{8}$; Fig. 304, p. 371. No. 205, a good specimen, in fine preservation, of the fan-shaped variety, but differs from the others in having the stop curved, wanting the curved ridge on the blade, and in having a groove running along the side surface; $5\frac{1}{4}$ by $3\frac{1}{4}$.—*Presented by executors of Leslie Ogilby, Esq.*

SHELF I., Tray J, contains twenty-nine narrow celts, with stops

and wings; numbered from 206 to 234. No. 206, a good specimen, in fine preservation, short and fan-shaped, like Fig. 262, with a high stop; a rudely graven ornament covers the outer face of one wing; $4\frac{7}{8}$ inches long by $2\frac{1}{2}$ broad. No. 207, of same variety, but more recurved in blade, stop rises considerably above the level of the wings; slightly imperfect at small end; $4\frac{3}{8}$ by $2\frac{3}{4}$. No. 208, rude, narrow, thick, in bad preservation, stop rudimental; $4\frac{1}{4}$ by $1\frac{3}{4}$. No. 209, very perfect, broad wings, stop, lunette-edged, it is remarkable for a beautiful cast ornament on side edges of wings, being the first specimen of the kind met with in the Collection (see Fig. 271, p 379); 5 by $2\frac{1}{4}$; found at Loughran's Island, on the Lower Bann.—*Presented by the Board of Works* (see Proceedings, vol. v., pp. 417). No. 210, rude, badly cast, narrow-winged, imperfect in several places; $5\frac{1}{4}$ by 2 . No. 211, long and narrow, imperfect at top, 6 by $2\frac{1}{4}$. No. 212, narrow, straight-edged, slightly injured on one wing, ornamented below stop, of yellow bronze; $5\frac{7}{8}$ by $2\frac{3}{8}$; found in bed of Shannon, at Athlone.—*Presented by Shannon Commissioners*. No. 213, narrow, semicircular in blade, ornamented on both flat and side faces, the latter by a series of circular indentations, slightly hammered at top; 5 by $2\frac{1}{4}$; worthy of illustration. No. 214, rude, narrow, imperfect, rudimental stop, oblique ridge on outer side of wing; $5\frac{1}{8}$ by $1\frac{7}{8}$. No. 215, coppery, slightly imperfect in casting, cast ornament on flat surface; $4\frac{7}{8}$ by $2\frac{3}{8}$. No. 216, narrow, imperfect, chisel-edged, with holes on thin septum between wings; 5 by $1\frac{3}{4}$. No. 217, rude, narrow, imperfect; coppery, with possibly a very small alloy of tin; the wings and stop merge into each other, has all the appearance of great antiquity; $3\frac{3}{4}$ by $1\frac{1}{2}$.—*Presented by Lord Farnham*. No. 218, another specimen of the same kind, also of very red metal, slightly corroded; 4 by $1\frac{1}{2}$.—*Presented, with No. 219, by W. R. Wilde, Esq.* (see Proceedings, vol. iii., p. 539). No. 219, ditto, rude and narrow, of yellower metal than the two former; $4\frac{1}{4}$ by $1\frac{1}{2}$. No. 220, rude, small, narrow, corroded; $4\frac{1}{2}$ by $1\frac{3}{4}$. These four celts, which are all of reddish metal, would appear to be the link between the simple, copper, wedge-shaped celt, and the long, narrow, bronze variety, with stop. No. 221, rude, narrow, imperfect at top, lower surface on a level with stop, and presenting a slight ornamental projection; 4 by $1\frac{3}{8}$; from Lisgarvel, parish of Maghesa, county of Derry. No.

222, a tolerably good specimen, long in the wings, slight oblique stop, lunette-edged; $4\frac{1}{4}$ by $2\frac{1}{4}$. No. 223, short, lunette-edged, with long and broad wings, slightly ornamented in casting, hammered at top; $4\frac{5}{8}$ by $2\frac{1}{4}$. No. 224, imperfect, very remarkable from wings coming down to margin of cutting edge, slight narrow stop; $4\frac{1}{4}$ by $2\frac{1}{4}$. No. 225, short, chisel-edged, with cast ornament on face, stop separate from wings, slightly hammered at top, outer side of wings ornate, and raised into ridges, as if for limiting the play of the tying; $4\frac{3}{4}$ by $2\frac{1}{4}$ (see Fig. 272, p. 379). No. 226, perfect, with recurved points to cutting edge; stop, wings and slight projection on outer sides of latter; $5\frac{1}{2}$ by $2\frac{5}{8}$ (Dawson). No. 227, long and narrow, with wings and stop, slightly hammered at top; $5\frac{1}{2}$ by $2\frac{3}{5}$. No. 228, round edged, with high wings passing below stop; $5\frac{3}{4}$ by $2\frac{1}{2}$. No. 229, very perfect, long, narrow, resembling No. 226 in elevation on outer edge; $5\frac{3}{4}$ by $2\frac{1}{4}$. No. 230, long narrow, broad-edged, much corroded; 6 by $2\frac{3}{4}$.—*Presented by Lord Farnham*. No. 231, large, broad, hatchet face, well developed stop, with a cast and tooled ornament below it, remains of patina on some portions, but corroded towards the edge; 7 by 3. No. 232, imperfect, chisel-edged, corroded, very broad in the groove, slight cast ornament below narrow stop; $6\frac{1}{4}$ by $2\frac{7}{8}$. No. 233, perfect, long, narrow, round in cutting edge, with recurved points, long in the groove cast ornament below stop; $6\frac{1}{2}$ by $2\frac{1}{2}$; found in the bed of the river above Bunnamukagh Bridge, parish of Cloonfinlough, county of Roscommon, in 1849, and—*Presented by the Board of Works* (see Proceedings, vol. v., App., p. 62). No. 234, short-winged, slightly imperfect, broad in the side, high stop with slight raised ornament below it, semilunar edge with recurved points; $5\frac{3}{4}$ by $2\frac{3}{4}$.—*Presented by the executors of Leslie Ogilby, Esq.*

SHELF II., *Tray K*, contains twenty-five long and narrow celts, with stops and wings; numbered from 235 to 259. No. 235, a long palstave, with lunette and recurved cutting edge, broad in wing, decorated in casting below stop; $6\frac{3}{8}$ inches long by 3 across the blade, and $1\frac{3}{8}$ wide on side of wing. No. 236, perfect, broad in the face, and wide in the wing; $6\frac{1}{2}$ by 3 in cutting edge, and $1\frac{1}{2}$ across side of wing. In this and Nos. 235, 237, 239, and 247, there is a slight projection on the side like No. 248, Fig. 260, p. 373. No. 237, large, of same variety, decorated below stop; 7 by $2\frac{7}{8}$, and

$1\frac{1}{2}$ across wing. No. 238, hatchet-faced, imperfect in wing, narrow groove and stop; surface much affected by exposure; $6\frac{7}{8}$ by $2\frac{7}{8}$. No. 239, slightly imperfect, much battered on surface, shallow groove, curved ornament below stop; $6\frac{1}{2}$ by $2\frac{5}{8}$ (from Major Sirr's collection). No. 240, chisel-edged, very broad in the wing; this is the first specimen in which the lower portions of the wings are made by hammering to overlap the stop and socket; 6 by $2\frac{5}{8}$, and $1\frac{1}{2}$ across breadth of wing (from the Dawson collection). No. 241, straight-edged, broadest part of wing below slight shallow stop; 6 by $2\frac{5}{8}$. No. 242, massive, slightly imperfect in one wing, hatchet face, stop and wing well developed; 6 by $2\frac{3}{4}$. No. 243, lunette edge, imperfect at small end, curved raised cast ornament below stop; $5\frac{1}{2}$ by $2\frac{7}{8}$ (Dawson). No. 244, narrow, chisel-edged, hammered at top, high stop with slight ornament beneath it; $6\frac{1}{4}$ by $2\frac{1}{2}$ (Dawson). No. 245, hatchet-face, unsymmetrical, very narrow wings and thin septum; 6 by $3\frac{1}{4}$. No. 246, the most perfect and largest specimen of this variety in the Collection, chisel-edged, ornamented below stop with bow-like cast decoration, below which is a line of circular indentations; $7\frac{1}{2}$ by 3, and $1\frac{5}{8}$ across side of wings. No. 247, a new sub-variety of the long, narrow celt, with wings and stop running into each other, broad in the cutting edge, slightly hammered at top, mould-mark on edges; $6\frac{1}{4}$ by $2\frac{7}{8}$. No. 248, the broadest winged celt in the Collection, lunette-edged, slight stop, with shallow curved ornament below, oblique raised bar on side; $5\frac{5}{8}$ by $2\frac{3}{4}$, and $1\frac{3}{4}$ across breadth of wing (see Fig. 250, p. 373). No. 249, narrow, small, lunette edge, wings turned into stop, like No. 247, showing one of the first indications of side socket, slightly hammered at top, mould-marks on side; $5\frac{3}{8}$ by 2. No. 250, short, fine close-grained metal, much hammered at top of wings, well developed cast ornament below stop; very sharp lunette edge; the moulds do not appear to have met closely, and have left a projecting ridge on side face; $4\frac{3}{8}$ by $2\frac{1}{2}$. No. 251, slightly imperfect, lunette edge; $5\frac{1}{2}$ by $2\frac{3}{8}$ (Dawson). No. 252, rude, but with well-developed socket-pouch, where wings and stop coalesce; slight projection on one side of cast line like a rudimental loop; $4\frac{3}{4}$ by $2\frac{1}{8}$. No. 253, lunette edged, imperfect in septum, broad wings, hammered over stop; $4\frac{7}{8}$ by $2\frac{1}{8}$. No. 254, of very red metal, rude, massive, much hammered at top, wings running down to chisel edge; $5\frac{1}{4}$ by $2\frac{1}{2}$; found in

Foulksrath, county of Kilkenny (Dawson). No. 255, chisel edge, hammered at top, wings turned in over stop, straight decoration on flat surface; $5\frac{1}{4}$ by $2\frac{1}{2}$.—*Presented by Lord Farnham.* No. 256, narrow, chisel edge, wings bent over stop; the slight flanges run down to cutting edge; $5\frac{3}{8}$ by $2\frac{1}{4}$ (Sirr). No. 257, narrow, chisel edge, stop and wings merge in casting, slightly imperfect at top; $5\frac{3}{8}$ by $2\frac{1}{8}$. No. 258, broad-faced, with curved points, small stop with wings hammered over it, straight raised ornament below; $5\frac{1}{4}$ by $2\frac{1}{4}$.—*Presented by Lord Farnham.* No. 259, lunette-edged, wings broad and hammered over stop; $5\frac{3}{8}$ by $2\frac{1}{2}$.

SHELF II., *Tray L*, contains twenty-eight narrow celts, with stops and wings, several imperfect; numbered from 260 to 287. No. 260, a rude specimen, with shallow wings, and high cast ridge below stop; $4\frac{3}{8}$ inches long by $1\frac{3}{4}$ across the blade. No. 261, a short specimen, with straight blunt edge, bow ornament below stop, septum defective at top, as if the celt makers had begun to economize the metal in this portion; $4\frac{1}{2}$ by 2. No. 262, imperfect, stop rising to level of wing, unsymmetrical on edge, 5 by 2 (Dawson). No. 263, chisel-edged, hammered at top, raised triangular ridge below stop; $4\frac{7}{8}$ by $2\frac{1}{8}$. No. 264, imperfect in casting at small extremity, broad chisel edge, side mould-marks, triangular raised ornament below stop; $4\frac{5}{8}$ by $2\frac{1}{2}$; found in cutting through shoal on River Comoge, near Fedamore, between Glennogra and Sixmilebridge, county of Clare (see Proceedings, vol. v., App., p. 65). No. 265, narrow, semilunar-edged, wings and stop join to form pouch; defective in casting at top; $4\frac{7}{8}$ by $1\frac{7}{8}$; found in county of Kilkenny. No. 266, lunette recurved edge, defective in casting at top; stop rises up over wings, and forms partial socket; $4\frac{3}{4}$ by $2\frac{1}{8}$. No. 267, lunette recurved edge; stop rises over wings; $4\frac{5}{8}$ by $2\frac{1}{8}$. No. 268, slightly corroded, lunette edge, with recurved points, broad wings, defective at top, raised ornament below stop; 5 by $2\frac{1}{2}$. No. 269, a good, clean specimen, but perfectly plain, lunette-edged; 5 by $2\frac{1}{4}$. No. 270, imperfect at top, and in bad preservation, lunette-edged, broad curved ornament below stop; $4\frac{1}{2}$ by $2\frac{1}{8}$ (Sirr). No. 271, broad edge, like No. 247, high stop, with wings hammered over it; $5\frac{1}{4}$ by $2\frac{1}{2}$ (Dawson). No. 272, lunette-edged, broad-winged; 5 by $2\frac{1}{4}$ (Sirr). No. 273, short, broad-edged, wings turned over stop, straight ornament on flat surface; $3\frac{3}{4}$ by $2\frac{3}{8}$; found in bed of river

at Killimor, barony of Longford, county of Galway.—*Presented by Board of Works.* No. 274, an imperfect but remarkable specimen, in which the side socket is partially developed, the wings and stop running into each other; septum imperfect; long, narrow blade, semilunar cutting edge; apparently very ancient, and formed of red metal; $5\frac{3}{4}$ by $2\frac{1}{4}$. No. 275, rude, narrow, imperfect at top, partial socket between wings and stop; raised ornament below, slight flanges running into narrow cutting edge; $4\frac{5}{8}$ by $1\frac{3}{4}$. No. 276, the most perfect specimen of the partial socket; see Fig. 263, p. 377; slightly imperfect at both extremities, lunette edge, wings and stop coalesce to form side socket; $5\frac{1}{8}$ by $2\frac{5}{8}$. No. 277, narrow, much injured, wings descend below stop; $5\frac{3}{8}$ by $2\frac{1}{8}$. No. 278, narrow, blunt-edged, no raised stop but wings hammered over groove; $5\frac{1}{4}$ by 2. No. 279, defective, semilunar-edged; $4\frac{5}{8}$ by $2\frac{1}{4}$. No. 280, defective, corroded, narrow, chisel edge; $5\frac{1}{2}$ by 2. No. 281, hatchet-faced, with a wind in side of blade, hammered at top, groove narrow; $5\frac{1}{8}$ by $2\frac{1}{2}$. No. 282, narrow, imperfect, shallow groove, wing and socket coalesce, of very red metal; $5\frac{1}{8}$ by $1\frac{5}{8}$. No. 283, imperfect, rude, thin septum, $4\frac{1}{2}$ by 2. No. 284, small, hatchet-faced, with partial socket, and straight ornament on front; $4\frac{5}{8}$ by $2\frac{1}{8}$ (Dawson). No. 285, imperfect, lunette edge, raised ornament; $5\frac{1}{2}$ by $2\frac{5}{8}$. No. 286, a bad casting, unsymmetrical, imperfect at top, semilunar edge, ridge left in moulding apparent on one side; 5 by $2\frac{1}{2}$ (Dawson). No. 287, narrow, defective at top, round edge, wings and stop very small; $5\frac{1}{2}$ by 2 (Sirr).

SHELF II., *Tray M*, contains fifty-one small, narrow celts, with well-developed stops and wings; and numbered from 288 to 338. No. 288, hatchet-faced; $4\frac{3}{8}$ inches long by $2\frac{1}{4}$ broad (Dawson). No. 289, ditto, imperfect at top, with pouch-shaped stop; $4\frac{3}{4}$ by 2. No. 290, perfect, lunette-edged; $4\frac{1}{4}$ by $2\frac{5}{8}$ (Dawson). No. 291, imperfect, badly cast, semilunar edge, slight shallow wings and stop; $4\frac{3}{4}$ by $2\frac{1}{4}$. No. 292, imperfect, rude, blunt at edge, slightly ornamented below rudimental stop; $4\frac{3}{8}$ by $1\frac{3}{4}$. No. 293, rude, massive, blunt on semilunar edge, high stop, raised, curved ornament below it; $5\frac{1}{2}$ by $2\frac{3}{8}$. No. 294, chisel edge, deep groove between broad wings, thin septum, imperfect at top; $4\frac{5}{8}$ by 2. No. 295, narrow, round-edged, imperfect in wings; $4\frac{1}{2}$ by $1\frac{5}{8}$. No. 296, lunette edge, slightly imperfect at top, cast-mark shows that the sides of mould did not match; $4\frac{1}{4}$ by 2 (Dawson). No. 297, rude, massive, as if

badly cast in a rude mould, septum imperfect at top; $4\frac{3}{8}$ by $2\frac{1}{4}$. No. 298, narrow, chisel-edged, broad in the wings, which with stop form side socket; $4\frac{1}{2}$ by $1\frac{3}{4}$; found in county of Tipperary. No. 299, much injured, lunette edge, $4\frac{1}{4}$ by 2. No. 300, a good specimen, lunette-edged with recurved points, side sockets formed with wings and stop; $4\frac{3}{4}$ by $2\frac{3}{8}$. No. 301, short, sharp hatchet-edge, imperfect at top, slight side socket; $3\frac{7}{8}$ by $2\frac{1}{8}$. No. 302, imperfect at small extremity, bears marks of sharpening on hatchet face; 4 by $2\frac{1}{8}$ (Sirr). No. 303, rude and imperfect in casting, lunette and recurved edge; $3\frac{5}{8}$ by $1\frac{7}{8}$.—*Presented by executors of Leslie Ogilby, Esq.* No. 304, lunette edge, with slight side socket; $4\frac{5}{8}$ by 2. No. 305, rude, massive, badly cast, much hammered at top, as if from long use as a chisel; 4 by 2. No. 306, a bad, lumpy casting, lunette edge, with side sockets; $3\frac{3}{4}$ by $2\frac{1}{8}$ (Dawson). No. 307, rude, imperfectly cast, corroded, slight side sockets; $3\frac{7}{8}$ by $1\frac{3}{4}$ (Dawson). No. 308, imperfect, lunette-edged, much hammered at top; $3\frac{3}{8}$ by $1\frac{7}{8}$. No. 309, lunette edge, imperfect at top; $2\frac{3}{8}$ by $2\frac{1}{8}$. No. 310, lunette-edged, with much recurved points, hammered at top, side sockets, ornamental ridge below stop. No. 311, narrow, rude, imperfect, corroded, semilunar-edged; $3\frac{1}{2}$ by $1\frac{1}{2}$.—*Presented by executors of Leslie Ogilby, Esq.* No. 312, of bright yellow metal, rude, slightly imperfect, semilunar edge, wings and stop coalesce; $3\frac{7}{8}$ by $1\frac{5}{8}$. No. 313, narrow, imperfect at top, chisel edge, raised, bow ornament below rudimental stop; $4\frac{1}{8}$ by $1\frac{1}{2}$; found in the parish of Rasharkin, county of Antrim. No. 314, perfect, lunette edge, wings bent over stop, raised ornament; $3\frac{7}{8}$ by $2\frac{1}{8}$ —"found 3 feet under surface, in excavating Toome bar, the ancient ford on the River Bann, between the counties of Derry and Antrim, and near Toome Castle, on the Antrim side."—*Presented by Board of Works.* No. 315, rude, chisel-edged, imperfect at top from defective casting, wings bent over slight stop. The turn-in of the wings, in this as well as the next specimen, was evidently effected in the mould; $3\frac{5}{8}$ by $1\frac{5}{8}$. No. 316, curved, and symmetrical in edge, wings turned over, slight stop; $3\frac{1}{2}$ by $1\frac{5}{8}$. No. 317, lunette edge, recurved points, defective at top, a handsome raised ornament occupies surface below stop; $3\frac{3}{4}$ by $2\frac{1}{8}$. No. 318, rude, narrow, round-faced, with deep grooves; $3\frac{3}{4}$ by $1\frac{3}{8}$ (Dawson). No. 319, a remarkable specimen, in which the wings are but rudimentary, and the stops much developed, lu-

nette-edged; $3\frac{1}{2}$ by $1\frac{7}{8}$ (Dawson). No. 320, rude, narrow, in bad preservation, round edge, hammered at top; $3\frac{5}{8}$ by $1\frac{5}{8}$ (Dawson). No. 321, imperfect at top, shallow stop, lunette edge, apparently ground; $3\frac{7}{8}$ by 2 (Dawson). No. 322, very rude, narrow, round edge, imperfect at top, side sockets; $3\frac{3}{4}$ by $1\frac{1}{2}$. No. 323, rude, narrow, chisel edge, imperfect, corroded, $3\frac{2}{3}$ by $1\frac{3}{8}$ (Dawson). No. 324, very short, lunette edge, much hammered at top; $2\frac{5}{8}$ by $1\frac{5}{8}$. No. 325, narrow, chisel edge, very broad in wing, deep side sockets, slightly ornamented below stop; $3\frac{2}{3}$ by $1\frac{3}{8}$, and $1\frac{1}{4}$ across width of wing. From county Kilkenny. No. 326, narrow, chisel-edged, deep side sockets, $3\frac{1}{8}$ by $1\frac{3}{8}$ (Dawson). No. 327, lunette edge, imperfect, with wings and stop; 3 by $1\frac{1}{2}$. No. 328, rude, narrow, blunt, chisel edge, side sockets; $2\frac{3}{8}$ by $1\frac{3}{8}$ (Dawson). No. 329, short, broad, lunette edge; wings turned over groove, cast bow ornament below; $3\frac{1}{8}$ by $1\frac{7}{8}$. No. 330, very rude, small, round-edged, wings and stop coalescing; $2\frac{3}{4}$ by 1 (Dawson). No. 331, small, hatchet face, imperfect in casting at top, slightly ornamented; $2\frac{3}{4}$ by $1\frac{1}{4}$. No. 332, lunette edge, narrow in the face, but broad in wings, slight cast ornament below stop; $2\frac{7}{8}$ by $1\frac{1}{4}$. No. 333, a curious and small specimen of this variety; chisel edge bearing marks of sharpening, with a stone, narrow groove, sharp-edged wings, unsymmetrical; $2\frac{3}{4}$ by $1\frac{1}{4}$. No. 334, rude, badly cast, lunette recurved edge, defective in top and wings, ornamented below stop; $2\frac{7}{8}$ by $1\frac{3}{4}$ (Sirr). No. 335, imperfect, chisel edge, side sockets; 3 by $1\frac{1}{4}$. No. 336, very small, semilunar edge, deep side sockets, imperfect at top; $2\frac{1}{2}$ by $1\frac{3}{8}$. No. 337, chisel edge, imperfect at top; $2\frac{7}{8}$ by $1\frac{1}{2}$.—*Presented by W. R. Wilde, Esq.* No. 338, very short and broad, round-faced, blunt, corroded, side sockets; $2\frac{3}{4}$ by $1\frac{3}{8}$ (Dawson).

There is scarcely a good perfect specimen on this Tray, and, from the number of imperfections in casting, they present, as a whole, all the appearance of specimens which might have been collected in the workshop of a celt-maker. They also strengthen the argument advanced for the ancient manufacture of all such articles in Ireland.

SHELF II., *Tray N*, contains eighteen long, narrow celts, with wings, stops, and loops; numbered from 339 to 356. No. 339, imperfect at top, chisel edge, hammered at small extremity, well-developed side sockets, loop imperfect; $4\frac{1}{8}$ inches long by $1\frac{7}{8}$ wide.

No. 340, narrow, with lunette but imperfect edge, apparently sharpened; shallow grooves and side sockets, loop perfect, ornamented with raised central bar and curved ridge on flat surface below stop; $5\frac{1}{4}$ by 2, see Fig. 306 (Dawson). No. 341, very imperfect, narrow, round-faced, without stop, septum rising above wings, loop fractured, slight marks of hammering upon top, so that, although it may never have been used with a handle, it was evidently employed as a chisel; $4\frac{1}{8}$ by $1\frac{5}{8}$. No. 342, broad, chisel edge, slightly corroded, wings shallow, but turned in over groove below, apparently in casting, loop perfect; $4\frac{3}{4}$ by $2\frac{1}{8}$; Fig. 265, p. 379. No. 343, slightly imperfect in septum, lunette-faced, with recurved points, ground on cutting edge, side sockets formed by turning in the lower extremities of the wings to meet a raised stud at their angles, loop perfect and high on socket; 4 by $2\frac{5}{8}$. No. 344, rather chisel-edged, corroded, deep side sockets projecting into ornaments, loop opposite sockets; $4\frac{7}{8}$ by $2\frac{1}{8}$ (Dawson). No. 345, lunette edge, notched at smaller extremity, deep side sockets, sides do not correspond, owing to moulds not meeting perfectly; $5\frac{3}{8}$ by $2\frac{1}{8}$.—*Presented by Shannon Commissioners.* No. 346, narrow in the shaft, and broad in curved cutting edge, shallow grooves, with slight side sockets, ornamented on the face like No. 340, large perfect loop; $6\frac{1}{4}$ by $2\frac{1}{2}$. “Taken out of bed of Shannon by C dredge.” No. 347, large, perfect, but unsymmetrical from moulds not meeting fairly above, the great object being evidently to produce a good cutting edge, which is always perfect, while the upper portion did not receive so much attention in the casting. Long in the blade, side sockets, loop perfect, slight triangular ornament on face; $6\frac{1}{2}$ by 3. No. 348, small, imperfect at wings and top, semilunar edge, side sockets, loop worn on inner side; $3\frac{5}{8}$ by $2\frac{3}{4}$; found at Shannon-Bridge, and—*Presented by Shannon Commissioners.* No. 349, rude, imperfect at top, circular side sockets, semilunar edge, wide loop placed opposite sockets; 5 by $1\frac{7}{8}$, found at Keelogue Ford, and—*Presented by Shannon Commissioners.* No. 350, short, semilunar-edged, lower end of wings turned in over slight stop; $3\frac{7}{8}$ by 2 (like Figure 256, p. 379). No. 351, lunette edge, hammered at top, deep side sockets, loop; $5\frac{1}{2}$ by $2\frac{1}{2}$. No. 352, narrow in the shaft and broad in the hatchet face, wings and stop coalesce, raised side ornament, small loop; 6 by $2\frac{3}{4}$. No. 353, a good specimen, graceful in shape, lunette edge, with

much recurved points, groove shallow at top, side face pleasingly decorated by a central ridge, and elevated side edges, loop perfect, circular apertures in hollows of sockets; $6\frac{3}{8}$ by $2\frac{7}{8}$ across blade, and $\frac{7}{8}$ ths at small extremity. No. 354, same variety, but not so good a cast, and wanting recurved points, massive loop, opposite shallow stop, a slight cast ornament on the face; $6\frac{3}{4}$ by $2\frac{3}{4}$.—*Presented by Shannon Commissioners.* No. 355, rather a rare form of this variety, massive, thick, unornamented, semilunar-edged, with deep sockets and elliptical broad stop, oblique at small extremity; $5\frac{1}{2}$ by $2\frac{1}{2}$. No. 356, same variety as No. 352, corroded, broad, hatchet face, ornamented like No. 340, shallow groove, loop perfect; $6\frac{1}{8}$ by $2\frac{3}{8}$; found in the county of Galway.

SHELF III., *Tray O*, contains thirty-five socketed and looped celts, some ornamented, numbered from 357 to 391. The socketed celts commence here, and end with No. 569, on *Tray S*. No. 357, a plain, rude, unornamented, socketed celt, rather chisel-edged, oval in socket; $3\frac{1}{8}$ inches long, $1\frac{7}{8}$ broad in cutting edge, and 2 across the long diameter of the oval socket, which is $2\frac{1}{2}$ deep, so that the solid portion is about $\frac{7}{8}$ ths of an inch; loop thin, but perfect (Dawson). No. 358, a much injured and corroded specimen of the wedge-shaped socketed celt, originally quadrangular in the socket, and slightly ornamented in the rim; loop perfect; $4\frac{7}{8}$ by $1\frac{5}{8}$. No. 359, imperfect on cutting edge, loop socket oval, with slightly raised margin, having a hole on one side, as if for insertion of a rivet, the only example of the kind in the Collection; the antiquity of this aperture is, however, questionable. It is now $2\frac{1}{2}$ by $1\frac{5}{8}$. On looking through this specimen, may be seen at the bottom the septum or slight ridge which marked the joining of the double core used in casting. No. 360, short, round-faced, with a raised ornament below socket margin; loop perfect; $2\frac{1}{2}$ by $1\frac{3}{4}$. No. 361, gold-coloured, round-edged, raised bar or fillet above large perfect loop, socket circular; $1\frac{3}{4}$ by $1\frac{7}{8}$ in blade, and $1\frac{5}{8}$ across outer edge of socket.—*Presented by R. A. Gray, C. E.* (see *Proceedings*, vol. v., App., p. 56). No. 362, of bright yellow metal, in good preservation, broad fillet, loop, socket oval, and having three ridges running down its interior, the marks of the three-pieced core; $2\frac{3}{8}$ by $1\frac{3}{4}$; “found 4 feet below the old bed of the Woodford River, townland of Cormeen, county of Cavan,” and—*Presented*

by Board of Works. No. 363, of bright yellow metal, semilunar edge, broad fillet round edge of oval socket; loop; $2\frac{3}{4}$ by 2.—*Presented by Lord Farnham.* No. 364, long, semilunar-edged, circular socket margined by a ridge overlapping a broad groove, which surrounds that part above a thick broad loop; $3\frac{1}{2}$ long by $2\frac{1}{2}$ broad, and $1\frac{5}{8}$ ths from out to out of socket, which is $2\frac{1}{8}$ deep (Dawson). No. 365, perfectly plain, slightly corroded, very thin, hatchet face, an imperfection in casting like a rivet-hole at edge of circular socket; loop remarkably slight; $2\frac{1}{8}$ by $2\frac{3}{8}$. No. 366, rather square, chisel-edged, oblique at top, apparently from bad casting, loop perfect, no remains of core marks in socket, but a circular grooved line surrounds the interior; a different form of casting was evidently used with this specimen; 3 by $1\frac{3}{4}$. No. 367, short, saddler's knife-edged, nearly circular in socket, loop, and top fillet; $2\frac{3}{4}$ by $2\frac{1}{4}$ (Dawson). No. 368, short, round-edged, oval in socket, a double fillet runs above perfect loop; $2\frac{3}{4}$ by $1\frac{1}{4}$ (Dawson). This specimen is covered with a fine, clean patina, or varnish. No. 369, short, hatchet-faced, plain, mould-marks on edge, oval in socket, three core lines, loop small; $2\frac{1}{2}$ by $2\frac{3}{8}$ (Dawson). No. 370, lunette-edged, plain, oval in socket; $2\frac{3}{4}$ by $2\frac{1}{8}$. No. 371, long, imperfect, wanting loop and part of socket; hatchet-faced, plain, slightly corroded; $4\frac{1}{8}$ by $2\frac{3}{8}$. No. 372, in good preservation, round-edged, oval socket, a double fillet surrounds the margin, loop elliptical; $3\frac{1}{4}$ by $2\frac{3}{8}$. No. 373, plain, semilunar-edged, slightly corroded, loop perfect; $3\frac{1}{8}$ by $2\frac{5}{8}$. No. 374, of fine smooth metal, covered with a greenish patina, semilunar blunt edge; a rude, double fillet, as if made by hand, surrounds oval socket, loop strong; $3\frac{1}{8}$ by $2\frac{1}{4}$ (Dawson). No. 375, plain, long and narrow, corroded, elliptical in blade, and circular in thin socket, loop large and circular; $2\frac{3}{8}$ by $2\frac{1}{2}$. The socket has been hammered on one side, as if it had been used as a chisel, like the narrow-winged celts (Sirr). No. 376, in good preservation, semilunar edge, socket oval, deeply marked with core ridges, edge indented, loop high; $3\frac{1}{4}$ by $2\frac{3}{8}$ (Dawson). No. 377, round, blunt edge, socket circular, with broad fillet round it at upper insertion of thick heavy loop; $3\frac{1}{4}$ by $2\frac{1}{8}$ (Dawson). No. 378, plain, corroded, round edge, nearly circular in socket, loop perfect; $3\frac{3}{8}$ by $2\frac{1}{4}$ (Sirr). No. 379, round in the edge, and circular in the socket, with raised bar surrounding upper edge above thick loop, cast ornament; described

and figured at p. 392; a decoration formed in the mould surrounds the insertions of the loop, as if intended to be worked afterwards with a tool, but the castings had never been cleared off; $3\frac{1}{4}$ by $2\frac{1}{2}$. No. 380, a remarkable and rather rare specimen, lunette recurved edge, five-sided in shaft, massive edge and loop, indented below, oval everted socket margin; $3\frac{1}{4}$ by $2\frac{3}{8}$. No. 381, long, round-edged, flat above cutting edge, socket circular, raised fillet above strong loop, slightly corroded; $3\frac{1}{2}$ by $2\frac{1}{8}$. No. 382, of fine close-grained metal, like No. 374, semilunar edge, unornamented, loop perfect, socket slightly irregular; $3\frac{1}{8}$ by $2\frac{3}{8}$ (Dawson). No. 383, semilunar-edged, with sharp extremities, double fillet round circular socket, thick heavy loop; $3\frac{3}{8}$ by $2\frac{1}{2}$. No. 384, lunette-edged, a slight indentation surrounds oval socket, loop long and flat; 3 by $2\frac{3}{4}$. No. 385, hatchet face, plain, slightly corroded, loop imperfect, socket nearly circular; $3\frac{1}{2}$ by $2\frac{3}{4}$ (Dawson). No. 386, large, semilunar-edged, socket thinner on one side than another, slightly raised fillet, oval loop apparently worn on inner surface; $4\frac{1}{8}$ by $2\frac{3}{4}$, and $3\frac{1}{4}$ deep in socket. No. 387, a good specimen, semilunar face, oval socket, with raised lip, narrow loop; $3\frac{3}{4}$ by $2\frac{3}{4}$; procured from Killala, county of Mayo (Sirr). No. 388, much corroded, loop broken, semilunar edge; $3\frac{7}{8}$ by $2\frac{1}{2}$ (Sirr). No. 389, a good specimen, round and broad in the blade, oval in socket, loop large and perfect, fillet broad and slight; $3\frac{1}{4}$ by $2\frac{3}{8}$; found at Athlone, and—*Presented by Shannon Commissioners*. No. 390, smooth, unornamented, of fine close-grained metal, like Nos. 374 and 382, which it much resembles, and, like them, has an irregular margin to the oval socket; $3\frac{1}{2}$ by $2\frac{3}{8}$ (Dawson). No. 391, presents somewhat the same characters as the preceding, but a slight tooled indentation surrounds the irregular margin of the oval socket, loop perfect; $3\frac{3}{8}$ by $2\frac{3}{8}$.

SHELF III., *Tray P*, contains thirty-five socketed and looped celts, numbered from 392 to 426. No. 392, short, compressed, chisel-edged, oval socket, with slight raised fillet round the margin, loop large; $2\frac{5}{8}$ inches long, by $1\frac{7}{8}$ across the blade, and $\frac{7}{8}$ ths in the clear of the short axis of the socket. No. 393, short, lunette-edged, compressed, socket oval, loop round; $2\frac{1}{2}$ by 2. No. 394, lunette-edged, oval socket, with indented ornament, cast mark on side edge; $2\frac{5}{8}$ by $2\frac{1}{4}$ (Dawson). No. 395, compressed, lunette-edged, socket a long oval, with a slightly everted margin, loop heavy; $2\frac{7}{8}$ by $2\frac{3}{8}$.

No. 396, round edge, socket oval with imperfect margin, loop wide, and its insertions running off into sides of socket, raised ornamentation; triple core marking the ends of the ridges not meeting in the angle below, so that probably the core was composed of several pieces; $2\frac{3}{4}$ by $2\frac{1}{8}$.—*Presented by Lord Farnham.* No. 397, a good clean specimen, resembling the fan-shaped celt in the blade, plain, circular in socket, loop; 3 by $2\frac{1}{2}$. No. 398, long, chisel edge, circular in socket, with raised fillet below margin, broad low loop; $3\frac{1}{4}$ by $1\frac{3}{4}$. No. 399, long, recurved lunette edge, plain, oval socket, large perfect loop; $3\frac{1}{8}$ by $2\frac{1}{8}$ (Dawson). No. 400, thick and massive, narrow, semilunar edge, plain, oval socket, circular loop; 3 by 2 (Dawson). No. 401, long, compressed in middle, semilunar edge, fractured from defect in casting, oval socket, with large elliptical loop; $3\frac{1}{2}$ by $2\frac{1}{2}$; found near Dunshaughlin, and—*Presented by Lord Farnham.* No. 402, flat, angular on side edges, hatchet face, socket oval with raised margin, small loop; $3\frac{1}{2}$ by $2\frac{5}{8}$ (Dawson). No. 403, plain lunette edge, nearly circular in socket, wanting core marks, slight round loop; $3\frac{1}{8}$ by $2\frac{3}{8}$; from the county of Tipperary (Sirr). No. 404, lunette slightly recurved edge, undecorated, socket circular; 3 by $2\frac{1}{2}$ (Dawson). No. 405, flat and compressed, straight chisel edge, socket elliptical, with triple fillet below everted margin, loop placed high up; $3\frac{1}{4}$ by $2\frac{1}{4}$. No. 406, a fine specimen, broad, lunette recurved edge, plain, oval socket, loop large and sharp on inner edge; $3\frac{1}{2}$ by 3 (Sirr). No. 407, plain, brassy, hatchet edge, slightly oval in socket, loop massive, large core ridge; $3\frac{1}{2}$ by $2\frac{5}{8}$ (Dawson). No. 408, narrow in shaft, six-sided, hatchet-faced, undecorated, socket oval, in the bottom of which still remains an inch of the wooden handle, indented with the core ridges, showing that it was forced into its place (see p. 383); $3\frac{5}{8}$ by $2\frac{3}{8}$; “found in the River Erne, in loose stones and gravel, about two feet below the bed of the river, in townland of Bessbrook, parish of Annagh, barony of Lower Loughtee, and county of Cavan.” No. 409, plain, long, narrow in blade, lunette edge, socket circular, loop thin; $3\frac{5}{8}$ by $2\frac{1}{2}$.—*Presented by R. A. Gray, C. E.* No. 410, massive, broad hatchet face, oval socket with indented edge, loop small; $3\frac{5}{8}$ by $3\frac{1}{8}$.—*Presented by the executors of Leslie Ogilby, Esq.* No. 411, a fine specimen, in good preservation, semilunar edge, slightly oval socket with triple fillet below wide-spread margin, loop broad; $3\frac{1}{2}$ by $2\frac{3}{8}$ (Dawson). No.

412, plain, round chisel edge, oval socket with trumpet mouth (Sirr). No. 413, large, lunette edge, socket circular, with indented margin, loop small; $3\frac{3}{4}$ by $2\frac{7}{8}$.—*Presented by the Shannon Commissioners.* No. 414, rude, plain, slightly corroded, edge round, socket circular, loop wide and thin; $3\frac{3}{4}$ by $2\frac{1}{2}$ (Dawson). No. 415, broad, lunette edge with slight recurved points, socket circular, with raised rim below everted margin, loop small; $3\frac{3}{4}$ by 3. No. 416, fan-shaped edge, circular socket, compressed opposite large wide loop; a slight raised band, $3\frac{1}{4}$ wide surrounds the socket edge; $3\frac{3}{4}$ by $2\frac{7}{8}$. No. 417, perfect, fan-shaped edge, a raised band passes round circular socket opposite insertion of narrow loop; $4\frac{1}{8}$ by $2\frac{7}{8}$. No. 418, in bad preservation, round hatchet edge, socket circular, with three raised bands, loop defective; $3\frac{3}{4}$ by $2\frac{1}{2}$ (Sirr). No. 419, plain, broad, hatchet-face, massive loop, socket circular; $3\frac{3}{4}$ by 3. No. 420, plain, lunette edge, oval; $3\frac{3}{4}$ by $3\frac{1}{8}$ (Sirr). No. 421, unornamented, round face, socket circular, loop small; $3\frac{7}{8}$ by $2\frac{3}{4}$. No. 422, plain, semi-lunar edge, socket oval with oblique margin, loop high; $3\frac{3}{4}$ by $2\frac{3}{4}$ (Dawson). No. 423, long, massive, six-sided, round face, socket circular, eye of loop small; $4\frac{1}{2}$ by $2\frac{3}{4}$; "found in deepening the bed of the river in the townland of Derrindrehid, parish of Killeshandra, barony of Tullyhunco, and county of Cavan."—*Presented by the Board of Works.* No. 424, massive, remains of patina on part of surface, lunette edge, circular socket, loop strong; $4\frac{1}{2}$ by $3\frac{1}{4}$. No. 425, of bright yellow metal, edge semilunar, socket circular, with broad fillet passing round margin; $4\frac{1}{8}$ by $2\frac{7}{8}$. No. 426, thin, defective in casting, round edge; $3\frac{3}{4}$ by 3 (Dawson).

SHELF III., *Tray Q*, contains forty-two socketed and looped celts, mostly long and narrow, some axe-shaped; numbered from 427 to 468. No. 427, short, round-faced, triple ornament, round socket, loop perfect; $2\frac{1}{4}$ inches long, by $1\frac{3}{4}$ wide in the blade—*Presented by the Shannon Commissioners.* No. 428, small, much corroded, hatchet-faced, covered with an incrustation like iron rust, loop circular; 2 by $2\frac{1}{4}$. No. 429, slender, lunette edge, recurved points, socket circular, unornamented, loop perfect; $2\frac{7}{8}$ by $1\frac{7}{8}$ (Dawson). No. 430, slender, hatchet-faced, socket circular, unornamented, loop perfect; 3 by $1\frac{3}{4}$ (Dawson). No. 431, imperfectly cast, lunette edge, plain, socket oval, loop slender, worn; $3\frac{3}{4}$ by $2\frac{1}{4}$. No. 432, plain, round edge, socket oval with indented margin, loop deficient; $3\frac{1}{8}$ by 2.

No. 433, long and slender, hatchet edge, ten-sided at top, socket circular with slight outer ornament, loop massive; 4 by $2\frac{1}{4}$. No. 434, large, plain, semilunar edge, socket quadrangular, loop broken; 4 by $2\frac{1}{2}$. No. 435, flattened, broad, lunette recurved edge, socket oval, with double fillet round outer margin, loop large; $3\frac{3}{8}$ by $2\frac{1}{4}$. No. 436, a fine specimen of the hatchet-faced variety of bronze celt, resembling in the blade some of the axes in the Iron Collection, especially No. 244, on Tray J, socket oval, loop massive; figured and described at page 385. No. 437, small, rude, corroded, chisel edge, quadrangular socket and shaft; no core-marks, as is common in this variety; $2\frac{1}{2}$ by $1\frac{5}{8}$: "found at Loughran's Island, on the Lower Bann," and—*Presented by the Board of Works*. No. 438, flattened accidentally, triple core-marks, semilunar edge, slender loop, decorated round socket and on side face, but ornament much effaced; $2\frac{1}{2}$ by $1\frac{7}{8}$. No. 439, a small specimen of the hatchet variety, thick, socket oval with marginal indentations, loop circular; $2\frac{5}{8}$ by $2\frac{1}{2}$. No. 440, thick, lunette edge, angular on sides, socket oval with indented margin, loop massive; $2\frac{3}{4}$ by $2\frac{1}{8}$. No. 441, slender, narrow in shaft, chisel edge, socket circular, with inner core-mark and raised band externally, loop small and placed high up; $3\frac{1}{4}$ by 2 (Dawson). No. 442, slender, semilunar edge, loop perfect, oval socket, raised fillet, sharp side angles, forming slight ornaments on both edge views; $3\frac{3}{8}$ by 2; found at Aughnacloy, county of Tyrone (Dawson). No. 443, perfectly plain, very thin, slender, chisel edge, oval socket with trumpet mouth, very small loop; $3\frac{1}{4}$ by 2 (Dawson). No. 444, slender, with roped ornament at top, figured and described at page 384, deficient on one lip of socket. No. 445, very perfect, broad, flat, chisel edge, socket a compressed oval with double moulding outside, loop large; $3\frac{3}{4}$ by $2\frac{1}{4}$; found in the Shannon, and—*Presented by the Shannon Commissioners*. No. 446, a fine specimen of the axe-shaped variety, like Fig. 281, page 385, octagon shaft, blade edge nearly straight, loop small, socket oval with large ridge externally, no vestige of core-mark; $3\frac{3}{4}$ by $3\frac{1}{4}$. No. 447, small, round edge; socket oval, with triple ornament externally; $2\frac{1}{4}$ by $1\frac{3}{8}$. No. 448, ditto; socket circular, with three bands below margin, large double core-marks; $2\frac{3}{8}$ by $1\frac{3}{4}$ (Sirr). No. 449, rude, plain, round in edge, circular in socket, loop slight and apparently worn; $2\frac{7}{8}$ by $1\frac{3}{4}$ (Dawson). No. 450, broad, semilunar edge, socket

oval, plain, loop narrow; $3\frac{1}{4}$ by $2\frac{3}{8}$. No. 451, slender, compressed, unornamented, six-sided in shaft, lunette edge, socket irregular, loop small and placed high up; $3\frac{1}{4}$ by $2\frac{1}{2}$ (Dawson). No. 452, of graceful shape and in fine preservation, except the loop, which has been broken, very round in the face; socket circular, and not quite an inch wide in the clear, with broad corded ornament on external surface; a fine patina or varnish covers the whole of this specimen; $3\frac{1}{2}$ by 2 (Dawson). No. 453, long, narrow, injured in socket, semilunar edge, loop small; found in the Bog of Allen, county of Kildare; $3\frac{3}{4}$ by $2\frac{1}{4}$. No. 454, small, lunette edge, socket circular, loop round; $2\frac{1}{8}$ by $1\frac{1}{2}$. No. 455, short, semilunar edge, quadrangular socket with everted margin over broad fillet, loop perfect; covered with an incrustation of iron (see page 394), has some Irish letters engraved upon it; $2\frac{1}{2}$ by $1\frac{7}{8}$. No. 456, short, round-edged, highly ornamented by five raised longitudinal bars running from the fillet below elliptical socket to cutting-edge; $2\frac{1}{4}$ by $1\frac{3}{4}$ (Dawson). No. 457, small, axe-shaped, slightly corroded, socket oval with everted edge, loop narrow; $1\frac{3}{4}$ by $1\frac{7}{8}$; no mark of core-mould. No. 458, small, narrow, lunette edge, socket circular, with trumpet opening, filleted; $2\frac{5}{8}$ by $1\frac{1}{2}$ (Dawson). No. 459, small, chisel-edged, socket circular with double moulding externally, 2 by $1\frac{1}{4}$. No. 460, small, compressed, worn, highly ornamented, loop attached to margin of socket, $2\frac{1}{8}$ by $1\frac{7}{8}$; figured and described at page 385. No. 461, perfect, in fine preservation, plain, except a slightly raised bar, round circular socket, semilunar edge, loop well formed; $2\frac{3}{4}$ by $2\frac{1}{4}$.—*Presented by the Executors of Leslie Ogilby, Esq.* No. 462, thick, plain, casting defective at margin of oval socket, triple core-mark, lunette edge, loop wide; $3\frac{1}{4}$ by $2\frac{3}{4}$. No. 463, perfect and in fine preservation, slender, thin, semilunar edge: socket circular, within it runs a narrow fillet $\frac{5}{8}$ ths below the edge of the socket, shaft hexagonal; loop small and well cast; $3\frac{1}{8}$ by $1\frac{7}{8}$, and 1 in the clear of the socket (Dawson). No. 464, perfect and in good preservation, flat, axe-shaped, quadrangular in socket, plain, loop small; $3\frac{1}{4}$ by $2\frac{3}{8}$. No. 465, perfect, slender, unornamented, broad, semilunar edge, circular in socket, loop thick; $3\frac{5}{8}$ by $2\frac{1}{4}$. No. 466, a fine specimen, in excellent preservation, with a highly decorated moulding an inch broad surrounding circular socket, axe-shaped edge, six-sided in shaft, loop circular and well cast; $4\frac{1}{4}$ by $2\frac{3}{8}$,

socket $3\frac{3}{8}$ inches deep, and 1 wide in the clear at top (see Fig. 277, page 384). No. 467, plain, thick, semilunar edge, socket oval, loop large and wide; $3\frac{3}{4}$ by $2\frac{1}{2}$; found near Newry, county of Down. No. 468, one of the largest socketed celts in the Collection, flat, highly decorated on the sides, slightly corroded, hatchet-faced, compressed, oval in socket, loop large and thick; $4\frac{1}{2}$ by 3, and $1\frac{1}{2}$ in the clear of the long axis of the socket.

SHELF III., *Tray R*, contains sixty-eight small socketed and looped celts; numbered from 469 to 536. No. 469, small, plain, lunette-edged, socket oval, with raised margin, loops high and perfect; $2\frac{1}{4}$ inches high by $1\frac{5}{8}$ broad in the blade. No. 470, round-faced, oval socket, with narrow fillet above loop; 2 by $1\frac{3}{4}$. No. 471, narrow, flattened, oval; $2\frac{1}{8}$ by $1\frac{1}{2}$. No. 472, perfect, and in good preservation, round-faced, circular, decorated; $2\frac{1}{8}$ by $1\frac{1}{2}$ (Dawson). No. 473, small, flattened, plain, hatchet-faced, circular; $1\frac{3}{4}$ by $1\frac{5}{8}$. No. 474, imperfect, and much battered; $2\frac{1}{8}$. No. 475, large, loop defective, plain, round-edged, socket circular; $3\frac{1}{8}$ by $2\frac{1}{4}$; found in the county of Tipperary (Sirr). No. 476, round faced, loop large, decorated round circular socket; $2\frac{5}{8}$ by $1\frac{1}{2}$. No. 477, compressed, chisel-edged, loop large, raised fillet below everted edge of quadrangular socket, triple core-mark; $2\frac{3}{8}$ by $1\frac{3}{4}$ (Dawson). No. 478, long, round-faced, fillet decorated, socket oval, loop perfect; 3 by $1\frac{1}{2}$. No. 479, compressed, round-edged, filleted, quadrangular socket; 3 by $1\frac{5}{8}$ (Dawson). No. 480, round-edged, loop prominent, and springing from a much elevated fillet, socket oval; 3 by $1\frac{7}{8}$ (Dawson). No. 481, flattened, lunette-edged with recurved points, filleted, socket a compressed oval; $2\frac{3}{4}$ by $1\frac{7}{8}$. No. 482, a plain, chisel-like celt, without loop, socket quadrangular, edge semilunar; $2\frac{7}{8}$ by $2\frac{1}{8}$.—*Presented by Lord Farnham.* This and the two specimens beneath it, Nos. 496 and 510, are exceptions to the rule on this Tray, and were cast without loops. No. 483, in bad preservation, plain, round-edged, large loop, socket nearly circular; 2 by $1\frac{3}{4}$ (Dawson). No. 484, imperfect, red metal, curiously decorated with raised lines ending in small elevated points running from the origins of the loop; a fillet surrounds the top; lunette-edged; $1\frac{7}{8}$ by $1\frac{3}{4}$. No. 485, flattened, irregular; oval socket margin edge rather straight; loop perfect; $1\frac{3}{4}$ by $1\frac{5}{8}$. No. 486, plain, round-edged, socket circular, loop wide; $2\frac{1}{4}$ by $1\frac{3}{4}$. No. 487, sides nearly

parallel, semilunar edge, quadrangular socket, raised fillet, loop on centre of side; $2\frac{1}{8}$ by $1\frac{5}{8}$. No. 488, plain, thin, round-edged, socket oval; $2\frac{3}{8}$ by $1\frac{5}{8}$. No. 489, an imperfect octagon, round-edged, socket circular, loop large; $2\frac{5}{8}$ by $\frac{5}{8}$. No. 490, broad, flat, round-edged, loop and fillet, socket a long oval; $2\frac{1}{2}$ by 2 (Dawson). No. 491, rudimentary, brassy, round-edged, socket circular, decorated fillet; $2\frac{3}{4}$ by $1\frac{7}{8}$.—*Presented by Lord Farnham*. No. 492, narrow, chisel-edged, a corded ornament surrounds the circular socket above loop; $3\frac{7}{8}$ by $1\frac{1}{2}$ (Dawson). No. 493, semilunar edge, loop large, ornamented like foregoing; $2\frac{3}{4}$ by $1\frac{7}{8}$ (Dawson). No. 494, plain, broad-edged socket, circular loop; $2\frac{1}{2}$ by $1\frac{7}{8}$ (Sirr). No. 495, rude, plain, loop defective in casting, edge semicircular, socket oval; $2\frac{3}{4}$ by 2. No. 496, undecorated, axe-shaped in the blade, like Fig. 281, p. 385; socket small and circular; a very remarkable specimen, and without a loop; $2\frac{3}{4}$ long, $2\frac{3}{8}$ wide in the cutting edge, and 1 from out to out of the socket. “Taken up by the Dredge out of the bed of the Shannon, about fifty yards above the New Bridge at Athlone, in October, 1847.”—*Presented by the Shannon Commissioners*. No. 497, small, lunette-edged, looped and filleted, socket nearly circular; $2\frac{1}{8}$ by $1\frac{3}{4}$. No. 498, plain, lunette-edged with recurved points, loop imperfect, margin of oval socket defective; $1\frac{7}{8}$ each way. No. 499, perfect, plain, flattened, hatchet-edge, socket oval; 2 each way. No. 500, narrow, chisel-edged, loop wide, socket margin filleted, and wider than cutting edge; 2 by $1\frac{3}{8}$. No. 501, rude, crooked, narrow-bladed, socket a long oval, loop strong; 2 by $1\frac{1}{4}$ (Dawson). No. 502, plain, round-edged, loop perfect, socket quadrangular, with slightly decorated margin; $2\frac{1}{8}$ by $1\frac{5}{8}$ (Dawson). No. 503, a good specimen, decorated with double indented ornament round top, round-faced, socket oval, loop perfect; $2\frac{1}{2}$ by $1\frac{3}{4}$. No. 504, plain semilunar edge, socket circular, loop round, $2\frac{5}{8}$ by $2\frac{1}{8}$. No. 505, ditto, $2\frac{3}{4}$ by 2 (Dawson). No. 506, semilunar edge, loop broad, a fillet surrounds circular socket; $2\frac{1}{2}$ by 2 (Dawson). No. 507, plain, flattened, thick, lunette-edge with recurved points, loop massive; $2\frac{5}{8}$ by 2. No. 508, ditto; $2\frac{3}{4}$ by $2\frac{1}{4}$ (Dawson). No. 509, flattened, semilunar-edged, oval socket, loop imperfect; $2\frac{3}{4}$ by $1\frac{7}{8}$ (Dawson). No. 510, small, plain, without loop, figured and described at pages 383 and 384. No. 511, small, flat, loop defective, chisel edge, socket circular; 2 by $1\frac{3}{8}$ (Dawson). No. 512,

flattened, round-edged, loop worn, socket a compressed oval; 2 by $1\frac{5}{8}$ (Dawson). No. 513, plain, graceful, lunette-edged, socket nearly circular, loop elliptical; $1\frac{7}{8}$ by $1\frac{3}{4}$ (Dawson). No. 514, plain, chisel-edged, looped, socket oval; $1\frac{7}{8}$ by $1\frac{1}{2}$. No. 515, broad, flat lunette-edged, plain, triple core-mark in oval socket, loop imperfect; 2 by $1\frac{7}{8}$. No. 516, plain, round-edged, oval, looped and filleted; $2\frac{3}{8}$ by $1\frac{7}{8}$. No. 517, plain, flattened, corroded, edge round, loop slight, socket oval; triple core-mark; $2\frac{3}{8}$ by $1\frac{7}{8}$. No. 518, broad, flat, compressed, plain, chisel-edged, loop springing from everted margin of oval socket; $2\frac{3}{8}$ by $1\frac{7}{8}$. No. 519, ditto, but more semilunar in cutting edge, $2\frac{3}{8}$ by $1\frac{7}{8}$. No. 520, ditto, in bad preservation, lunette-edge, margin of oval socket inverted, loop attached to edge, core-mark separates below carving into a triple line on each side; $2\frac{3}{8}$ by 2 (Sirr). No. 521, injured in loop and socket, plain; $2\frac{3}{8}$ by $1\frac{7}{8}$ (Dawson). No. 522, large, flat, plain, metal resembles Nos. 421 and 422 on Tray P, semilunar edge, loop perfect; 3 by $2\frac{1}{2}$. No. 523, long, flat, semilunar edge, plain, edge of oval socket everted, loop perfect; $2\frac{7}{8}$ by $2\frac{3}{8}$. No. 524, the smallest celt in the Collection, and the least recorded in the British Isles; figured and described at p. 386 (Dawson). No. 525, rude, imperfect, loop broken, badly cast; $1\frac{3}{8}$ by $1\frac{1}{8}$. No. 526, lunette-edged, oval filleted socket, looped; $1\frac{5}{8}$ by $1\frac{1}{2}$. No. 527, small, flat, corroded, imperfect; $1\frac{5}{8}$ by $1\frac{1}{2}$ (Dawson). No. 528, socket imperfect, margin corroded; $1\frac{3}{4}$ by $1\frac{3}{8}$ (Sirr). No. 529, small, rude, edge straight, loop wide, socket oval; $1\frac{3}{4}$ by $1\frac{3}{8}$. No. 530, small, imperfect in socket, very round in edge, looped and filleted; $1\frac{3}{4}$ by $1\frac{5}{8}$. No. 531, flattened together, imperfect, decorated with longitudinal ridges in front, broad core-markings; 2 by $1\frac{3}{4}$ (Dawson). No. 532, narrow, chisel-shaped, loop broken, socket circular; $2\frac{1}{4}$ by $1\frac{1}{8}$. No. 533, rude, defective, badly cast, round-faced, core-marks rising into a septum; $2\frac{1}{4}$ by $1\frac{5}{8}$.—*Presented by Henry Watson, Esq.*, county of Limerick (see Proceedings, vol. i., p. 361.) No. 534, rude, flat, plain, unsymmetrical, loop high and elliptical, edge round, socket oval; $2\frac{1}{8}$ by $1\frac{5}{8}$. No. 535, edge rather straight, socket oval, with everted lip over indented band, loop prominent; $2\frac{5}{8}$ by $1\frac{7}{8}$ (Dawson). No. 536, of reddish metal, defective, flattened accidentally, loop slight and angular; $2\frac{3}{8}$ by $1\frac{3}{4}$.—*Presented by Lord Farnham.*

SHELF III., Tray S, contains thirty-three socketed celts, looped,

and, for the most part, long and narrow, some decorated; numbered from 537 to 569. No. 537, plain and small, quadrangular in socket, lunette-edged; 2 inches by $1\frac{3}{4}$. No. 538, narrow, quadrangular, plain, loop wanting; $2\frac{3}{8}$ by $1\frac{1}{2}$ (Dawson). No. 539, quadrangular, semilunar edge, large broad loop, everted edge to socket; $2\frac{1}{2}$ by $1\frac{1}{2}$ (Dawson). No. 540, imperfect, loop hammered in, quadrangular, edge round, wreath-like decoration to socket margin; 3 by $1\frac{3}{4}$. No. 541, quadrangular, imperfect, no loop, very small in socket, hatchet edge; $3\frac{1}{8}$ by $1\frac{3}{4}$. No. 542, long, narrow, quadrangular, loop defective, corroded; $3\frac{1}{4}$ by $1\frac{1}{4}$. No. 543, quadrangular, narrow, edge unsymmetrical, decorated with three raised ridges; a form of ornament common in this description of celt; $3\frac{1}{2}$ by $1\frac{5}{8}$ (Dawson). No. 544, defective, straight-edged, quadrangular, slightly decorated; $3\frac{3}{8}$ by $1\frac{5}{8}$ (Dawson). No. 545, large, quadrangular, imperfect on cutting edge, decorated on flat surface with five raised longitudinal lines crossed by a double fillet above; 4 by $2\frac{1}{4}$. No. 546, imperfect, quadrangular; lunette edge with recurved points, large loop, raised socket margin, highly decorated on surface with nine raised lines, every second one of which terminates in three balls; $3\frac{7}{8}$ by $2\frac{1}{4}$ (Dawson). No. 547, defective for about $1\frac{3}{8}$ inch at cutting edge, quadrangular, highly decorated round socket margin, and also on flat surface, by three raised lines ending in balls surrounded with circles. This specimen is now $3\frac{1}{4}$ by $1\frac{3}{4}$. Found at Athlone, and—*Presented by the Shannon Commissioners*. No. 548, quadrangular, badly cast, large loop, lunette-edge; 2 by $1\frac{3}{8}$. No. 549, narrow, quadrangular, straight-edged; $2\frac{3}{4}$ by $1\frac{3}{4}$. No. 550, quadrangular, lunette edge, fillet round socket; $2\frac{3}{8}$ by $1\frac{1}{2}$. No. 551, quadrangular, straight-edged, filleted, loop defective; $2\frac{5}{8}$ by $1\frac{1}{2}$ (Dawson). No. 552, perfect, decorated with roped ornament round oval socket above double fillet, straight, raised line on side-face, semilunar edge; $3\frac{1}{4}$ by $1\frac{5}{8}$. No. 553, narrow, quadrangular, nearly circular in opening of socket, hatchet-face, ornamented on side, loop broken; $3\frac{3}{4}$ by $1\frac{7}{8}$. No. 554, quadrangular, straight-edged, decorated round socket margin, loop wanting; $3\frac{3}{4}$ by $1\frac{7}{8}$. “Found in deepening the bed of the river in the townland of Derrindrehid, parish of Killeshandra, barony of Tullyhunco, and county of Cavan.”—*Presented by Board of Works*. No. 555, quadrangular, round-edged; a corded ornament surrounds

top of socket passing through loop; $3\frac{3}{4}$ by $1\frac{7}{8}$. Found at Keelogue Ford, and—*Presented by the Shannon Commissioners.* No. 556, long, narrow, quadrangular, semilunar edge, loop broken, raised fillet round socket; $4\frac{1}{8}$ by $1\frac{3}{4}$ (Dawson). No. 557, quadrangular, semilunar edge, broad fillet round socket; $4\frac{1}{2}$ by 2 (Dawson). No. 558, very long, narrow, and quadrangular, broader in the lateral than the antero-posterior diameter, decorated by a raised line ending in a circle on the flat surface (see Fig. 283, p. 385). No. 559, short, thick, edge curved, socket oval, with a roped and filleted ornament round margin; $2\frac{1}{8}$ by $1\frac{1}{2}$. No. 560, round-edged, six-sided, socket round margin depressed; $2\frac{1}{2}$ by $1\frac{3}{4}$. No. 561, hatchet-shaped, plain, six-sided; $2\frac{3}{8}$ by $1\frac{3}{4}$. “Found at Keelogue Ford, and—*Presented by the Shannon Commissioners.*” No. 562, four-sided, full-raised ornament round socket, lunette-edged; $2\frac{3}{4}$ by $1\frac{7}{8}$. No. 563, quadrangular, straight-edged, decorated with three straight lines on flat surface; 3 by $1\frac{5}{8}$ see Fig. 284, p. 386.—*Presented by Executors of Leslie Ogilby, Esq.* No. 564, broad, flat, six-sided, hatchet-edged, decorated on flat surface with straight lines ending in arrow points, depressed ornament round socket; $3\frac{1}{4}$ by $2\frac{1}{8}$; found at Keelogue Ford, and—*Presented by the Shannon Commissioners.* No. 565, flat, compressed, oval in socket, semilunar in blade, edge sharpened, decorated on side-face by five longitudinal lines, each ending in a circular elevation; $3\frac{1}{8}$ by $2\frac{3}{8}$. No. 566, flat, quadrangular, straight-edged; decorated on flat surface with raised lines and knobs; round oval socket with a double raised fillet; $3\frac{5}{8}$ by $2\frac{1}{8}$ (Dawson). No. 567, broad, imperfect, chisel edge, double fillet round socket margin; $3\frac{5}{8}$ by $2\frac{1}{2}$. No. 568, the longest socketed celt in the Collection, quadrangular, lunette-edged, raised margin round socket, wide oval loop; $5\frac{1}{8}$ by $2\frac{1}{8}$. No. 569, four-sided, chisel-edged, decorated on the surface and round the socket margin; $4\frac{7}{8}$ by $1\frac{7}{8}$.

SHELF III., *Tray T*, contains six perfect and twenty-six fragments of bronze celts of different patterns; numbered from 570 to 601. No. 570, the upper fragment of a large palstave. No. 571, a small, thin, socketed celt, wanting loop; 2 inches long by $1\frac{3}{8}$ wide. These two specimens—*Presented by W. R. Wilde, Esq.* See Proceedings, vol. iii. p. 539. No. 572 is of the same size and form, but much corroded and encrusted. No. 573, imperfect, a portion

having been removed for analysis; $1\frac{3}{4}$ inches each way; looped, round-edged, unornamented, triple core-mark in socket, supposed to be from the county of Cavan, Museum mark—Farnham 38. Coppery, possessing only 4.56 per cent. of tin (see No. 4 in Mr. Mallet's paper, p. 322, Transactions, vol. xxii.). "The metal was very soft, and resembled No. 2 [new No. 16, on Tray A] in colour, but was not quite so red. Specific gravity, 8.428." No. 574, perfect, small, flat, socketed, ornamented on side, loop large, socket oval; $1\frac{7}{8}$ by $1\frac{1}{2}$. No. 575, an imperfect socketed celt, round-edged; 3 by $1\frac{7}{8}$; analyzed. No. 576, a long hollow celt, imperfect, analyzed by Mallet (No. 3), slightly ornamented round fragment of circular socket; $3\frac{3}{4}$ by $1\frac{7}{8}$. No. 577, perfect, chisel-edged, socket oval with indented margin; $2\frac{7}{8}$ by $1\frac{1}{2}$, found in the Shannon, and—*Presented by the Shannon Commissioners*. No. 578, large, plain, perfect, round-edged, socket circular, metal reddish; 4 by $2\frac{1}{4}$, "found along with a golden bracelet." No. 579, perfect, flat, socket oval, with indented margin; $3\frac{3}{4}$ by 2. No. 580, small fragment of a palstave, $1\frac{7}{8}$ long. No. 581, fragment of blade portion of a palstave; $2\frac{1}{2}$. No. 582, ditto, rude and hammered; $2\frac{5}{8}$ (Sirr). No. 583, fragment of palstave, casting defective; $3\frac{3}{4}$. No. 584, fragment of a socket celt, rudely cast; 3. No. 585, fragment of palstave, defective in casting; $3\frac{7}{8}$. No. 586, defective palstave, $3\frac{1}{2}$; a portion removed for Mallet's analysis. No. 587, a thick, rude, broad-edged palstave, hammered at top, slight wings, no stop; $3\frac{3}{8}$ by $2\frac{1}{2}$.—*Presented by the executors of Leslie Ogilby, Esq.* No. 588, a very much corroded palstave, of a greenish-white colour; 5 by 2. No. 589, an imperfect palstave; $4\frac{5}{8}$ by 2, said to have been found at Dunshaughlin.—*Presented by Lord Farnham*. No. 590, a massive, imperfect palstave, of a golden yellow or Dowris-bronze colour, much hammered at top, ornamented on front, three sunken ornaments, apparently drilled in, present upon external face; $4\frac{3}{4}$ by $2\frac{1}{2}$. No. 591, a small wedge-shaped copper celt, thin, flat, and exceedingly primitive in shape; $2\frac{3}{4}$ by $1\frac{3}{4}$ (Sirr). No. 592, fragment of the upper end of a long, narrow celt; $2\frac{5}{8}$. No. 593, a small, long, narrow celt, with slight flanges, much corroded; 3. No. 594, perfect, thin, flat, of the long, narrow variety; $2\frac{7}{8}$; analyzed by Mr. Mallet. No. 595, perfect, long, narrow; $5\frac{1}{2}$ by $2\frac{3}{4}$. No. 596, lower fragment of a large, thick, long, and narrow celt; $3\frac{1}{2}$. No. 597,

portion of a broad, thin, flat celt, resembling a copper specimen both in shape and colour, hammered at top; $3\frac{1}{4}$ by $2\frac{5}{8}$; analyzed by Mallet, as No. 1, see Transactions, vol. xxii. p. 322—*Presented by Lord Farnham*. No. 598, flat, lunette-edged, much hammered at top, rudimentary flanges; $3\frac{1}{4}$ by $2\frac{1}{2}$. No. 599, long and narrow, lunette edge, much corroded; $4\frac{3}{4}$ by $2\frac{1}{2}$. No. 600, long and narrow, hammered on side of cutting edge; 6 by $2\frac{1}{2}$. No. 601, flat, broad, and straight in cutting edge, of the long narrow variety, much hammered at top, metal reddish; $4\frac{3}{8}$ by $3\frac{1}{8}$.

RAIL-CASE **K** contains forty-nine celts of different varieties, and numbered from 602 to 650. No. 602, a copper celt of the same variety as No. 10 on Tray **A**; $5\frac{5}{8}$ inches long, by $3\frac{7}{8}$ inches broad in the cutting edge, and $1\frac{5}{8}$ at the small square extremity. No. 603, a cleaned copper specimen of the same variety, but somewhat smaller, rough, unsymmetrical in blade; 5 by $3\frac{3}{8}$. No. 604, a very small copper celt; $2\frac{1}{2}$ by $1\frac{1}{2}$. No. 605, a triangular copper celt, much hammered, as if forged without smelting from a piece of native copper, thin in the middle, elevated on the edges; $3\frac{1}{4}$ by $2\frac{5}{8}$. The locality of this specimen is questionable; it has all the appearance of an American celt; it forms part of the *deposit* recently made by the *Royal Dublin Society*. No. 606, bronze, long and narrow, imperfect at small end, most highly ornamented on both surfaces with a great variety of pattern (see Figs. 288 and 289, p. 389). The patina has been removed in several places, and with it the punched or hammered ornamentation; $6\frac{1}{4}$ by $3\frac{3}{4}$; enumerated as 618 in Proceedings, vol. vii., p. 129. No. 607, long and narrow, with a thick patina or varnish all over it, slightly hammered into an ornament on the side-edges, a double-looped dotted ornament on side face; $5\frac{7}{8}$ by 3 (see Fig. 290, p. 389). No. 608, one of the very finest celts of the long, narrow variety in the Collection; described and figured at p. 365, and resembling No. 72, on Tray **B**, both in the ornamentation on the edges and flat surfaces (see Proceedings, vol. vi. p. 314). No. 609, long and narrow, hammered edges, highly ornamented on flat with ridges and punched indentations; a slight flange occupies edges from small extremity to cutting-face; $4\frac{7}{8}$ by $2\frac{1}{2}$, found in the county of Galway, and—*Presented by R. A. Gray, C. E.* No. 610, a very perfect specimen, long and narrow, broad cutting-edge, entire flat surface covered with longitudinal punched

indentations; $6\frac{1}{4}$ by $3\frac{3}{8}$.—*Deposited by the Royal Dublin Society.* No. 611, very rude, much corroded, marked on surface in several places with a stamp; 3 by 2. No. 612, long and narrow, plain; 5 by $2\frac{1}{4}$. No. 613, ditto, small; 4 by $2\frac{1}{8}$. No. 614, ditto; $4\frac{3}{4}$ by $2\frac{1}{4}$. No. 615, ditto, plain, perfect, broad-edged; $5\frac{1}{2}$ by 3; found in excavations at Portnashoal, on Lower Bann.—*Presented by the Board of Works.* No. 616, long, narrow, with a beautiful cast ornament on the side, and a rope decoration on edge, patina apparent in some places like a varnish, lunette-edged; $5\frac{7}{8}$ by $2\frac{1}{2}$ (see Fig. 294, p. 390). No. 617, long and narrow, slightly imperfect at extremities, much corroded on one side, decorated on the other, covered with green patina, stop and flange rudimental; $6\frac{3}{4}$ by 3 (see Proceedings, vol. vii., p. 129.)* No. 618, rude, in bad preservation, round-edged, rudimental stop and flange; $4\frac{1}{4}$ by $2\frac{1}{8}$.—*Deposit R. D. S.* No. 619, long and narrow, plain, of bright yellow metal; $5\frac{1}{2}$ by 3.—*R. D. S.* No. 620, corroded on one side, lunette-edged, rudimental stop and flange, highly decorated below curved stop with triangular dotted ornament; $5\frac{3}{8}$ by $3\frac{3}{8}$ (see Fig. 292, p. 390; see also Proceedings, vol. vii., p. 129.) No. 621, of fine close-grained yellow metal, saddler's knife-shaped blade, stop and flange well marked although not high, decorated both on surface and side edges; $4\frac{3}{4}$ by $2\frac{3}{4}$. See Fig. 268, p. 379. No. 622, much corroded, long and narrow, straight-edged; $5\frac{3}{4}$ by 3.—*R. D. S.* No. 623, short, imperfect at top, lunette-edged; $3\frac{7}{8}$ by $2\frac{7}{8}$.—*R. D. S.* No. 624, lunette-edged, slightly imperfect, rudimental stop and flange; $4\frac{1}{4}$ by 2. No. 625, imperfect, unsymmetrical, lunette-edged, highly decorated with cast and tooled ornament on sides and edges, rudimental stop and flange; $4\frac{3}{4}$ by $3\frac{1}{8}$ (see Fig. 293, p. 390).—*Deposited by Sir B. Chapman, Bart.* No. 626, rude, plain, lunette-edged; 4 by $2\frac{1}{2}$.—*R. D. S.* No. 627, cleaned, of gold-coloured bronze, slightly corroded, broad saddler's knife-edge, rudimental stop and flange, decorated with engraved and hammered ornament on flat surface between stop and

* At vol. vii. pp. 129 and 130 of the Proceedings, six of the celts in this Case are enumerated and described as placed in Case L; they may be identified in the present arrangement under the following alterations in the numbering:—Nos. 617, 620, and 621, are the same in both; No. 618, in the Proceedings, is now 606; No. 619, is 607; No. 622, is 635; No. 609, is 636. In Rail-case L, No. 623, in Proceedings, is now 669; and No. 624 is 668.

blade; $5\frac{3}{4}$ by $3\frac{1}{2}$ (see Fig. 299, p. 390). No. 628, a curious specimen, apparently so recent as to look like a forgery, deep-groove, semicircular edge; $4\frac{1}{8}$ by $2\frac{1}{4}$; figured by Mr. Du Noyer, in the *Archæological Journal*, vol. iv. No. 629, lunette-edged, wings, and deep groove but no stop, outside edges of wings deeply ornamented, as if with a file; it has a modern appearance; $4\frac{5}{8}$ by $2\frac{1}{4}$.—*Deposited by Sir B. Chapman, Bart.* No. 630, a very curious, and, probably, modern specimen, with wings and loop, but no stop, decorated on side-edges like the foregoing, and ornamented in the groove with a chequered pattern; $3\frac{3}{8}$ by $1\frac{5}{8}$. No. 631, a small grooved celt, of unique shape, without stop, looking like a forgery; $2\frac{7}{8}$ by $1\frac{3}{8}$. No. 632, the beautiful fan-shaped celt, figured and described at pp. 373 and 379. No. 633, cleaned, gold-coloured, somewhat like the foregoing, but edge more lunette-shaped, side-view figured and described at p. 379, broad flange, curved stop; $4\frac{5}{8}$ by 3. No. 634, a small, very perfect, fan-shaped celt, like No. 632; $5\frac{1}{8}$ by $3\frac{1}{8}$, found in the county of Carlow, and—*Presented by Dr. O'Meara.* No. 635, a plain palstave celt, without loop, lunette-edged, high wings, thin septum, mould edges irregular; $4\frac{1}{4}$ by $2\frac{1}{4}$. See *Proceedings*, vol. vii. p. 129. No. 636, a very beautiful long palstave, with wide hatchet face, narrow shaft, broad wings, narrow groove, deep curved ornament below the stop; $7\frac{1}{2}$ by $3\frac{1}{8}$; marked in *Proceedings* as 609; found in the Silver River, townland of Coleraine Middle, King's County. No. 637, a thick, massive palstave, unsymmetrical, lunette edge with recurved points, rude cast ornament below stop; 5 by $2\frac{3}{8}$; it and Nos. 638 and 641 were—*Deposited by Sir B. Chapman, Bart.* No. 638, a palstave, imperfect, wings and stop coalesce, raised bow-and-arrow ornament below stop, semilunar edge; 6 by $2\frac{1}{2}$. No. 639, a massive winged palstave, lunette-edge, slightly imperfect at top, bow ornament; $5\frac{3}{8}$ by $2\frac{3}{4}$.—*Presented by Mrs. Ball.* (See *Proceedings*, vol. vi., p. 525.) No. 640, small, rude, short groove, side socket; 3 by $1\frac{3}{4}$. No. 641, imperfect, deep side socket ending in raised cast ornament, a large knob of metal is attached to one side; $3\frac{7}{8}$ by 2. No. 642, a short, unsymmetrical palstave, with a wind in the casting, broad wings and stop, semilunar edge, hammered at top; $4\frac{1}{2}$ by $2\frac{1}{8}$.—*R. D. S.* No. 643, ditto, large, lunette-edged with recurved points; $5\frac{1}{2}$ by $2\frac{3}{4}$.—*R. D. S.* No. 644, ditto, smaller, without raised stop, but having

thin ends of wings hammered in below over the groove; it resembles in this respect, Fig. 265, and several specimens on Trays **K**, **M**, and **N**. There is a small and apparently modern hole in one of the wings; $4\frac{3}{4}$ by $2\frac{1}{4}$.—*R. D. S.* No. 645, plain, badly cast, covered with a green oxidation, chisel-edged; $5\frac{1}{4}$ by $2\frac{1}{8}$.—*R. D. S.* No. 646, a short lunette-edged palstave; $4\frac{1}{4}$ by $2\frac{1}{8}$.—*R. D. S.* No. 647, a short palstave, lunette edge, wings and stop uniting; $4\frac{1}{2}$ by $2\frac{1}{4}$.—*R. D. S.* No. 648, a small, imperfect palstave of reddish metal, hammered, wings and stop coalescing; $3\frac{1}{2}$ by $1\frac{3}{4}$.—*R. D. S.* No. 649, a lunette-edged palstave, with recurved points, septum thick, wings well developed, but stop rudimentary; $4\frac{1}{4}$ by $2\frac{1}{4}$.—*R. D. S.* No. 650, a palstave, long in the shaft, lunette-edged, rudimental stop, wings thin, hammered at top; 4 by $2\frac{1}{4}$.—*R. D. S.*

RAIL-CASE **L** contains thirty-eight celts of the palstave and socketed varieties; numbered from 651 to 688. No. 651, a very perfect palstave celt, sharp at the angles, hammered all over the surface, and covered with a reddish-brown patina, hatchet blade, round small extremity projecting above wings, slight stop; $6\frac{3}{8}$ inches long, by $2\frac{7}{8}$ broad. This specimen has a fresher or more modern appearance than any other of the same variety in the Collection. It, and the seven following were—*Deposited by the Royal Dublin Society.* No. 652, a long, narrow palstave, of bright yellow metal, and remarkable for the thinness of wings and stop; $6\frac{1}{2}$ by $2\frac{1}{8}$.—*R. D. S.* No. 653, a long, chisel-edged palstave, without a stop, slightly hammered at top; $5\frac{3}{4}$ by $2\frac{1}{4}$.—*R. D. S.* No. 654, a massive palstave, slightly defective, dark-brown colour, bow ornament below stop; 7 by $2\frac{3}{4}$.—*R. D. S.* No. 655, a palstave, corroded, hammered on semicircular edge, $5\frac{1}{8}$ by $2\frac{3}{8}$.—*R. D. S.* In outline of wings and oblique stop it resembles 636. No. 656, a narrow palstave, much corroded, round-edged; $5\frac{1}{2}$ by 2.—*R. D. S.* No. 657, ditto, with slight ridge on site of stop, hammered; $4\frac{7}{8}$ by 2.—*R. D. S.* No. 658, a small, badly cast, corroded palstave, wings and stop coalesce; 4 by $1\frac{5}{8}$.—*R. D. S.* No. 659, a short palstave, with lunette edge, raised straight ornament below stop; $4\frac{1}{4}$ by 2.—*Presented by Viscount Castlemaine.* (See Proceedings, vol. vii., p. 297.) No. 660, a chisel-edged palstave, said to have been found in one of the Strokestown crannoges; $5\frac{1}{8}$ by $2\frac{1}{4}$. No. 661, large, perfect, lunette-edged palstave; $5\frac{5}{8}$ by $2\frac{1}{2}$. The remainder of the celts in this Case are

socketed. No. 662, the largest of the socketed lunette-edged celts in the Collection, although not so long as the four-sided chisel-edged specimen, Fig. 283, described on p. 385; it measures $4\frac{1}{2}$ inches long, $3\frac{1}{4}$ across the blade, and 2 from out to out of the long diameter of the oval socket.—*Deposited by the Royal Dublin Society.* No. 663, a large, massive, socketed celt, lunette edge, slightly ornamented with fillet below everted margin of oval socket; $3\frac{3}{4}$ by $2\frac{7}{8}$. No. 664, a graceful specimen, loop defective, semilunar edge, slightly oval socket; $3\frac{7}{8}$ by $2\frac{5}{8}$.—*Presented by T. B. Huthwaite, Esq.* No. 665, flattened, round edge, triple ornament around socket; $3\frac{3}{4}$ by $2\frac{3}{4}$.—*Deposited by Sir B. Chapman, Bart.* No. 666, plain, short, round-edged, socket oval; $2\frac{7}{8}$ by $2\frac{1}{4}$. No. 667, perfect, and covered with a brown deposit probably ferruginous, semilunar edge, raised fillet below four-sided socket; 3 by 2. No. 668, plain, unsymmetrical, blade round, loop broken, socket oval; $2\frac{3}{4}$ by $2\frac{1}{8}$. No. 669, light, slender, thin, octagon in section of socket, loop low down on side, semilunar edge; $2\frac{3}{4}$ by $1\frac{5}{8}$; numbered as 623 in Proceedings, vol. vii. p. 129. No. 670, small, short, compressed, hatchet-faced, mould-marks sharp, as if not cleaned off, slightly decorated below oval socket; $1\frac{1}{2}$ long, and $1\frac{5}{8}$ broad in the blade. The four next specimens have been cleaned by the process described at p. 374, in order to show their original golden colour. No. 671, of a beautiful golden lustre, perfect in every respect, large, circular, lunette edge, slightly unsymmetrical, a raised quadruple roping below everted socket margin; $3\frac{3}{4}$ by $2\frac{1}{2}$. No. 672, perfect, and of a beautiful reddish-yellow bronze, lunette edge, socket circular, double-grooved ornament; $2\frac{3}{4}$ by $2\frac{1}{4}$. No. 673, gold coloured, slightly corroded, and defective in margin of quadrangular socket, raised double fillet, lunette-edged with recurved points; $2\frac{3}{8}$ by $1\frac{7}{8}$. No. 674, light, graceful, axe-edged, octagon in shaft, raised ornament below circular socket, like Fig. 276, p. 384, slightly corroded all over; 4 by $2\frac{1}{2}$. No. 675, slender, plain, chisel-edge, socket circular, loop long; $2\frac{3}{4}$ by $1\frac{3}{8}$.—*R. D. S.* No. 676, perfect, large, lunette edge, roped ornament round oval socket; $3\frac{1}{2}$ by $2\frac{1}{2}$.—*R. D. S.* No. 677, corroded, loop defective, round-edged, oval socket, remains of fillet ornament; $3\frac{1}{4}$ by $2\frac{3}{8}$.—*R. D. S.* No. 678, plain, round-edged, oval socket; 3 by $2\frac{1}{3}$.—*R. D. S.* No. 679, defective, corroded, round-edged; $3\frac{1}{4}$ by $2\frac{1}{4}$.—*R. D. S.* No. 680, perfect, an irregular octagon

in the shaft, socket a long oval, edge semilunar; $2\frac{3}{4}$ by $2\frac{1}{4}$.—*R. D. S.* No. 681, of reddish metal, covered with a green corrosion, lunette-edged; $2\frac{3}{8}$ by $2\frac{1}{4}$.—*R. D. S.* No. 682, an imperfect cast, socket flattened, six-sided, edge round; $2\frac{7}{8}$ by $2\frac{1}{8}$, procured from the county of Longford, and presented to Royal Dublin Society by Colonel Patrickson.—*R. D. S.* No. 683, fractured across blade, much corroded, socket oval; $3\frac{5}{8}$ by $2\frac{1}{2}$.—*R. D. S.* No. 684, perfect, small, lunette edge, traces of cast ornament between fillet and margin of oval socket; 2 by $1\frac{7}{8}$.—*R. D. S.* No. 685, small, slender, plain, defective, one of the least of its kind, scarcely 2 by $1\frac{1}{4}$.—*R. D. S.* No. 686, a diminutive socketed celt, the smallest in the Collection except No. 524, which is figured and described at p. 386; $1\frac{1}{16}$ by $\frac{1}{8}$.—*Deposited by the Royal Dublin Society.* No. 687, fragment of a large socketed celt found in an ancient crucible, described at page 158. No. 688, a long, narrow, plain celt, fitted into a model handle, figured and described at page 370.—*Presented by R. Ball, Esq.* (see Fig. 256, p. 370).

No. 1, in this Rail-case, is the celt and handle belonging to Mr. Murray, figured on p. 370. Nos. 2 and 3, the bronze mould, and cast referred to at p. 396; Nos. 4, 5, 6, and 7 are flat, circular portions of antique bronze, found at Balrath, in the county of Westmeath, between (says Mr. R. Murray, of Mullingar, from whom they were procured) “Dysart and Rathconrath, a place abounding in raths and cairns; and along with these pieces of bronze slag were found two or three rough and unfinished-looking celts.” Nos. 8 and 9, brass models of English celt-moulds—*Presented by Lord Talbot de Malahide.* The originals are in the possession of Lord Ravensworth.

How or from what parts of the country the bronze celts—plain, palstave, and socketed—deposited in the Museum by the Royal Dublin Society, as specified in the Proceedings of 27th February, 1860, were originally obtained, there is now very little known. Several have attached card-labels, bearing numbers (19, and from 275 to 388), but, except one entry, “11–24, chip axes of brass,” in a printed list of 1812, and referring to Vallancey’s *Collectanea*, vol. iv., the records of that Society do not contain any notice of such articles.

Thirty-one have small green printed labels, corresponding with the numbers in the Catalogue made by the late Mr. J. M. Kemble for the Manchester Exhibition of 1857.

All the celts, as well as other articles in the Collection, that ever bore a mark, still retain on the reverse side all their original labels, viz.:—those referring to the Dawson or Sirr Lists; those of the old Registry of the Museum, vols. i. and ii.; also marks referring to the Trays on which they were placed before the present arrangement and classification, as specified in Mr. Clibborn's Catalogue for the Dublin Industrial Exhibition of 1853. These different references are all set forth in the Manuscript Registry drawn up under the author's direction by Mr. Eagar, and from which this Catalogue has been compiled. That registry, together with all the original labels, mostly supplied by the Board of Public Works, and the Shannon and Drainage Commissioners, have been carefully preserved, and may be had recourse to for purposes of identification.

As specified in the foregoing enumeration, 23 of the celts were found in the Shannon during the drainage operations carried on in that river some years ago. Of these, seven were procured from Keelogue Ford, near Meelick, between the county of Galway and the King's County, already referred to in the description of stone celts at p. 48. A very general impression has long prevailed, and the late Mr. Kemble shared in it (see his Address, vol. vi. p. 464), although there is no record to warrant it in any of the Proceedings of the Academy, that the different specimens from Keelogue were found in distinct strata, arranged in layers of iron, bronze, and stone articles. Such, however, has not been shown to be the fact. That they were deposited in that order during the many contests between the Connaught and Leinster-men at that pass, for centuries, there can be little doubt. But then it must be remembered that the entire depth of silt which had accumulated for thousands of years over the surface of the ford (caused by the crossing of the great esker at that point),

did not much exceed eighteen inches in any part, and that this deposit had become so hard and identified with the stratum on which it rested, as to require blasting. It will, therefore, be seen that no such observation could well have been made, even if the contractors and workmen had been forewarned of the probability of the circumstance alluded to. Furthermore, the force of the current during floods would sweep off the greater portion of such articles into the deep water below the ford. It is much to be regretted that no antiquary visited the place when the works under the Shannon Commissioners were in progress.*

In a great national Collection like this, derived from all parts of the country, and intended to aid history and ethnology, it is important to bring together, and, when possible, to increase antique articles in proportion to the numbers in which they have been discovered. By so doing we learn what things were in common use, and what were scarce. It is only after collecting for many years, that anything like a complete topographical arrangement by counties or provinces, even of typical articles, can be attempted. Bronze celts are now of nearly as common occurrence as when Vallancey writing in 1782, said: "Multitudes of these instruments are daily dug up in Ireland."

Among the rare uses to which, in the later days of celt-making, one form of the long-handled palstave with a semicircular blade was applied, was that of fixing it in a bronze socket, at right angles with which there was a circular aperture, through which a wooden handle was passed, and thus the implement was converted into an axe, either of the weapon or

* Since the former part of this Catalogue was printed, search has been made at the office of the Board of Works, for any memoranda which could warrant the impression respecting the stratification of these antiquities; but none such could be found, I have also communicated with Sir Richard Griffith, Chairman of the Board of Works, who in presenting these articles to the Academy on the 9th January, 1843, made the observations which I have printed at p. 48; and he has confirmed the foregoing statement.

tool species. See the figure of one of these implements, so mounted, in Lindenschmit's Catalogue of the Romano-Germanic Central Museum in Mayence (*Heft iv. Taf. 2, Fig. 685*). There is another blade of this kind in the Museum at Copenhagen, for a fac-simile drawing of which the author is indebted to Director Thomson. Vallancey has represented an Irish one by Fig. 3, Plate 10, vol. iv. of his *Collectanea*.* There is an aperture or notch in the small end of each of these articles for passing a stud or rivet through.

SPECIES I.—WEAPONS—BRONZE, II. AND III.

SWORDS.—The sword and its diminutive, the dagger, is not only the most ancient, but the most widely disseminated pure weapon, and that which has remained longest in use in the world. It has at different times, and by various nations, been made of divers substances,—stone, wood, bone, copper, bronze, and iron, of all of which we possess examples in the Museum. In shape, the most primitive sword was sharp-pointed, double-edged, and used for stabbing and thrusting, as shown in all our bronze specimens, and not a heavy-backed, single-edged, cross-hilted weapon for hacking and cutting, as the more modern kinds, forged from iron. Although not nearly so numerous as the celts, our collection of swords and daggers is very rich, amounting together to 282 specimens, which are arranged

* Vallancey's engravings were taken from a collection of very faithful drawings by Gabriel Beranger, possibly those made for the Right Hon. W. B. Conyngham's intended Atlas of Irish Antiquities, to which he invited the attention of the Academy in 1791. They afterwards passed into the possession of the late Austin Cooper, to the courtesy of whose son, the Rev. A. Cooper, I am indebted for the loan of them. They have enabled me to identify several articles now in the Academy. Vallancey only engraved a portion of them. Beranger was a French artist resident in Dublin at the end of the last century.—(See Gilbert's History of Dublin, vol. iii., p. 360.)

Referring to the celt moulds described at p. 392, it may be remarked, that in 1788 the Rev. Mr. Hamilton, F. T. C. D., exhibited to the Committee of Antiquities a bronze celt in its stone mould, stated to have been found in Ireland.

on Trays from **U** to **HH**, at the commencement of the Western Gallery, and in Rail-case **O**. The Irish term for a sword is *Claidheamh*, a generic word applicable to all forms of this weapon. The sword-blades present three well-marked varieties,—the leaf-shaped, both long and short; the straight-edged rapier, both narrow and triangular; and the large, broad, round-pointed, and occasionally curved or scythe form. It is remarkable that although there are representations of celts on our sculptured crosses, the swords of the combatants figured thereon are invariably of the iron pattern, long, straight, round or angle-pointed, and cross-hilted, as if the bronze celt had remained in use after the introduction of the iron sword.

There is no mention made in our authentic published annals and histories of bronze swords; the introduction of such weapons was probably pre-historic, and they very likely continued in use until the general employment of iron, and even for long after; for it is not likely that a “trusty blade” of fine bronze, beautifully balanced, and with a highly decorated and gold adorned handle, would ever have been broken up and re-cast, to turn the metal to other purposes. A greater number of bronze swords, and of greater variety, have been found in Ireland than in any other part of the British isles. A large number of those in the British Museum are Irish. The iron swords found in Ireland are chiefly modern, and the oldest specimens which we possess are evidently Scandinavian.

Among the presents made by the chief Kings of Erin to their dependent princes, as the stipends for the tributes of oxen, swine, escort, and refreshment, &c., as stated in the *Leabhar na g-Geart*, there were vast numbers of swords and shields. Thus the King of Casheal gave the Prince of Cruchan 100 swords; bestowed on the Prince of Ailach 50, and on the Lord of Tulach Og, 30; to the King of Uladh he gave 100 swords; 30 to the King of Taimar, and 40 to the hero of Gabhran, or Osory; and so in like proportion from each of the monarchs of

Erinn to their dependant chieftains.* In the particulars of these weapons recorded in Beanan's poetic description of the tributes, we read of "swords for wounding; for all strength; fit for war; swords imported from afar; swords for the maiming of hosts; bright swords; polished swords of battle; slender swords; keen-edged swords; swords in their scabbards; with razor edges; beautiful swords of shining lustre;" beside other forms to be referred to hereafter.

The bronze swords appear to have suffered less from oxidation than the celts, and consequently the colour of the metal in its present state is generally lighter than that in the latter but older implements. Of those examined by Mr. J. W. Mallet, two were found to contain less tin than the generality of bronze celts; one contained 3·37 per cent. of lead, and only 8·52 of tin; but in another there were found above 11 per cent. of tin. Further and more extended analyses of the composition of the metal employed in the formation of our bronze swords is, however, required to enable us to form any well-grounded opinion on the subject. The edges of most of those swords are in fine preservation, as if they had never been hacked, and were only used for stabbing. To exhibit the original colour of these weapons, four of them, Nos. 57, 58, 59, and 60, on Tray **X**, have been cleaned, and when compared with the bright bronze already described, will be found to present more of the red hue of the copper than the golden lustre observed in celts and spears. With few exceptions, we do not find on the swords the same smooth patina or remains of a crust or lacquer, observed on several celts, but a ferruginous deposit is not uncommon (see page 394). Several of the short curved swords and battle-axes are copper.

* Dr. O'Donovan, in a note to *Leabhar na g-Ceart*, says, the word *claideam* or *clot-deam* is evidently cognate with the Latin *gladius*, and adds: "It is remarkable that Giraldus Cambrensis makes no mention of the sword among the military weapons used by the Irish in his time. The mention of the swords in this work as among the weapons presented by the kings to their chieftains shows the inaccuracy of Cambrensis." See p. 32.

The first variety is of the pure Grecian type, formed apparently on the model of the leaf of the aloe or agave; narrow near the handle, and gradually swelling in breadth to within a third of the point,—having a thick solid ridge or midrib running up the centre of the blade, and a fine sharp edge on both sides from hilt to point, which latter is spear or lancet-shaped; all cast in a mould, and not bearing any marks of the hammer, the grinding-stone, or the file. This variety exhibits some minor differences in the shape of the handle-plate to be explained hereafter; but the most ostensible distinctions between it and the second are shown in these two illustrations, drawn one-fifth the natural size, and here placed in juxtaposition, to show the difference in shape and relative proportions of the best-marked types of the leaf-shaped and rapier forms of bronze swords. The first, Figure 313, is drawn from a very fine broad leaf-shaped specimen, No. 56 on Tray X, smooth in the blade, with the handle-plate perfect, having eight rivet-holes, and deeply notched at the lower portion of the blade for catching the hilt. It is $22\frac{1}{2}$ inches long, and 2 wide in the broadest part. It was—*Deposited by Sir Benjamin Chapman, Bart.*



Fig. 313, No. 56.

Figure 314 is, by permission of Lady Staples, drawn from the most perfect specimen of bronze rapier blade ever found in Ireland, and certainly the finest article of its class of which we have now any record in Europe. It is $30\frac{1}{4}$ inches long, $2\frac{1}{4}$ across the widest portion of the flat

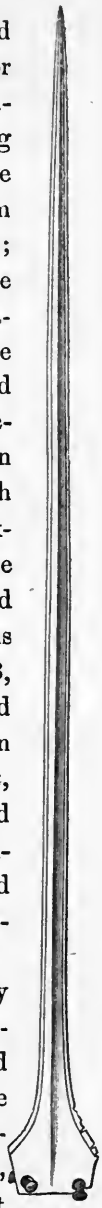


Fig. 314.

handle-plate, and five-eighths across the centre of the blade, where the thick midrib forms with the side edges the accompanying figure in section, drawn the size of the original. It was found in a turf-bog, in the townland and parish of Lissane, county of Derry, on the property of Sir Thomas Staples, Bart.* No. 66 on Tray **x**, now $13\frac{3}{8}$ inches long, $2\frac{7}{8}$ wide in the handle-plate, and 1 across the middle of the blade, is the fragment of a rapier which was evidently much larger than that figured above, and was in all probability 40 inches in length (see p. 474). All the swords in our collection are beautifully balanced; many of them, especially those of the rapier variety, are so tempered that they may be bent considerably, and will afterwards spring back to their original straight form.



Fig. 315.

The Leaf-shaped Swords present two varieties,—the broad and the long; and the six following cuts, drawn one-sixth the size of the originals (except Fig. 317, which is one-fifth), represent typical specimens of both these kinds. Fig. 316, from No. 45 on Tray **w**, has a thick flat midrib and grooved side bevels, or feather-edges, with hilt notches in the base of the blade. The handle-plate, which is slightly defective, has four rivet-holes, and has been welded by an over-lap. It is $18\frac{1}{2}$ inches long, by 1 wide in the broadest portion of the blade. Fig. 317, drawn from No. 43 on Tray **w**, represents a smooth bright yellow sword-blade, $17\frac{3}{4}$ inches long, by $1\frac{3}{4}$ broad, rather square in the handle-plate, which is $2\frac{1}{4}$ in length. It is perfectly smooth in the blade, sloping gradually from the slight midrib to each edge. The handle-plate, which is flat, short, and has four rivet-holes, descends from the blade beneath an angular shoulder, and in this respect differs from all the other swords in the Collection; but Nos. 41, 42, and 68, slightly resemble it. The four next cuts represent sword-blades of the second variety, gradually increasing in

* Mr. Wilde has presented to the Academy, by permission of Lady Staples, a model of the bronze rapier alluded to above.

length, and lessening in breadth of blade, like the leaf of the iris; also wanting the central stem or midrib, in place of which a slight fulness traverses the middle of the blade from hilt to point. Figure 318 is drawn from a very perfect sword-blade, No. 5 on Tray **U**, 23½ inches long, including the handle-plate, which is 4½; it is 1½ wide in the centre of the blade, which is margined by a grooved feather-edge. The handle-plate is nearly per-

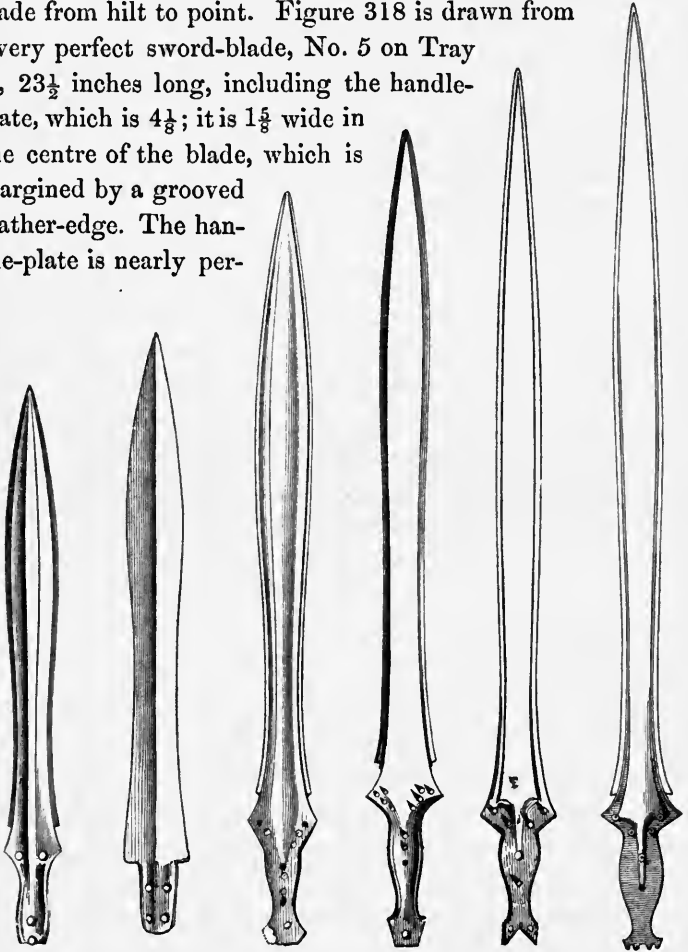


Fig. 316, No. 45. Fig. 317, No. 43. Fig. 318, No. 5. Fig. 319, No. 2. Fig. 320, No. 38. Fig. 321, No. 40.

fect, and perforated with four rivet-holes for the attachment of the bone or horn sides to. There are also several indentations where the metal ran into the rivet-holes in casting. It is deeply

notched for fixing the hilt to the blade. The edges of this, and most other swords in the Collection, are remarkably sharp, and of the finest temper. Fig. 319, from No. 2, on Tray **U**, is a very perfect specimen of long leaf-shaped sword, without mid-rib, but having a narrow grooved feather-edge with a ribbing running round the margin of the blade, except where deeply notched for the hilt; the handle-piece is thin and flat, enlarged at the small extremity for the attachment of the pommel, and perforated with twelve small rivet-holes, in nine of which the bronze pin-like rivets still remain. It is 26 inches long by $1\frac{1}{2}$ across the widest portion of the blade, and $2\frac{3}{8}$ at the junction of the handle-plate. Fig. 320, from No. 38, on Tray **V**, shows the still further decrease in breadth, and increase in length of the blade, which is surrounded by a bevel edge. It is beautifully cast, and is one of the longest perfect swords of its kind in the Collection, $28\frac{1}{2}$ inches long, with eight rivet-holes in handle-plate, in five of which the stout bronze pins still remain. It is said that when this sword-blade was found in the county of Limerick, about twenty years ago, a portion of the gold mounting was attached to the handle-plate.* Fig. 321 is drawn from No. 40, on Tray **V**, the longest and one of the most perfect sword-blades of this description which has been discovered in Ireland. It is $29\frac{5}{8}$ inches long, of which the blade is $26\frac{3}{4}$, and $1\frac{5}{8}$ broad. It is a beautiful specimen of ancient casting, having a keen edge, and a raised rib on the inner margin of the bevel; the blade is deeply notched above the handle-plate for catching the metal hilt: there are five rivets in the broad handle-plate, with counter-sunk extremities, as if for holding jewels or enamel. The total number of leaf-shaped swords of both descriptions, either perfect or fragmentary, on Trays in the Collection, is 90.

While the foregoing illustrations afford us a clear idea of

* See Mr. Clibborn's letter, signed H., in "Saunders's News-Letter," for 1st January, 1850.

the best-marked varieties of these two forms, there are some exceptions worthy of note. Figure 322 is drawn one-half the size of the original, from a portion of the fragment of a curiously decorated blade, $4\frac{1}{4}$ inches long, placed as No. 275, in Rail-case **o**. The sides are symmetrical, and the raised lines and circles formed in casting are in strong relief. It is the only specimen of its kind yet noticed in Ireland, and may have been a sword of office. The only article on which we observe any approach to the same form of decoration is the small narrow rapier sword, No. 67, on Tray **x**, in which a row of minute elevated rings extends along the projection of the midrib from the centre towards the point. No. 80, on Tray **z**, $22\frac{1}{2}$ inches long, is a unique sword-blade of the long iris-leaf variety, curved edgeways like a Turkish yataghan.* It is said to have been found with several others on an ancient battle-field in the Co. Westmeath. It is scarcely possible that this curve could have arisen from a defect in casting; if caused by fire subsequently, the bend is much more likely to have been towards the flat of the blade, in which manner those bronze swords, evidently subjected to great heat, warped, and of which No. 77 is a notable example. If not originally formed of this shape, it is difficult to understand by what force, either accidental or designed, this scimeter-form could have been given. Without, however, expressing a decided opinion on the subject, it is worthy of remark that in the Book of Rights, already frequently referred to, we read of both "curved swords of battle" and of "curved narrow swords."

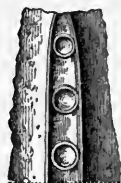


Fig. 322. No. 275.

Some of the leaf-shaped swords had been broken, and were in former times welded, both by fusion and by the addition of a collar of the metal, which encircles the extremities of the fragments, and of which we have good examples in the handles of

* The handle of this and Nos. 40 and 79 resemble one another so closely as to lead at first sight to the belief that they are duplicates; but such is not the fact.

Nos. 27, 50, 57, and 81. In other instances the fragments have been joined either by brazing or with spelter; the junction in many of the former, and all of the latter, is evidently modern.

The four next illustrations represent the *Broad triangular* and the *Long narrow Rapier swords*, tapering from the hilt to the point; with a thick central ridge; no large handle-plate, but, in lieu thereof, a thin sudden expansion of the blade, which was attached to a cast-metal handle, probably formed of one piece, and to which it was affixed by two or more strong rivets burred over it. In many instances the handle-plate was only notched for the passage of the rivets; and in some it was both notched and perforated, as shown in the accompanying illustrations. Fig. 323, No. 152, on Tray **CC**, is one of the smallest, but at the same time a very fine specimen of the broad-handled triangular rapier-shaped short sword; 12 inches long by $2\frac{1}{2}$ across the handle-plate, which is very wide compared with its other proportions; a well-cast midrib runs up the centre. It is very sharp-pointed, and only $\frac{5}{4}$ ths of an inch wide across the middle of the blade. The metallic handle of this weapon must have had four rivets; two held the blade in its place by means of notches, and two—which still remain—fastened it by passing through apertures. It was found in the River Barrow. Fig. 324, drawn from No. 62, on Tray **X**, represents a very beautiful short, broad, triangular blade, with both cast and engraved ornaments on each side; $10\frac{3}{4}$ inches long by $2\frac{3}{4}$ wide. It is complete, but fractured near the point, and has four very large rivets *in situ*, the two inside ones are each five-eighths of an inch long, and the outer ones somewhat shorter, as if to accommodate themselves to the curve of the massive metal handle; the ornamentation across the base of the blade is graven in the same manner as that on the gold articles in the Museum. It was—*Presented by the Shannon Commissioners*. No. 63, on Tray **X**, is another very beautiful blade of the same class, and is similarly ornamented. Fig. 325, No. 65, on Tray **X**, $15\frac{3}{4}$ inches long, and $2\frac{1}{2}$ wide

in the broadest portion of the handle-plate, has two large short rivets still remaining. It was obtained from Keelogue Ford and—*Presented by the Shannon Commissioners.*

Figure 326, No. 106, on Tray **AA**, is a beautifully cast specimen of the long rapier variety, thin, slight, and exquisitely sharp at both bevelled edges and at the point, with a flat midrib bifurcating below; 19 inches in length by $2\frac{1}{3}$ wide across the handle-plate, in which

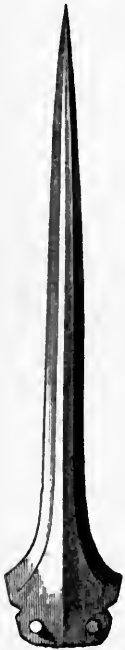


Fig. 323, No. 152.

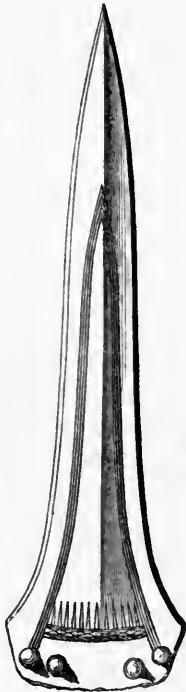


Fig. 324, No. 62.



Fig. 325, No. 65.



Fig. 326, No. 106.

there are two semicircular notches for catching the rivets. It was found in the parish of Killeshandra, county of Cavan, and—*Presented by the Board of Works.* The largest perfect specimen of this variety of blade is No. 104.

The total number of sword-blades of both descriptions—the broad triangular and the long narrow rapier—now in the Academy, amounts to 35; but as all the sword forms merge gradually, first into short weapons for close combat, and then into the most diminutive dirk or stiletto, it is difficult to draw any precise line of demarcation between the sword and the dagger. This easy transition from the longest sword to the dagger of the same form;—the fact that no two of these weapons are duplicates, or were cast from the same mould;—as well as the circumstance of the very great variety of such weapons in this collection, lends support to the belief that there was an extensive manufactory of such articles in Ireland in very remote times. Before considering the question as to the mode of hefting, it is proper to describe the third variety, or the—

Broad Scythe-shaped Swords;—which are specially and peculiarly Irish, now amounting to as many as forty-one specimens, have been (except No. 271) arranged on Trays **FF**, **GG**, and **HH**. Thick, heavy, round-pointed, averaging 12 inches in length by $2\frac{1}{2}$ broad at the base, and generally furnished with from two to four, and even more massive rivets, they must have been—whether attached to short metal handles for use in close combat, or affixed either spearways, or, like axes, to long wooden staves—most formidable weapons. Several of these are curved, and, as many are formed either out of red bronze or pure copper, it is probable that, like the celts of that material, they are of immense antiquity. They are all of a very dark colour, except such as are very thin, and made out of tin-alloyed metal. Some are thin and perfectly flat, except at the bevelled edges, as Nos. 232, 233; but the great majority have thick flat central stems or midribs, rising from the broad thin expansion of the blade for insertion into the cleft of the handle, but at top following the curve of the pointed outer edge.

Of the entire, 22 are of the true curved scythe-shape;

and these have all strong central elevations to afford additional strength. Although the points of some have been broken off, none of these blades are hacked or indented on their edges, showing that they were principally used for stabbing. The notion as to their having been attached to the sides or axles of chariots, like those attributed to Boadicea, derives no proof from an examination of these in the Museum of the Academy. The immense rivets, some an inch and a half in length, and nearly an inch across the burr, show that they must have been attached to massive metal handles; but as yet no fragment of any such has come to light. Like the two former varieties, they lessen in size until we find the form repeated among the daggers. The following woodcuts, most of which are drawn one-sixth the size of nature, present us with the best-marked varieties of this very remarkable ancient weapon. Fig. 327, from No. 232 on Tray **FF**, of yellow metal, very thin, in good preservation, and round at point, has a narrow bevel surrounding the edge, and four rivet-holes, in one of which the stud-like rivet still remains. It is $12\frac{7}{8}$ inches long, by $2\frac{3}{4}$ wide across the handle portion, and $1\frac{1}{2}$ within an inch of the point. It was found in the county of Longford, and—*Presented by Dr. D. Kelly.* Fig. 328, from No. 248 on Tray **GG**, shows another form of the short, straight, scythe-shaped sword, thick and massive, slightly defective on both edges, with a strong oval midrib, a deep triple groove surrounding the margin, and three massive rivets, the head of each of which is nearly an inch across. It is $11\frac{1}{4}$ inches long, by $2\frac{7}{8}$ wide. The two next illustrations show the curved form of this weapon. Fig. 329, from No. 240 on Tray **GG**, smooth, dark-coloured, having a grooved feather-edge, and stout central stem like the foregoing, has also three rivet-holes in the handle-plate, in two of which the massive studs remain. It is 16 inches long, by $3\frac{3}{4}$ broad at the handle, and $2\frac{1}{2}$ in centre of blade; and was found with the six others following on this Tray, points downwards, $2\frac{1}{2}$ feet under the surface of a shallow bog, in making

the railway at Hillswood, near Woodlawn, parish of Kilconnel, county of Galway, in 1850. It was—*Presented by G. W. He-mans, C. E.* (see Proceedings, vol. iv., p. 565). Figure 330, drawn to a larger scale than the foregoing, from No. 271 in

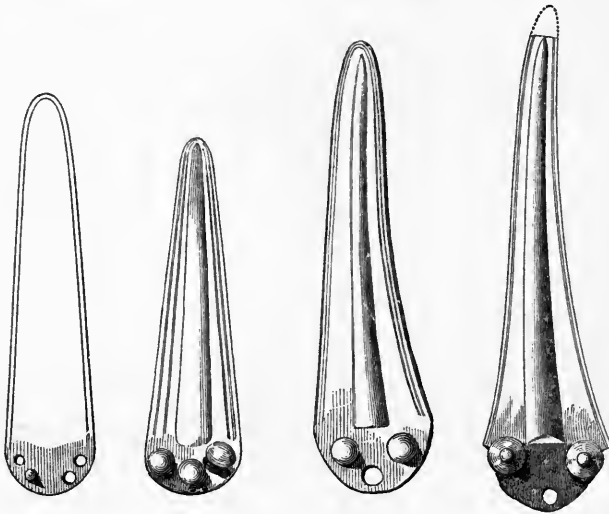


Fig. 327, No. 232.

Fig. 328, No. 238.

Fig. 329, No. 240.

Fig. 330, No. 271.

Rail-case **O**, is another specimen of the same type, narrower towards the point, which is slightly defective. In other respects it resembles No. 240, and, when perfect, was nearly 15 inches long. It is $3\frac{3}{4}$ inches broad across the handle-plate, and $1\frac{3}{4}$ measured over the middle of the blade. It has three rivet-holes, in two of which the rivets remain, and differ from all others in the Collection in having large conical washers each $1\frac{1}{4}$ inch wide, between them and the blade. A similar form of rivet has been observed in some of the short bronze swords found in France and Germany. This blade has been—*Deposited by the Royal Dublin Society*. In a thin, flat, straight specimen, No. 233 on Tray **FF**, like Fig. 327, there are no less than five perfect, and two incomplete rivet-holes, some of which would appear to have been cut at different times

from the others,—possibly to strengthen the blade in the handle, or to re-adapt it to a new one.

Sword Moulds, except one now in Trinity College Museum, have not been found in this country; it is, therefore, questionable how our swords were made, but many were probably cast in sand. On the continent they are equally scarce, but a few instances of such articles having been discovered in England,—these now in the British Museum, and described in the *Archæological Journal*, vol. ix. p. 185. Models of these two English stone-moulds have been—*Presented by Lord Talbot de Malahide*, and will be found in the lower compartment of the central glass-case, Bronze III., Nos. 300 and 301. They were used for casting the narrow rapier variety, and have no marks for rivet-holes.

In the accompanying cut is shown the wooden model of a sword 20 inches long, found five feet deep in Ballykilmurry, a bog near High Park, Co. Wicklow, which was—*Presented by James Westby, Esq.*, in 1850 (see *Proceedings*, vol. iv., p. 440). Near it was found some bog-butter, but no further indication to mark its age. Upon the side of the blade, and of a piece with it, there is a projection, as shown in the accompanying illustration. The use of this article is conjectural: if a toy,



Fig. 331, No. 234.

this raised portion would be an inconvenience; but if a model for a sand-mould, the metal might have been poured in through the aperture left by this projection. Not the least curious portion of this implement is the handle, which resembles some of the single-piece bronze sword-handles observed in different parts of Europe. See Mr. Clibborn's *Exhibition Catalogue*, page 129.

Handles—such as were affixed to our Irish sword-blades—may be described under two heads. The first was made up of several pieces of bone, horn, tooth, or hard wood, and of

metal; and which hefted all the leaf-shaped swords with flat, narrow handle-plates. It was composed of at least four portions—the two sides of the former material, and the hilt and pommel, of the latter; besides the decorations formed of thin plates of gold,—all held together by slender rivets. As each part depended for its position on the integrity of the whole, it is manifest that it could not have lain in the earth or water for any length of time without destruction of the animal or wooden portions, and subsequent general disintegration of the entire. Very many centuries, indeed, must have elapsed since the most recent of our bronze swords was deposited in those situations where discovered during the last fifty years. This will, in part, account for the circumstance that no vestige of a single fragment of any such article has yet been noticed in Ireland. It is only by a careful study of a great number of sword-handles in different collections that the antiquary can form a probable opinion as to the mode of hefting such articles.* Great variety exists in the precise form of these handle-plates; most of the short broad-leaf swords, especially those on Tray **U**, terminate in straight T-like projections, while the ends of the long variety of the leaf-

* Among the vast collection of Scandinavian swords, there are very few examples of blades with flat handle-plates like these under consideration; and those of that description in the Royal Museum at Copenhagen, and having leaf-shaped blades, are, in all probability, Irish. In only one of these can any trace of the bone sides be detected. As we proceed northward, this special form of sword becomes scarcer.

In nearly all the Danish swords the handles were composed of metal, and consisted of a semilunar collar, or hilt, which came down on the blade, and formed a crescentic ornament, which must have abutted on the scabbard. Instead of a flat handle-plate, the blade ended in a long narrow stem or tang, over which was run down a series of rings, or an open-worked plate, sometimes decorated with gold or niello; in many cases the hilt and handle-piece were made in the one casting. The pommel, or terminal knob, cap-shaped, and of either a round, oval, or diamond form at the top, was perforated; the end of the tang being riveted upon it, held all firmly together. The interstices of the rings, or the thin open work, or spiral collar, which occupied the space between the hilt and pommel, was filled with terra-cotta or a mixture of pitch or resin and fine clay. Gold wire was, in some instances, wound round

shaped sword, as shown by those on Tray **v**, are either flattened out into thin square plates, as in No. 2, or cleft like No. 38, see p. 444. The number of rivet-holes is various, but generally consists of three sets, those in the lozenge-shaped enlargement, between the handle-plate and blade, and which served to fix the lunette metal hilt;—they vary from two to eight; those in the central portion of the plate—usually three—for holding the bone sides; and the end apertures variable in number, and sometimes wanting. To these there are a few exceptions, as in No. 43, Fig. 317, and those of that description where the handle was probably formed altogether of metal. In others, instead of rivet-holes, there were oblong apertures, as shown in the accompanying illustration drawn from No. 1, on Tray **v**.



Fig. 332.
No. 1.

In size as well as shape the handle-plates, when perfect, exhibit great diversity; and it is only after completing the handle, even in imagination, that we can form an opinion as to the magnitude of the space to be occupied by the closed hand. That they were very much smaller than those of modern swords with guards, and used for cutting as well as thrusting,

the handle, and even niello was employed. These swords are so faithfully depicted in that magnificent work, the *Atlas for Nordisk Oldkyndighed*, published by the Royal Society of Northern Antiquaries, and are also so well shown in the last edition of Worsaaes's *Nordiske Oldsager*, as not to require further description. I am much indebted to the venerable W. Thomsen, of Copenhagen, for a small sword-handle answering to the foregoing description. Upon taking that article carefully asunder, it has afforded me still further instruction as to the mode of hefting the most common as well as the most beautiful variety of Danish sword. It is now among the collection of Scandinavian Antiquities in the Royal Irish Academy, where may also be seen another bronze handle of a sword or dagger, with a spiral middle piece. I am also indebted to M. Hildebrand, the able Curator of the Museum of National Antiquities at Stockholm, for drawings of such swords in that collection as were necessary for the elucidation of this subject.

Besides those mentioned above, there are, as already specified, a few blades with thin flat short handle-plates, of which No. 117, in the *Nordiske Oldsager*, resembles No. 43, in R. I. A., see Fig. 317, p. 444. In other Danish swords the flat handle-piece has a short stud-like tang at the end for riveting over the pommel; and in

there can be no doubt, yet some of them are large enough to receive a moderate-sized hand. Without discussing the generally received opinion that the men who used such swords had very small hands, like some of the Asiatics of the present day, the mode of using these weapons must not be forgotten:—they were employed for stabbing and fencing, in which the middle, ring, and little fingers alone grasped the handle completely, while the thumb and fore-finger passed upwards on each side of the blade, fitting into the curved hollows of the hilt—and not, like the method of the cavalry soldier of the present day, who, when about to deal a heavy blow, grasps his weapon with the closed hand, which must occupy a space of about four and a half inches. Among the Scandinavian swords there are several with handles longer than those of many modern swords; and it is remarkable that the size of the blade bears no proportion to that of the handle: some of the largest and heaviest having short though well-balanced handles.

The short swords and daggers were, moreover, probably held points downwards, with the thumb resting on the pommel, in the way in which the modern Spanish stiletto and the

some a sort of frame-work, or cradle, passed down over the sides of the handle, and held the bone or horn portions together. One of these cradles, recently discovered in Denmark, is covered with plates of gold, decorated with embossed circles, like those seen upon some of our oldest gold ornaments. The end, or pommel, of these flat-handled swords, consists of a thin plate, each end of which terminates in a spire turned inwards, and in some cases joined by a short bar. Such a pommel, fastened by two rivets, would specially suit those sword-blades in the Academy's Collection, Nos. 38 and 77, cleft and perforated at the extremity.

There are no swords in the Scandinavian collections corresponding to our long rapier variety, and, therefore, no handles cast of solid metal without a perforation; but there are a few broad triangular dagger-blades, with strong stout rivets, like those in our Collection, to which such handles would be applicable. The ornamentation upon all the true Danish swords is most distinct, and consists chiefly of the continued spiral so characteristic of early Danish art. In only one instance has a scabbard for a bronze sword been discovered: that specimen, found in sinking a foundation some years ago in the city of Copenhagen, is formed of wood covered with leather, and mounted with bronze.

Indian creese are used; and did not, therefore, require a greater space in the centre of the handle than could be encircled with the two middle fingers.

The handle-plates in our Irish swords are more frequently deficient than the points; and from the number of instances in which they were mended by welding, or having a collar or socket of new metal run round them, it is evident that this part of the weapon was particularly liable to accident, possibly from the want of that support afforded by the metallic rings, the composition within which gave lightness with stability and balance to the Danish swords. When fractured, the blade was again placed in a mould with the broken end heated, and fresh metal run round it: see also page 447. This addition, as we see in the cleaned specimens, is usually of a redder colour than that of the original, probably from containing more copper, in order to insure greater toughness. When the pommel was completed, the average length for the finger grasp was about three inches.

In some of the finest swords, principally those of the long leaf-shape, a triangular elevation, swelling out at the base of the blade, passes down on the handle-plate. See, in particular, the beautiful examples in Figs. 318, 320, and 321, page 444, and the two fragments, Nos. 77 and 80, on Tray z. The side edges generally rise into slight flanges above the level of the handle-plate; and, judging by analogy, this is the place to which gold overlaying was adapted.

In reconstructing the handle, our greatest difficulty arises from the form of the pommel,—unless we adopt that afforded by the Celto-Scandinavian swords in the Copenhagen Museum, already described in the note at page 455. A metal framework, or cradle, including the terminal knob or boss, may have been employed in the formation of some of these handles, like that referred to at page 455, or those represented by the models of continental swords from the Mayence Museum, placed alongside the Danish collection. It certainly is

remarkable that as yet no portion of the metal fragments of such handles has turned up in Ireland. Several other minor particulars concerning the handles of bronze swords have been noted, and will be found in the detailed Catalogue of these articles.

Many of these sword-handles afforded work for the jeweller as well as the armourer. In the Book of Rights, already frequently referred to, we read of “a sword adorned with a gold hilt,” forming part of the stipend granted by the King of Caiseal to the King of Deise;—and again, of “a sword with studs of gold.” On the sword No. 38, Fig. 320, as already stated at p. 445, several remnants of the gold decoration were found. On a sword discovered in the Bog of Cullen, county of Tipperary, in 1748, and described by Governor Pownall in his article in the *Archæologia*, vol. iii, p. 362, it is said that on the handle-plate was “a thin piece of gold, which weighed twelve pennyweights nine grains.” And in 1751 was also found “such another weapon, on the rivets of which was a plate of gold, which covered one side; at the end of which was a thing like the pommel of a small sword, with three links of a chain hanging out of it: all the gold together weighed three ounces, three pennyweights, eleven grains.” Another similarly described weapon was found in 1753; and, adds Walker, “golden-hilted swords have been found in great abundance in this kingdom. The annalist of Innisfallen describes Brian Boromhe, exhorting his soldiers before the Battle of Clontarf, with a crucifix in his left, and a gold-hilted sword in his right hand. Solinus relates that the Irish formed the handles of their swords from the teeth of large sea-monsters, which they polished to a most beautiful whiteness.”—*See Memoir on the Armour and Weapons of the Irish*, page 118. In some specimens, as already stated at page 445, the extremities of the rivets are countersunk.

With respect to the second variety of sword-handle, for attaching to blades of the long triangular or rapier-shape, pro-

vided with stout studs or rivets, and broad nut-like burs or washers, we have less difficulty, as two such articles, each formed of a solid metal casting in one piece, have been discovered entire in Ireland, and are shown in the subjoined illustrations. Fig. 333 has been engraved, one-third the size, from a narrow, slender, small sword of the rapier variety, in the choice and valuable collection of Dr. Petrie, who has generously afforded the drawing from which this cut has been made. It is hollow in the handle, and open at the pommel end, where it probably had a bone stud, and now measures $21\frac{3}{4}$ inches in length, and 3 wide across the lunated hilt. It was found many years ago in the county of Tipperary. Fig. 334, drawn two-thirds the size of the original, represents a very beautiful short dagger, quite perfect in the handle portion, now No. 272, in Rail-case **O**, where it forms a portion of the deposit recently made with the Academy by the Royal Dublin Society; although belonging to the dagger variety of weapon, it is here introduced for the sake of explaining the construction of the handle. It is highly ornamented, both in casting, and also by the punch or graver.

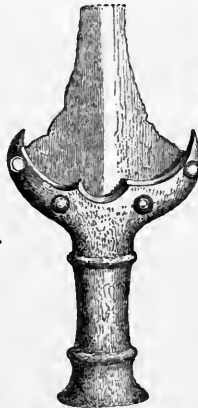


Fig. 333.

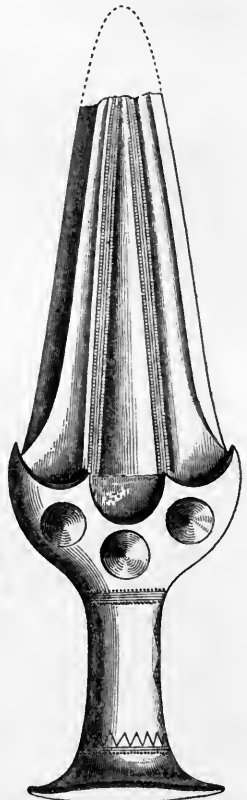


Fig. 334. No. 272.

The blade partakes of the character of the broad triangular weapons, figured at page 451. This article is now 6 inches long; the studs are riveted with conical washers.

Handles of the same description have been found attached to both Frankish and Roman swords, several fine specimens of which are now in the Museums of Mayence and Rouen. In those, the size of the handle is not always in proportion to the blade. The bronze mould, consisting of the two side-pieces and a core, recently found in Italy, and now in the Museum of Munich, was evidently employed for casting solid metal handles for swords of this third variety, which was very widely distributed throughout Europe. The same description of metallic, single-piece, cleft and riveted handles, were, no doubt, affixed to the majority of these broad blades on Trays **FF**, **GG**, and **HH**, some of which have been figured and described at page 451; but several of them were probably used as battle-axes, and hefted in the manner described at page 492. In the continental blades of this class the handle-grasp is straight and cylindrical; see the drawings and models of those in the Museum;* and they are fastened, not by two or three large studs, but by a semicircular row of rivets, sometimes ten or twelve in number.

Strange as is the circumstance that no remains of the separate metallic portions of the handles of leaf-shaped swords have been found in Ireland, it is still more difficult to account for the fact of so few of these solid handles—some of which must have been nearly an inch thick where crossed by the rivets—having been recovered. It would be absurd to suppose that these large blades had been adapted to wooden handles; for, independent of the discovery of metal hefts, for a similar description of implements, both here (see Figs. 333

* See, in particular, the full-sized coloured drawings from swords in the Rouen Museum, presented to the Academy by G.V. Du Noyer, Esq.; also the beautiful models of swords from the Mayence Museum, among the collection of casts recently procured by the Academy; see likewise Lindenschmit's Catalogue, referred to at p. 251. *Zweites Heft*, Tafel iv. Next to our country, Germany, France, and Switzerland, are the localities where such broad dagger-blades have been found in greatest abundance: see also *Mittheilungen der Antiquarischen Gesellschaft in Zurich*, B. i.

and 334) and on the Continent, the shape of the hammered-out burrs, or exposed ends of these massive rivets, shows that this must have been effected over metal apertures, like the rivets in a steam-boiler, and not on any substance less resistible than metal. These broad or triangular blades, straight and curved, have been arranged along with the swords with which they are assorted, and the daggers into which they finally merge, where these latter retain their form in a diminutive size.

The *Scabbard*, or sheath, in Irish, *Truail*, of these bronze swords was (as shown by the specimen found in Copenhagen) made of wood, covered with leather, and bound with bronze, having usually a four-sided ferule at the end, terminated by a circular button knob. Although the sheaths of iron swords of the Saxon and Danish periods have been found in England, no complete scabbard for a bronze sword has yet been discovered in the British Isles. All those articles belonging to ancient bronze swords have been arranged* in Rail-



Fig. 335, No. 283.

case o. The small ferule, No. 283, here figured one-half the natural size, is the extremity of the scabbard of an antique bronze sword of the rapier variety, and it corresponds with the one found in Copenhagen (see note p. 455); but it would only serve for the sheath of the narrowest-pointed blade. By the three following figures are represented articles which,

* Material having been taken as the basis of the primary arrangement of the Museum, many articles of the same species and variety must be grouped together, although differing widely in chronological order. Occasionally we meet with a combination of two or more different materials, as in the handles of stone and metal celts; the gut-tying of flint arrows in wooden shafts; the different substances used in the construction of harps; and the enlaving with enamel, and decoration with glass or jewels, pins, brooches, or other personal ornaments. Each article has, however, been arranged under that class of which the substance of its *principal* material was composed. Therefore, the fragments of brass handles or ferules of iron swords have not been enumerated in this section, although several are of considerable antiquity, but will be described under the head of Iron Swords and Daggers, &c.

there is every reason to believe, served as terminal decorations as well as ferules to the scabbards of our broad-leafed swords; although differing widely in shape, they were evidently used for the same purpose, are composed of a similar description of thin antique bronze, and were found under circumstances that leave no doubt as to their great antiquity. Figure 334, from No. 284, shows, the natural size, a small hollow capsule, indented and perforated above the convex edge, for affixing it to the end of the wooden sheath; “found in the railway gripe at Cloonmore, near Templemore.”—*Presented by the Board of Works*: see Proc., vol. v. page 417. In Fig. 337, one-third the size of the original, which is 4 inches long, the extremities are pointed and prolonged into a boat-shape. The indentations on the sides mark the overlapping of the wooden portion of the scabbard which was fastened to it by two slender rivets, so that the ends projected about an inch on each side. It was found in Keelogue ford, and—*Presented by the Shannon Commissioners*. In No. 288, Figure 338, which, although now slightly defective in one

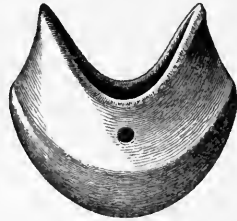


Fig. 336. No. 284.

end, was originally $7\frac{1}{2}$ inches long,—we find the extremities prolonged still further, and terminating in small buttons. These latter most probably projected 2 inches beyond the line of the scabbard, which possibly spread out at this part, like those of some Roman swords figured on ancient sculptures. There are two specimens of the second, and three of the third variety of this



Fig. 337. No. 284.

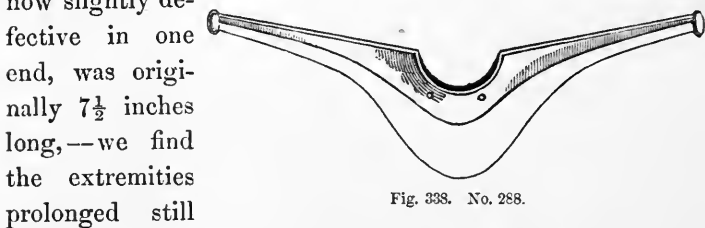


Fig. 338. No. 288.

description of ferule, in Rail-case **O**; see page 487. They are all exceedingly light, and of fine yellow bronze. When we reflect on the mode of suspending the ancient broad-leaf sword high up on the thigh, not like the modern trailing long sword, it will be seen that these projections would be less in the way of the wearer than might at first sight appear. The small crescentic piece of yellow metal, No. 290, described in the Proceedings, vol. vii., page 160, would also seem to have been a scabbard end, but for a different form of sword. The lunetted hilt raised over the level of the blade prevented the sword passing down too far into the scabbard.

DAGGERS,—serving occasionally as scians or knives, like the Highlander's dirk,—are, in use and generally in form also, but miniature swords; a great number, however, of the small bronze weapons in the Collection differ materially from the swords in their mode of hefting—being socketed like the spears. The dagger, in Irish, *Daiger* or *Scian*, as represented by the specimens in the Collection of the Royal Irish Academy, may be divided into five varieties, the blades of all which have their representatives among the swords.

1. The diminutive leaf-shaped and rapier-swords; the latter form reduced to only a few inches in length, and in breadth occasionally as narrow as the most slender modern stiletto, with broad, flat handle-pieces fixed in metal hefts by two or more rivets. The flat handle-plate is without apertures. Several such weapons may be seen on Trays **BB** and **CC**, of which the accompanying illustration, Fig. 340, is a good type. It is drawn from No. 156, which is 10 inches long, and only one-half wide in the middle of the blade: see details at page 480. Fig. 339, from No. 170, on Tray **DD**, is a leaf-shaped dagger-blade; $8\frac{7}{8}$ inches in length by $1\frac{5}{8}$ broad in the centre of the deeply grooved blade.



Fig. 339.
No. 170.



Fig. 340.
No. 156.

2. The broad triangular-sword form,—varies in shape from that represented, one-third the natural size, by Figure 341, from No. 249, on Tray **HH**, with convex edges,—to No. 190, on Tray **DD**, Fig. 342, a thin, angular blade, concave on the margin, and also drawn one-third the size of the original. The former, which is remarkably sharp-pointed, has a bevelled edge, and two stout rivets in the thin handle-plate; it is $6\frac{1}{4}$ inches in length by $2\frac{1}{8}$ broad; and No. 191 is almost a counterpart of it. The latter, of bright-yellow metal, is $4\frac{1}{2}$ inches long by 2 wide at the base, has four rivet holes, and a broad, flat midrib. Of the

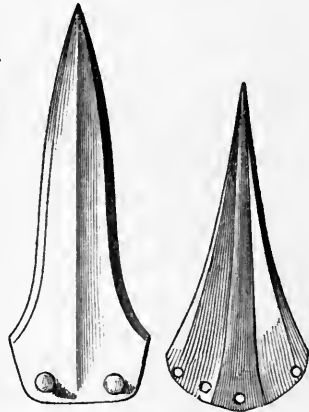


Fig. 341. No. 249. Fig. 342. No. 190.

the same description of weapon are the three following illustrations. Figure 343, from No. 250, on Tray **HH**, is a small, thin, flat, angular dagger-blade, brassy in colour, with four small rivet-holes, and decorated all over the surface of the flat midrib with a series of dotted lines. It is $4\frac{7}{8}$ inches long by $1\frac{3}{4}$ in width; was found at Loughran's Island on the

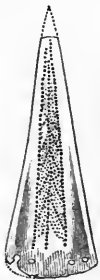


Fig. 343. No. 250.



Fig. 344. No. 259.



Fig. 345. No. 137.



Fig. 346. No. 274.

Lower Bann, and—*Presented by the Board of Works.* No. 159, on Tray **CC**, shown by Figure 344, is a triangular,

slender dagger-blade, one of the most perfect of its kind in the Collection, formed upon the model of the scythe-shaped swords in every respect, and showing how they were represented in miniature by the weapons of this variety. It is notched for rivets in the handle-plate, is rather thick towards the point, and is traversed by a broad midrib margined by linear elevations. It is $8\frac{1}{8}$ inches in length, and $1\frac{3}{4}$ across the base. The third illustration, Fig. 345, from No. 137, on Tray **CC**, is a rather remarkable and rare form of the short, triangular blade; perfectly flat, except the feather edge, and only $5\frac{1}{8}$ inches long by $1\frac{7}{8}$ across the base. It was—*Presented by Lord Furnham*. Of the same variety of triangular weapon is the dagger-blade, Fig. 346, from No. 274, in Rail-case **O**, with a metal handle-plate, terminated by an oval button; $7\frac{1}{8}$ inches long, and $1\frac{3}{4}$ broad. It has two apertures; the lower was probably for passing a rivet through, for fixing the lateral hefts of bone or wood. This unique and very ancient weapon was found deep under the surface of the ground in the Yellow River, townland of Creevy, near Ballinamore, county of Leitrim, and was—*Presented by the Board of Works*. Among the weapons of this variety, and of which it is a typical form, may be classed the beautiful perfect dagger with its metal handle, No. 272, figured and described at p. 458.

Besides the cast and graven decorations exhibited upon several of our short swords and daggers,

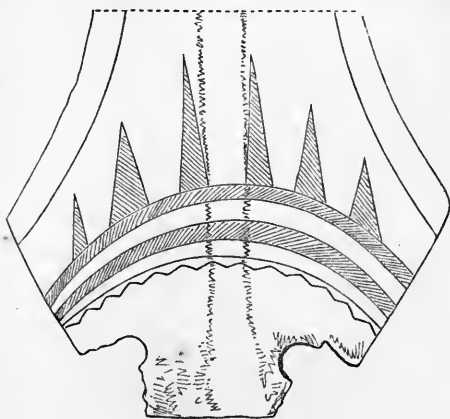


Fig. 347. No. 196.

as shown in several of the foregoing illustrations, the annexed cut, drawn the natural size, from No. 196, on Tray **DD**,

presents us with a form of ornamentation peculiarly Celtic, upon a short, broad, triangular dagger-blade, $6\frac{5}{8}$ inches in length.

3. The socketed variety—in which the metal portion formed about one-half the length of the handle, the pommel part being made of either wood, bone, or horn—numbers thirty-three, which are all arranged on Tray **EE**, from No. 199 to 231. In length they vary from $3\frac{3}{4}$ to $11\frac{1}{2}$ inches, and are well represented by the five following illustrations. They are nearly all leaf-shaped in the blade, into which the socket passes up for a short distance in many specimens. In shape the socket is either circular, oval, or quadrangular, and is in

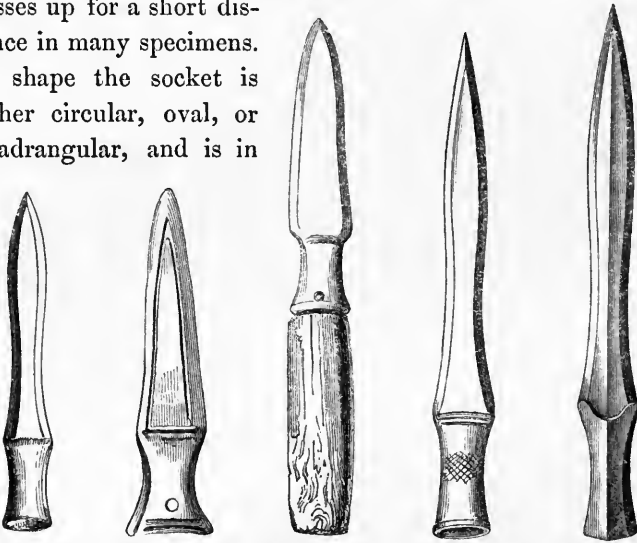


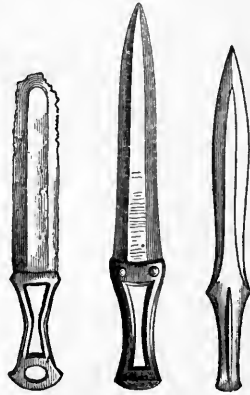
Fig. 348, No. 218. Fig. 349, No. 208. Fig. 350, No. 220. Fig. 351, No. 229. Fig. 352, No. 228.

many instances decorated either in the casting or by hand. The socket is traversed by a rivet, the apertures for which pass either from front to rear, or from side to side, as described in the details of these articles at page 483. Fig. 348, from No. 218, represents a socketed dagger of the simplest form, leaf-shaped in the blade, with bevelled edges; side rivets, socket compressed in the middle; it is $8\frac{3}{8}$ inches long;

was found in the Shannon, and—*Presented by the Shannon Commissioners.* Fig. 349, No. 208, is peculiar in shape, having an oval socket with a bell mouth and decorated margin, with a rivet-hole in front; the blade is triangular, with a deep groove running round it within the feather-edge; it is $5\frac{3}{8}$ inches in length. It was found sticking in a human skull in Drumona Bog, county of Armagh, in 1816. Fig. 350 presents us with a dagger-blade of somewhat the same variety as the foregoing, but less decorated, and found fixed upon an ancient yew handle in the Bog of Aughrane, near Athleague, county of Galway. It is $8\frac{1}{8}$ inches long, of which the blade is $4\frac{1}{2}$, and was—*Presented by Denis H. Kelly, Esq.* Figure 351, from No. 229, represents a very fine specimen of long dagger-blade with broad bevel-edge, and raised dice pattern on centre of socket; $10\frac{1}{4}$ inches long, and here shown one-fourth the natural size. It was found near Headfort, county of Galway, and—*Presented by J. M. St. George, Esq.* (see Proceedings, vol. vii. p. 274.) The last illustration, Fig. 352, drawn one-fourth the actual size, from No. 228,—long, narrow, leaf-shaped, with midrib and bevel edges, has a four-sided socket, ending in a lunated projection, like that of a sword-hilt. It is $10\frac{7}{8}$ inches long, was found in the river near the site of the old bridge at Banagher, and—*Presented by the Shannon Commissioners.*

4. This variety has only two representatives in the Collection, both of which are attached to Tray **DD**, and here shown one-sixth the natural size. Their distinguishing characteristic consists in the open-work metal handle, which is of a piece with the blade, and into which was probably inserted originally a decorated piece of bone, wood, or horn. The first, Fig. 353, is $9\frac{3}{4}$ inches long, of which the handle is $3\frac{5}{8}$; the blade, flat, with broad, bevelled edges, is $1\frac{3}{8}$ wide. It was found in the Dunshaughlin crannoge, and—*Presented by Mrs. Rothwell, of Rockfield, county of Meath.* The se-

cond specimen of this class, Fig. 354, is the finest example of the fourth variety which has been discovered, and has been long known to Irish antiquaries, having been figured and described by Vallancey in 1784 (see *Collectanea*, vol. iv., plate xi., fig. 4), who properly described it as “cast in one piece, the rivets being either ornamental or to stop against the top of the scabbard,” p. 61. Its total length is $11\frac{3}{4}$ inches, of which the handle is 4; the blade has broad, flat bevels, and measures $1\frac{1}{4}$ across its centre. The flat, central portion corresponding to the midrib in other specimens, is not similar on both sides. The casting of the inner edge of the handle-plate is very rude. This article was drawn by Beranger, and has also been figured in Gough’s edition of Camden’s *Britannia*, in 1789.

Fig. 353.
No. 167.Fig. 354.
No. 168.Fig. 355.
No. 166.

5. Consists of five specimens, numbered from 162 to 166 on Tray **DD**, with long sword-like metal handle-plates, having ridges or raised narrow flanges on each side, and terminating in thin, sharp, flat ends. These ridges were probably intended for affixing the handle-pieces of either animal or vegetable materials to. Figure 355, among the foregoing illustrations, is drawn from No. 166, the largest of these specimens, $10\frac{1}{2}$ inches long, by $1\frac{1}{4}$ wide, at the junction of the handle-plate with the leaf-shaped blade.

Most of the daggers, especially those of the short variety, served as knives for all the ordinary purposes of life, as well as offensive weapons. Of their sheaths we have no remains, except the leather one, No. 1, described at page 293. The following list of Trays furnishes the details of all the swords, daggers, and battle-axes in the Collection not specified in the foregoing descriptions.

WESTERN GALLERY.—BRONZE, II.

END CASE.—SHELF I., *Tray U*, contains nineteen bronze broad leaf-shaped sword blades, both long and short; numbered from 1 to 19. In size they vary from $17\frac{1}{2}$ to $26\frac{1}{2}$ inches, including the handle-plate, which in several specimens is imperfect. No. 1, a long and very perfect leaf-shaped sword-blade, rather narrow above the handle, with a central midrib; no side bevel; broad edges to handle-plate, which was probably covered with gold; and differs from all other specimens in the Collection except No. 94, on *Tray X*, in having longitudinal perforations instead of rivet-holes; it is $26\frac{1}{2}$ inches long by $1\frac{5}{8}$ broad in the widest part of the blade (see Fig. 332, page 454). It was found, with several other antique articles enumerated in the Proceedings (see vol. v., App., p. 64), "scattered over the hard bottom of Toome bar, on the Lower Bann, at the outlet of Lough Neagh, between the counties of Derry and Antrim, at a depth of from 1 to 3 feet under the surface of the sand; adjacent to Toome Castle on the Antrim side."—*Presented by the Board of Works*. No. 2, very perfect (see Proceedings, vol. iii., App., p. 90); figured and described at p. 444. No. 3, plain, smooth, a slight rib within margin, hilt cleft, nine holes in handle-plate; $24\frac{5}{8}$ by $1\frac{5}{8}$.—*Presented by F. W. Barton, Esq.* (see Proceedings, vol. v., p. 407). No. 4, of bright Dowris-coloured metal, smooth and narrow above handle-plate, which has four perforations; $23\frac{3}{4}$ by $1\frac{3}{4}$; found with Nos. 1, 10, 11, 16, 32, 37, &c., and—*Presented by the Board of Works*. No. 5, plain, except slight ridge parallel to edge; figured and described at p. 444; when found, the rivets were in the handle. Found at Kildrinagh Ford, on the River Nore, near Borris-in-Ossory, Queen's County, with three other bronze swords, Nos. 48, 49, and 50, and two iron swords, two iron spear-heads, and three skulls, "within the space of 44 yards, resting on the hard gravel bed of the old river, with about one foot of loose material over them." The ford is in a direct line between two large raths, and other remains of ancient military works. At the ford were found the remains of a bridge of black oak.—*Presented by the Board of Works*. (See Mr. Frazer's description in the Proceedings, vol. v., App. p. 38). No. 6, deeply grooved and ridged on surface, peculiarly notched for hilt above

handle-plate, very sharp on edge, decorated with punched ornament; 23 by $1\frac{1}{2}$. No. 7, smooth in blade, seven holes in imperfect handle-plate; $19\frac{3}{4}$ by $1\frac{3}{8}$. Marked "Athy, county of Kildare." No. 8, plain, broad, curiously welded in blade by means of a collar which grasps the two portions; handle-plate imperfect; three rivet-holes; 22 by $1\frac{3}{4}$ (Dawson). No. 9, slightly curved in the blade, owing, perhaps, to a warp in casting; smooth, with a slight bevel surrounding the edge; handle imperfect; four rivet-holes; $20\frac{3}{4}$ by $1\frac{1}{2}$. No. 10, handle imperfect, notched for hilt, bevel edge, six rivet-holes; 20 by $1\frac{3}{4}$. Found with Nos. 1, 4, 11, 16, and 32, &c.—*Presented by the Board of Works.* No. 11, plain, slightly corroded, wanting handle; $19\frac{1}{4}$ by $1\frac{3}{4}$; found with Nos. 1, 4, 10, 16, and 32, &c.—*Presented by the Board of Works.* No. 12, perfect, slightly bevelled round edge, hilt notch, four large rivet-holes welded in centre, without intervention of a collar; $21\frac{1}{4}$ by $1\frac{1}{2}$. No. 13, complete, but fractured across handle-plate; narrow; handle curiously grooved and notched for hilt; narrow bevel round edge; contracted above handle-plate; eight rivet-holes; $21\frac{1}{4}$ by $1\frac{1}{2}$.—*Presented by the Shannon Commissioners.* No. 14, plain, broad in blade, handle-plate imperfect, four small rivet-holes; $18\frac{1}{2}$ by $1\frac{7}{8}$. No. 15, plain, slight hilt notch, handle-plate deficient, two rivet-holes; $17\frac{1}{2}$ by $1\frac{1}{2}$ (Dawson). No. 16, perfect, feather-edged, slight hilt notch, four rivet-holes in handle-plate; 21 by $1\frac{3}{4}$; found with Nos. 1, 4, 10, 11, and 32, &c.—*Presented by Board of Works.* No. 17, remains of dark lacquer on blade, handle short and grooved like No. 13; hilt notched; $20\frac{1}{8}$ by $1\frac{5}{8}$. No. 18, perfect, bevel-edged, five large rivet-holes, slight hilt notches; 20 by $1\frac{1}{2}$; found in Keelogue Ford, and—*Presented by the Shannon Commissioners.* No. 19, of peculiar shape, blade narrow in middle, hilt notches, handle-piece plain, four rivet-holes; $20\frac{3}{8}$ by $1\frac{1}{2}$; found in the river at Carrick-on-Shannon, county of Leitrim, and—*Presented by R. A. Gray, C. E.*

SHELF II.—*Tray V*, contains twenty-one sword-blades, chiefly of the long narrow variety, of the leaf-shaped pattern, but some are almost as short as daggers. In length they vary from $14\frac{3}{8}$ inches (including the handles, which average 4 inches) to $29\frac{3}{8}$; they have been placed horizontally, and are numbered from 20 to 40. No. 20, long and narrow, slightly beveled along edge, handle-plate broken; 22 inches by 1 in the widest part of the blade. "Found

on hard gravel, 5 feet under alluvium, in cutting new course for River Boyne, in townland of Rahin, Barony of Carbury, and county of Kildare."—*Presented by Board of Works* (see Proceedings, vol. v., App. p. liv.). No. 21, very narrow, like a modern sword blade, handle-plate defective; 19 by $\frac{3}{4}$.—*Presented by the Shannon Commissioners*. No. 22, perfect, leaf-shaped, hilt notch, six apertures in handle-plate; $20\frac{1}{8}$ by $1\frac{1}{4}$.—*Presented by Lord Lorton*. No. 23, handle defective, blade fractured, sharp-pointed, strong midrib, two rivet-holes; $18\frac{1}{8}$ by $1\frac{1}{4}$, found at the Cutts on the River Bann, near Coleraine, with Nos. 36, 97, 124, &c., and—*Presented by the Board of Works* (see Proceedings, vol. v., p. 417). No. 24, polished, welded in two places, wants handle-plate, two rivet-holes; $16\frac{7}{8}$ by $1\frac{1}{8}$ (Dawson). Analyzed by Mallet as No. 8, who writes: "This specimen was made of a beautiful compact metal, very hard, and of a yellow colour, like that of No. 1 [celt No. 597, on *Tray T*, see p. 430], but a little deeper. Specific gravity, 8·819. It contains copper 87·07, tin 8·52, lead 3·37, with a trace of sulphur. No. 25, slightly imperfect at both extremities, welded in blade; $16\frac{3}{8}$ by $1\frac{1}{4}$ (Sirr). No. 26, complete, but fractured; notched for hilt; three rivet-holes; 19 by $1\frac{1}{4}$ (Sirr). No. 27, sharp-pointed, covered with ferruginous crust, handle-plate defective, five rivet-holes; 19 by $1\frac{1}{4}$. No. 28, complete, but fractured in blade; four rivet-holes, and raised longitudinal bars in handle-plate; $18\frac{3}{4}$ by $1\frac{1}{4}$; found in the county of Cork. No. 29, narrow, imperfect at both extremities, four rivet-holes in handle-plate; $15\frac{1}{2}$ by 1; "found 2 feet deep in hard clay and gravel, in excavation of Black River, townland of Clooncumbur, parish of Cloone, county of Leitrim."—*Presented by the Board of Works*. No. 30, short, narrow, edge slightly bevelled, handle-plate defective; $14\frac{3}{4}$ by 1; found in the county of Mayo (Dawson). No. 31, perfect, large, broad handle-plate cleft at extremity, eight rivet-holes, with six rivets remaining, grooved edges, cleft for hilt; $24\frac{3}{4}$ by $1\frac{1}{8}$; found at Keelogue ford.—*Presented by the Shannon Commissioners*. No. 32, perfect, point ground or worked down below level of blade for about four inches, broad handle-plate cleft for pommel, six rivets *in situ*; $25\frac{5}{8}$ by $1\frac{1}{8}$; found on Toome bar with Nos. 1, 4, 10, 11, 16, &c.—*Presented by the Board of Works*. No. 33, small-pointed; bevelled; imperfect in handle-plate, which is sunk below the level of the blade; nine rivet-holes; $24\frac{3}{8}$ by $1\frac{1}{8}$; found on rocky bed of Lough

Oughter, county of Cavan, and—*Presented by the Board of Works* (see Proceedings, vol. v., App., p. 60). No. 34, a fine perfect specimen, with broad handle-plate cleft at end; six rivet-holes; $26\frac{1}{2}$ by 1; found at Cootehall shoal on the Boyle Water, county of Roscommon.—*Presented by R. A. Gray, C. E.* No. 35, handle-plate defective, but having four rivet-holes; notched on side of blade; $23\frac{5}{8}$ by $1\frac{1}{8}$; found in 1847, about 3 feet under gravel deposit in bed of River Glyde, 1100 yards south-east from Derrycrammagh Ford, parish of Stabannan, county of Louth.—*Presented by Board of Works.* No. 36, perfect, except slight deficiency at end of handle-plate; bevel edges, six rivet-holes, $27\frac{1}{4}$ by $1\frac{1}{4}$; found at Cutts, near Coleraine, see No. 23.—*Presented by the Board of Works.* No. 37, complete, except handle-plate, which is brazed in two places; blade also welded in two places within half an inch of each other, the line of junction being scarcely discernible; bevel-edged, hilt notches, four rivet-holes; $26\frac{1}{2}$ by $1\frac{1}{4}$; found with Nos. 1, 4, 10, 11, and 16, &c., at Toome bar.—*Presented by the Board of Works.* No. 38, complete, but fractured in broad cleft handle-plate; eight rivet-holes, edge grooved and bevelled; see Fig. 320. No. 39, perfect, welded in centre of blade, slightly grooved and bevelled, hilt notches, handle-plate cleft, five rivet-holes; $29\frac{1}{2}$ by $1\frac{1}{4}$; found at Tumna on the Boyle water, Co. Roscommon, in the same townland with the hollow golden balls, of which there are six in the Academy's Collection, and—*Presented by R. A. Gray, C. E.* (See Proceedings, vol. v., App., p. 36.) No. 40, the largest and one of the most perfect sword-blades in the Collection, figured and described at page 444. See Fig 321.

CENTRAL GLASS CASE, BRONZE III.—SHELF I., *Tray W*, contains fourteen sword-blades, chiefly of the broad leaf pattern, several being wider than most others in the Collection. In length they average nineteen inches, including the handle-plates, and are numbered from 41 to 54. The three first specimens are of a totally different character from any of the foregoing, both in the smoothness and great breadth of the blade, and the flat tang-like shape of the handle-plate, as represented by Fig. 317, on p. 444. No. 41 has been mended in four places, is smooth and flat, except the central midrib; it is $18\frac{7}{8}$ inches long, of which the handle-plate is $2\frac{1}{2}$, and is $1\frac{7}{8}$ broad in the widest part of the blade. No. 42, perfect, and similar to foregoing except in hilt-notches; $19\frac{3}{8}$ by $1\frac{7}{8}$. Found at Ath-

lone—*Presented by the Shannon Commissioners.* No. 43, ditto, of bright yellow bronze, figured and described at p. 444. No. 44, perfect, of bright yellow bronze, light bevelled edge, handle-plate slightly corroded and similar to those on Tray **U**, decorated with cast ornament, forming a high flange round its edges; hilt notches, six rivet-holes; 19 by $1\frac{5}{8}$ across blade; found in the county of Cavan, and—*Presented by Lord Farnham.* No. 45, perfect, except in handle-plate; figured and described at p. 444. No. 46, perfect, smooth, nearly flat in centre of blade, shallow hilt notches, seven rivet-holes; $19\frac{1}{2}$ by $1\frac{1}{2}$; found with No. 47 at Keelogue ford. Both were—*Presented by the Shannon Commissioners.* No. 47, a fine, perfect specimen, slightly bevelled edge, hilt notches; handle-plate decorated with raised bars, possibly for attaching the ornamental but perishable portions of the handle to, and welded at lower third; five rivet-holes; $20\frac{1}{8}$ by $1\frac{1}{2}$ (see No. 46). No. 48, double groove, bevel edge, hilt notches, handle welded, five rivet-holes; 18 by $1\frac{1}{4}$; found with Nos. 5, 49, and 50, on Kildrinagh Ford, in the old bed of the River Nore, and although now hacked and broken, they were then quite even and sharp, and in No. 5, all the rivets were found in the handle-plate—*Presented by the Board of Works.* No. 49, narrow bevel edges, hilt notches, four rivet-holes; $18\frac{1}{4}$ by $1\frac{1}{8}$ (see No. 48). No. 50, hacked on bevelled edge, handle-piece welded, hilt notches, five rivet-holes; $19\frac{1}{4}$ by $1\frac{1}{2}$ (see No. 48). No. 51, perfect, the broadest portion of the blade nearer the point than in any other specimen of this variety, hilt notches, seven rivet-holes; $18\frac{3}{4}$ by $1\frac{1}{2}$; marked “Killala, county of Mayo.” No. 52, perfect, narrow, bevel edge, handle-piece welded, six rivet-holes, two of them not through, hilt notches; $18\frac{1}{4}$ by $1\frac{1}{4}$. “Found in the crevice of a rock in the Yellow River, near Ballyduff Bridge, drainage district of Ballinamore, county of Leitrim.” (See Proceedings, vol. v., App., p. 59). No. 53, imperfect in handle, corroded, flat central midrib; $17\frac{1}{4}$ by $1\frac{3}{8}$ (Sirr). No. 54, perfect, plain, welded in centre of blade, four rivet-holes; $18\frac{3}{4}$ by $1\frac{3}{8}$ (Dawson).

SHELF I., Tray **X**, contains thirteen swords of different shapes, four being cleaned in order to show the colour of the bronze; numbered from 55 to 67. No. 55, a good specimen of the long leaf-shaped sword-blade, wanting a part of the handle-plate, where it is incrustated with an iron deposit, two rivet-holes, one rivet remain-

ing, slight cleft for hilt; 23 inches long, and $2\frac{1}{4}$ where the blade and shoulder-piece join.—*Deposited by Sir B. Chapman.* No. 56, a very fine specimen of the broad leaf-shaped sword; figured and described at p. 442. No. 57, a very graceful blade of leaf-shape, between the broad and narrow variety, slightly corroded all over like a frosting, exquisitely sharp on edge and point, slightly deficient at handle-plate, with about $2\frac{1}{2}$ inches welded to it, six rivet holes; $19\frac{1}{2}$ by $1\frac{1}{4}$. No. 58, long and narrow, quite perfect, but corroded on surface, cleaned to show bright yellow colour of metal, hilt notches, five rivet-holes; $21\frac{1}{2}$ by $1\frac{1}{4}$; found near Ardcarne Church, barony of Boyle, county of Roscommon.—*Presented by R. A. Gray, C. E.* No. 59, cleaned to show the beautiful and very bright golden colour of the bronze; a thick strong sword-blade of the long narrow variety, grooved on surface, very round in edge, hilt notch peculiar, handle slightly imperfect, seven rivet-holes; 18 by $1\frac{3}{8}$; found a short distance from one of the mounds near Dowth, county of Meath.—*Presented by W. Farren, Esq.* No. 60, cleaned to show the golden colour of the metal; a short leaf-shaped sword-blade, deeply grooved on surface, bevel edge, brazed with yellow brass above handle: cast handle-plate of a redder or more coppery colour, overlapping end of blade across first rivet-holes, and forming a collar round end of blade, three rivet-holes, slight hilt notch; 17 by $1\frac{3}{8}$. No. 61, fragment of a broad leaf-shaped sword, wanting point, handle-plate imperfect, four rivet-holes; $14\frac{1}{2}$ by $1\frac{1}{2}$ (Dawson). No. 62, a short, triangular sword-blade, figured and described at p. 448. No. 63, a beautiful sword-blade of the short, broad, rapier variety, highly ornamented both in casting and by the graver, handle-plate defective, a thick midrib; remains of seven rivet-holes as if it had been frequently mended; $14\frac{1}{2}$ by $2\frac{3}{4}$.—*Deposited by R. D. S.* No. 64, the short, thick, triangular blade of a dagger or small sword, mended, corroded on surface, two strong rivets, greatly resembling in handle-plate the specimen which follows; $13\frac{1}{4}$ by $2\frac{1}{2}$ across handle-plate (Dawson). No. 65, a very perfect blade, and in good preservation; a fine specimen of the short, broad, rapier variety, both large rivets remaining, thick angular midrib, narrow bevel edges; figured and described at page 448. No. 66, the lower fragment of a very beautiful, long, narrow rapier, and, probably, one of the largest of its kind, as it is

proportionably of much greater size than that figured and described at p. 442, which it greatly resembles in colour as well as shape; raised midrib and bevel edges, two thick rivets with very slight burrs; $13\frac{3}{8}$ long by $2\frac{7}{8}$ across handle-plate, see page 443. Judging of its original proportions by what now remains, this beautiful specimen must have been, with its handle, about 40 inches long. It was drawn by Beranger, and figured by Vallancey in 1784. See *Collectanea*, vol. iv., pl. 11, Fig. 10. No. 67, a perfect specimen of the long, narrow, rapier sword, handle-plate thin, bevelled at sides, tapering gradually from the handle to the point, ornamented somewhat like Fig. 322, see p. 448; two rivet-holes, one of them imperfect; 18 by $2\frac{1}{8}$ across handle, and $\frac{3}{4}$ in centre; found with five others in a bog, about two miles north-west of Ballymahon, townland of Mulawornea, and county of Longford.—*Presented by Dr. Kelly.*

SHELF I., *Tray V*, contains six sword-blades, some with modern handles, numbered from 68 to 73. No. 68, a beautifully shaped blade, complete, but fractured towards the long narrow point, slightly corroded, high central midrib, short thin handle-plate with four rivet-holes, in two of which the rivets remain; 21 by $1\frac{1}{2}$.—*Presented by the Shannon Commissioners.* No. 69, a perfect sword-blade, the antiquity of which has been questioned; the handle-plate may be comparatively modern, but the blade appears antique; it has a thick blunt edge, and two small rivet-holes; 20 by $1\frac{1}{4}$. No. 70, a perfectly smooth, and certainly modern sword-blade compared with the foregoing; believed to be a forgery, but perhaps of not so recent a date as is conjectured (analysis might determine the antiquity or modernness of the metal); nine rivet-holes; $19\frac{1}{2}$ inches long, including the handle-plate, which is 5, and $1\frac{1}{4}$ at widest part of blade. No. 71, a short, leaf-shaped sword-blade, fitted into a handle, ingeniously carved from the palm of a deer's horn, so as to form a very perfect cross guard; total length 21 inches; blade above handle is $15\frac{1}{4}$ by $1\frac{1}{4}$. This curious implement, which is one of the earliest donations to the Academy, was found in the county of Limerick, and—*Presented by the learned Sylvester O'Halloran* in April, 1788. (See MS. Minutes of Committee of Antiquities.) No. 72, a very beautiful long, narrow, leaf-shaped sword-blade, fastened into a straight yew handle by four small iron rivets, without a guard, and probably fashioned upon the style of the ancient sword-handle.

The last one and a half inch of top is curiously indented, as if by immersion in an acid, and thus resembling No. 32. The handle has been most ingeniously adapted to the blade; the whole implement is 25 inches long, of which the blade is $20\frac{1}{3}$ by 1 broad. No. 73, a short, broad leafed sword-blade riveted to an iron flange, ending in a tang, to which is attached a modern wooden handle, with a large hilt and guard like that of a cavalry sword of the present day; the bronze blade is $17\frac{7}{8}$ by $1\frac{5}{8}$. This implement was found in the county of Kerry, and—*Presented by Maurice O'Connell, Esq., M. P.*

SHELF II., *Tray Z*, contains twenty-one sword-blades of the leaf-shaped pattern, chiefly in fragments; numbered from 74 to 94. No. 74, fragments of a sword-blade and handle portion, with seven rivet-holes and two indentations, not through, hilt notches; $9\frac{1}{2}$.—*Presented by Lord Farnham.* No. 75, fragment of a leaf-shaped sword, ground to a dagger shape, handle-plate perfect; $7\frac{1}{4}$.—*Deposited by Sir B. Chapman.* No. 76, a fragment of sword-blade; $3\frac{3}{4}$; “found with No. 85 under about three feet of alluvial deposit, resting on limestone gravel, in the drainage cut through Brook Lodge Demesne, parish of Killeroran, barony of Tiaquin, county of Galway, in 1851.”—*Presented by the Board of Works.* No. 77, the lower two-thirds of a very fine sword-blade, curled up on itself towards the handle, evidently from the action of intense heat; raised line within bevel edge. The handle-piece is very perfect, and resembles those of Nos. 40 and 80; perforated with eleven rivet-holes, that being the greatest number met with, except in No. 2; six of the rivets remain, and are countersunk like those in Nos. 40 and 80; hilt cleft like No. 38, said to have been found with Nos. 40, 80, and 84, and several other swords, upon an ancient battle-field near Athlone (Dawson). No. 78, fragment of a sword-handle with seven rivet-holes; 7. No. 79, small fragment of a sword-blade with peculiar handle-plate, examined by Mallet, but not described. No. 80, the curiously curved scimitar-shaped sword-blade, described at p. 446; welded in centre of blade, handle-piece defective, countersunk rivets like those in No. 77, but smaller; $22\frac{1}{2}$ inches long (Dawson). No. 81, lower fragment of a long narrow sword, handle portion welded and covered with ferruginous incrustation, two rivets; $9\frac{1}{4}$. No. 82, a fragment of a remarkable sword, differing

from all other specimens in the Collection, both in shape and form of handle-plate, the rivet-holes coming up on side of blade; $6\frac{1}{4}$. No. 83, the upper fragment of a narrow, leaf-shaped sword-blade, formerly supposed to have been part of No. 81, now placed before it; an examination of their sections will show the difference; $9\frac{1}{8}$ (Dawson). No. 84, the upper fragment of a sword-blade, curved like No. 80, with which it was found, and which it resembles in the raised line within bevel edge; nearly 10 inches long. No. 85, fragment of a bright yellow broad sword-blade, found with No. 76, which see.—*Presented by the Board of Works.* No. 86, complete, but fractured in centre, much hacked on edge, four large rivet-holes; 19 inches long, found with No. 22, and—*Presented by Lord Lorton.* No. 87, complete, but fractured, nine rivet-holes; $15\frac{3}{4}$; marked "Killala, county of Mayo." Lower fragment drawn by Beranger; see p. 439. No. 88, a sword, defective in handle portion, and joined in two places by modern soldering; $15\frac{1}{4}$ (Dawson). No. 89, a complete leaf-shaped sword-blade, fractured, covered with iron incrustation, seven rivet-holes, and two indentations not through; $19\frac{1}{4}$; found at Kilbride shoal, on the Shannon, and—*Presented by the Shannon Commissioners.* No. 90, imperfect sword-blade, broken near handle; $14\frac{1}{8}$ (Dawson). No. 91, a bad specimen, long and narrow, modern soldering in centre, an incrustation of iron like that described at p. 394, covers the welded handle-plate; $17\frac{1}{4}$ (Dawson). No. 92, a curious piece of antique bronze, corroded, and composed of fragments of two different swords brazed together; $17\frac{3}{4}$. No. 93, a leaf-shaped sword, nearly complete, narrow handle-plate; 18 (Dawson). No. 94, the lower half of a sword, handle portion having one oblong aperture, like No. 1, broad side flanges, six large rivet-holes; $12\frac{1}{8}$; analyzed by Mallet as No. 9, and found to consist of 87·94 of copper, 11·35 tin, and traces of lead, zinc, and sulphur. (See Transactions, vol. xxii., p. 323.)

SHELF I., *Tray AA*, contains thirteen sword-blades of the long and short rapier variety, generally provided with large rivets for attachment to cast-metal handles, numbered from 95 to 107. These swords merge, gradually, into the smallest form of dagger, on *Tray DD*. No. 95, plain, triangular, tapering gradually from hilt to point, two imperfect rivet-holes; $12\frac{3}{4}$ inches long by 2 across the broad thin hilt-plate; found at Keelogue Ford, and—*Presented*

by the Shannon Commissioners. No. 96, another blade of the same character, bevelled, a thick stud remaining in one of the two rivet-holes; 12 by 2; found near the site of the old bridge at Banagher, between the county of Galway and King's County.—*Presented by the Shannon Commissioners.* No. 97 has a slight increase in the breadth of blade at the middle, which, with the handle-plate, looks like a transition from the leaf-shaped to the rapier variety; covered with smooth patina; two rivet-holes, one thick rivet remains; 11 by $1\frac{1}{4}$; found at Cutts, near Coleraine; see No. 23.—*Presented by the Board of Works.* No. 98, a bad casting, short, two rivet-holes; $9\frac{3}{4}$ by $1\frac{3}{4}$.—*Presented by Lord Farnham.* No. 99 increases slightly in middle of blade, which has been fractured and soldered; two imperfect rivet-holes; $11\frac{1}{8}$ by 2 (Dawson). No. 100, a short, leaf-shaped sword-blade, thin, flat, and slightly imperfect in handle-plate, worn above hilt notches; 14 by $1\frac{1}{8}$ across blade.—*Presented by the Shannon Commissioners.* No. 101, a fine blade of the same variety as No. 62, mended near the point, ornamented with four delicate raised lines, running between the midrib, and the side edges; three rivet-notches; $17\frac{1}{2}$ by $2\frac{1}{2}$ at base. No. 102, long, narrow, thin, smooth, sharp; two shallow notches, and two rivet-holes, with one very thick rivet; $18\frac{1}{2}$ by 2; found at Keelogue Ford.—*Presented by the Shannon Commissioners.* No. 103, slender, thin, long, narrow, and sharp, two rivet-notches, and central square aperture probably modern in hilt-plate; flat midrib; 19 by $1\frac{3}{4}$. No. 104, the largest blade of this description in the Collection, very thin, flat, and sharp on edges, broad flat midrib running entire length of blade, two large semicircular notches; $21\frac{1}{4}$ by $1\frac{1}{4}$, and $2\frac{1}{2}$ at base; found with two similar swords, also two bronze spears (Nos. 64 and 235) and a spear-head, and two dirks of iron, in the bed of the River Boyne, a mile below Stoneyford Bridge, townland of Moyfin, parish of Clonard, and county of Meath.—*Presented by the Board of Works.* No. 105, thin, slender, angular midrib, two large rivets, each $\frac{5}{8}$ ths long; $20\frac{3}{4}$ by 2 at base, and $\frac{7}{8}$ across centre of blade; found at Keelogue Ford.—*Presented by Shannon Commissioners.* No. 106, a very beautiful perfect blade, thin, slight, and exquisitely sharp both on edges and at point, midrib bifurcated towards handle, two semilunar rivet-notches; 19 by $2\frac{1}{8}$ at base, and 1 across centre of blade; this sword has been figured and described at page 448. No. 107, portion of

a very fine blade, wanting about 3 inches of top, and resembling the long rapier figured and described at p. 448; blade deeply grooved or fluted, stout midrib, remains of four rivet-holes; $17\frac{1}{4}$ by $2\frac{1}{8}$ at base, and $\frac{3}{4}$ across centre of blade.—*Presented by Shannon Commissioners.*

SHELF I, *Tray BB*, contains eighteen sword and dagger-blades, of the narrow rapier variety; numbered from 108 to 125. No. 108, a very small, thin dagger-blade; $7\frac{1}{4}$ inches long by $1\frac{1}{8}$ across the hilt-plate, and scarcely $\frac{1}{2}$ wide in blade. No. 109, a similar sword-blade, with thick midrib and shallow notches; $7\frac{3}{4}$ by $1\frac{1}{2}$; found in excavating Portna shoal, in gravel, bed of River Bann, on Antrim side.—*Presented by Board of Works.* No. 110, ditto, imperfect at point, two rivet-holes; 8 by $1\frac{3}{8}$ across hilt-plate; found at Athlone. *Presented by Shannon Commissioners.* No. 111, a defective, much corroded dagger-blade; 10 inches in length. No. 112, a dagger-blade, imperfect at top, two very wide rivet-holes; $10\frac{1}{8}$ by $2\frac{1}{8}$. No. 113, a remarkably thin, slender dagger-blade, scarcely larger than a modern metal skewer, $11\frac{3}{8}$ by $1\frac{3}{8}$ at hilt, and $\frac{3}{8}$ across middle of blade. No. 114, a very perfect, thin, narrow, rapier-blade; edge sharp, and in fine preservation, double notches in handle-plate; 14 by $1\frac{3}{8}$ at base, and $\frac{5}{8}$ across centre of blade. Procured from the neighbourhood of Strokestown, but whether from any of the crannoges in that locality is uncertain. No. 115, a small, rapier-shaped sword-blade, with thick midrib and two semicircular rivet-notches; $14\frac{7}{8}$ by $2\frac{1}{4}$. Found in the Shannon, and—*Presented by Shannon Commissioners.* No. 116, a very thin slight blade, corroded narrow hilt-piece, two small perfect rivet-holes; $15\frac{1}{2}$ by $1\frac{1}{2}$; “found in bed of River Corrib, at Newcastle shoal, town of Galway.”—*Presented by the Board of Works.* No. 117, a small, perfect rapier blade, with large rivet notches; $17\frac{5}{8}$ by $1\frac{7}{8}$ at base, and $\frac{3}{4}$ in blade; found at Keelogue Ford in 1843.—*Presented by Shannon Commissioners.* No. 118, a similar blade; $17\frac{5}{8}$ by $1\frac{5}{8}$, and $\frac{3}{4}$ in blade; found in bed of River Shannon, at Cornacarrow, near Jamestown, between the counties of Leitrim and Roscommon, in 1845.—*Presented by Shannon Commissioners.* No. 119, a small-sword rapier-blade, very thin, shallow notches, bent; $17\frac{1}{8}$ by $2\frac{1}{8}$ at base, and $\frac{7}{8}$ in blade; found at Athlone.—*Presented by Shannon Commissioners.* No. 120, ditto, rounded in handle portion, very shallow rivet-notches; 16 by $2\frac{1}{8}$ at base, and

$\frac{5}{8}$ in blade; found at Keelogue Ford. This, as also Nos. 121 and 123 were—*Presented by Shannon Commissioners.* No. 121, ditto, narrow handle-plate; 16 by $1\frac{1}{2}$. No. 122, ditto; 16 by $1\frac{7}{8}$, and $\frac{5}{8}$ in blade; found with swords No. 1 and others on Toome Bar, on the River Bann.—*Presented by the Board of Works.* (See No. 138.) No. 123, ditto, with thick, flat midrib; $15\frac{1}{2}$ by $1\frac{1}{4}$ in hilt, and $\frac{3}{4}$ in blade. No. 124, a rapier-shaped small-sword blade of bright-yellow metal, partially cleaned, broad hilt-plate, with two perfect rivet-holes; $14\frac{1}{4}$ by $\frac{5}{8}$, and 2 at hilt; found at Cutts, near Coleraine.—*Presented by Board of Works.* No. 125, a good specimen, very thin and sharp, thick midrib, notched for rivets; 14 by $1\frac{3}{8}$, and $\frac{3}{4}$; found in the parish of Killucan, county of Roscommon, near Carrick-on-Shannon.—*Presented by R. A. Grey, Esq., C. E.*

SHELF I., *Tray CC*, contains thirty-six bronze sword and dagger blades of different shapes and sizes, numbered from 126 to 161. No. 126, a thin, narrow, long, leaf-shaped dagger-blade; $6\frac{3}{4}$ inches long by $\frac{5}{8}$ broad.—*Presented by Lord Farnham.* No. 127, a narrow blade of the rapier shape, very slender, point imperfect, notched in handle-piece; $6\frac{1}{4}$ by $\frac{3}{8}$ wide in middle of blade; found in the townland of Lismoyle, parish of Tamlaght-O'Crilly, county of Derry. No. 128, a triangular dagger-blade, with battered edge and two incomplete rivet-holes; $6\frac{3}{4}$ by $1\frac{5}{8}$ above handle-plate (Dawson). No. 129, perfect, triangular; $7\frac{3}{8}$ by $\frac{7}{8}$ across middle of blade (Dawson). No. 130, leaf-shaped, rivet-notches; $6\frac{3}{4}$ by $\frac{7}{8}$ across blade; found with 134 at Keelogue Ford, and—*Presented by Shannon Commissioners.* No. 131, rapier-shaped, covered with incrustation, two rivet-notches; $6\frac{5}{8}$. No. 132, ditto, short and thick, notched; $5\frac{5}{8}$.—*Presented with No. 133 by Shannon Commissioners.* No. 133, leaf-shaped, thin, notched; $5\frac{1}{8}$ (see foregoing). No. 134, dagger-blade, fractured; $6\frac{3}{8}$ (see 130). No. 135, portion of dagger-blade, corroded, hammered at edge of handle-piece for fixing handle to; $4\frac{1}{2}$; found near Desertoghill Church, county of Derry. No. 136, a triangular dagger-blade, one edge serrated; $4\frac{3}{4}$ by $\frac{3}{4}$ across blade. No. 137, a remarkable specimen, of a very short dagger-blade, rapier-shaped, but very broad in handle-plate, two rivet-notches; figured and described at page 463. No. 138, rapier-shaped, round top, flat midrib, notched; $5\frac{3}{4}$; found with Nos. 1, 4, 10, 11, 16, 32, 37, 122, 147, and 184, on Toome Bar, and—*Presented by Board of Works.* (See No. 1.)

No. 139, ditto, slender, notched; $6\frac{3}{4}$ (Dawson). No. 140, leaf-shaped, thick midrib, two rivet-holes; $6\frac{3}{8}$. No. 141, ditto, ditto; $7\frac{1}{8}$ (Dawson). No. 142, ditto, rivet-holes incomplete; $7\frac{3}{4}$. No. 143, a corroded, sharp-pointed, broad, scythe-shaped dagger-blade; $9\frac{3}{8}$ by 2 in widest part. It and Nos. 144 and 145 came with the Dawson Collection. No. 144, the lower fragment of a rapier-blade, with rivet-notches; $8\frac{5}{8}$ by $\frac{7}{8}$ across blade. No. 145, a complete, thick, narrow, dagger-blade, bayonet-shaped on each side towards point, two small rivet-holes; $8\frac{1}{4}$. No. 146, rapier-shaped dagger-blade, corroded, two rivet-notches; $8\frac{3}{4}$. No. 147, ditto, wants point, two rivet-holes, one rivet; $8\frac{5}{8}$; found with No. 1, &c. (See No. 138.)—*Presented by the Board of Works*. No. 148, a rapier-shaped dagger-blade, thin, point fractured, notched in handle-plate; $9\frac{7}{8}$. No. 149, a short, broad, triangular dagger-blade, slight bevel edge, defective in thin, worn handle-plate; 9 by $1\frac{3}{4}$ at base; found in the Shannon.—*Presented by W. R. Wilde, Esq.* (See Proceedings, vol. vii., p. 162, No. 270.) No. 150, a long, flat, rather broad dagger-blade, fractured near the top, where it had been subsequently rudely mended, curved at base, two slight rivet-notches; $10\frac{7}{8}$ by 1 across middle of blade. No. 151, a broad, flat, triangular dagger-blade, slight midrib, two imperfect rivet-holes; 9 by $1\frac{7}{8}$ across base. No. 152, figured and described at p. 448; found in the River Barrow. No. 153, a small, triangular dagger-blade, very broad at the base, with two large rivet-holes; $5\frac{1}{2}$ by $1\frac{7}{8}$ at base; procured from a county of Limerick collection. (See Proceedings, vol. vii., p. 130.) No. 154, a triangular dagger-blade, imperfect at both extremities; $3\frac{5}{8}$. No. 155, a short, leaf-shaped sword or dagger-blade of bright-yellow bronze, deeply notched in handle-plate, compressed in width near point, edges exquisitely sharp; $11\frac{1}{8}$ by 1 across blade (Dawson). No. 156, a long, very narrow rapier-shaped dagger-blade; 10; found about 4 feet under surface in clay and gravel, townland of Kilcloughans, parish of Tuam, county of Galway.—*Presented by Board of Works*. See Fig. 340, p. 462. No. 157, ditto, two rivet-holes; $8\frac{3}{8}$.—*Presented (with No. 158) by Shannon Commissioners*. No. 158, ditto, broad in handle-plate, which is devoid of holes or notches; $8\frac{1}{4}$. No. 159, a dagger-blade of the scythe shape; figured and described at p. 463. No. 160, a very perfect, triangular dagger-blade, exquisitely sharp at point and

on edges, very shallow handle-notches; 9 by $1\frac{1}{8}$ across middle of blade, and $1\frac{5}{8}$ at base. No. 161, a triangular dagger-blade, fractured about the middle, remains of rivet-notches; $9\frac{1}{8}$ by $1\frac{1}{2}$ at base, and $\frac{7}{8}$ in middle of blade; found in Annagh demesne, county of Leitrim, three feet below the old bed of the river.—*Presented by Board of Works.*

SHELF II., *Tray DD*, contains thirty-seven dagger-blades of different sizes, varying in length from 3 to $11\frac{3}{4}$ inches, and numbered from 162 to 198. No. 162, a triangular dagger-blade, with a short elevated ridge running along each side of the handle-plate; $3\frac{3}{4}$ inches long by $\frac{7}{8}$ wide; this number commences a series of very remarkable specimens, of which No. 166 is drawn as the type of this variety. No. 163, perfect, and resembling the former in every respect, except size; $5\frac{3}{8}$.—*Presented by Shannon Commissioners.* No. 164, ditto, mended near centre, ridge on handle-plate oblique; $5\frac{1}{2}$. No. 165, ditto, rather larger, complete, and sharp-pointed; $5\frac{3}{4}$.—*Presented by Lord Farnham.* No. 166, the largest specimen of this peculiar variety, slightly grooved on surface; figured and described at p. 467. No. 167, a perfect bronze dagger, with open-work handle, all of one casting; figured and described at p. 467. No. 168, another and finer specimen of the same variety, also figured and described with foregoing. No. 169 appears to have been part of sword-blade, altered to dagger size, three rivet-holes, apparently drilled after casting, feather edge; $11\frac{1}{4}$ by $1\frac{3}{8}$. No. 170, figured and described at p. 462. No. 171, a very thin, flat, dagger-blade of the broad triangular variety, which may be classed along with the scythe-shaped swords, and resembles No. 232, figured on page 451. In the handle-plate are the remains of six rivet-holes, as in some of the Continental broad swords and daggers; $8\frac{3}{8}$ by 2 across base, and $1\frac{1}{2}$ in middle of blade. No. 172, a thin, flat, triangular blade, corroded at edges, and having lower portion prolonged into a tang for insertion into a horn, bone, or wooden handle. The slight narrow bevel on the edge is continued round the flat handle-plate, showing that the article was cast in its present condition, and not hammered out subsequently; $8\frac{1}{4}$ by $2\frac{1}{8}$. Both this and the foregoing specimen were, probably, used as knives as well as daggers. It was purchased from Mr. Wakeman, and possibly came from Dunshaughlin. No. 173, a broad, flat

copper dagger-blade, with long handle-plate and two rivet-holes; $6\frac{7}{8}$ by $1\frac{3}{4}$. No. 174, thin, plain, flat, sharp-pointed; 6 by $1\frac{3}{8}$; found at Shannon Bridge.—*Presented by Shannon Commissioners.*

No. 175, copper, flat, triangular handle-plate, forming an irregular lozenge with blade, one rivet-hole; 5 by $1\frac{5}{8}$. No. 176, a sharp-pointed dagger-blade, furnished with midrib and two rivet-holes; $4\frac{5}{8}$ by $1\frac{1}{4}$. No. 177, a sharp-pointed dagger-blade, notched in handle-piece; $7\frac{1}{2}$. No. 178, ditto, ditto, one perfect rivet-hole; 6 (Dawson). No. 179, ditto, rivet-notches; $5\frac{3}{4}$; found near Jamestown Bridge, on the Shannon, between counties of Roscommon and Leitrim, and—*Presented by Shannon Commissioners.*

No. 180, sharp-pointed, one rivet-hole in flat tang; $5\frac{5}{8}$. No. 181, ditto, ditto; $5\frac{1}{2}$. No. 182, thin, flat, broad at handle-piece, one rivet-hole in tang; 5. No. 183, knife-shaped, thin, flat, sides nearly parallel, slight feather-edge; 5 by $\frac{5}{8}$. No. 184, perfect, knife-shaped, grooved in casting, slight raised ridge on handle-plate, like No. 166; $4\frac{3}{4}$; found with No. 1, and others, on Toome Bar. (See description of No. 138, on p. 479.)—*Presented by Board of Works.*

No. 185, thick, narrow, imperfect at point; $3\frac{7}{8}$. No. 186, very narrow blade, broad handle-piece, resembling No. 127, point broken, three rivet-holes; 4 by $1\frac{1}{4}$ at base, and $\frac{3}{8}$ across blade. No. 187, thin and flat, with tang handle, perforated with one rivet-hole; $4\frac{3}{8}$. This, and the two following, may have been used as ordinary knives. No. 188, ditto, ditto, $3\frac{3}{4}$. No. 189, ditto, thin, flat, two rivet-holes; scarcely 3 by 1. No. 190, very triangular, four rivet-holes; figured and described at p. 463. No. 191, ornamented in casting, two rivets; $5\frac{1}{4}$ by $1\frac{3}{4}$; resembles No. 249. No. 192, triangular, flat, two small rivet-holes; $5\frac{1}{2}$ by $1\frac{5}{8}$. No. 193, very narrow in blade, being only $\frac{1}{2}$ inch wide in the centre; $5\frac{5}{8}$ long, by $1\frac{1}{4}$ across handle-plate; resembles No. 195. No. 194, sharp-pointed, narrow handle-plate; $6\frac{1}{2}$ by $1\frac{3}{8}$. No. 195, perfect, thick flat midrib, rivet-notches; $6\frac{1}{2}$ by $1\frac{1}{2}$; found at Carnacarrow, near Jamestown, county of Leitrim, and—*Presented by Shannon Commissioners.*

No. 196, a rapier-shaped blade with feather-edge, two rivet-notches; figured and described at p. 464. No. 197, rapier-shaped, sharp-pointed, broad handle-plate, two rivet-holes, one rivet; $6\frac{3}{8}$ by $1\frac{7}{8}$; found at Keelogue Ford.—*Presented by Shannon Commissioners.*

No. 198, long and narrow, two rivet-holes, one incomplete; $7\frac{1}{8}$ by $1\frac{1}{4}$.

SHELF I., *Tray EE*, contains thirty-three socketed dagger-blades; numbered from 199 to 231. In length they vary from $3\frac{3}{4}$ to $11\frac{1}{2}$ inches; and the socket traversed in all cases by rivet-holes, runs from 1 to $2\frac{1}{3}$ inches in depth. In twenty-two specimens the rivets passed from front to rear, and in all others (except 207) from side to side. No. 199, a spear-pointed dagger-blade, quadrangular in socket; 4 inches long. No. 200, broad in blade, feather-edged, compressed at neck of socket; $4\frac{3}{4}$; found at Keelogue Ford.—*Presented by Shannon Commissioners.* No. 201 wants point and margin of oval socket, compressed at neck; $4\frac{1}{4}$. No. 202, fragmentary, of bright-yellow metal, socket square, and $2\frac{1}{2}$ deep; now $3\frac{3}{4}$ long; found near Newry. Analyzed by Mallet, who has thus reported upon it:—"A good hard bronze, very like No. 8 [see sword-handle, No. 24] in colour and external appearance, and rather more malleable. It was scarcely tarnished. Specific gravity, 8·675." Its composition was copper 90·72, tin 8·25, lead 0·87. See Transactions, vol. xxii., p. 323. No. 203, spear-pointed, socket short, but passing for an inch into blade portion; $4\frac{3}{4}$. This specimen, together with Nos. 206, 210, 213, 216, 222, 224, and 227, were procured with the Dawson collection. No. 204, one of the most perfect miniature daggers in the Collection, socket round; $4\frac{3}{8}$ by $\frac{3}{4}$ across blade. Procured with No. 205 with the Sirr collection. No. 205, a short, broad blade, with round point, like a modern knife; $3\frac{3}{4}$. No. 206, spear-shaped, tapering from flattened socket to point; $3\frac{3}{4}$. No. 207, flat, wants top, socket short, no rivet-holes, decorated with a double ridge above handle portion, and a depressed line running round margin; $5\frac{3}{4}$ by $1\frac{1}{4}$. No. 208, another and more perfect specimen of the same variety; figured and described at p. 465. No. 209, of the same variety, blade flat, with feather-edge, socket oval; $5\frac{1}{2}$; found at Tubbercurry, county of Sligo. No. 210, thin, flat, leaf-shaped, socket oval; $6\frac{3}{8}$ by 1 across blade. No. 211, ditto, bevel-edged four-sided socket, with a narrow neck; $6\frac{1}{2}$; found in bed of the river at Carrick-on-Shannon, and—*Presented by Shannon Commissioners.* No. 212, ditto, fractured, leaf-shaped, socket oval; $6\frac{1}{2}$; found at Keelogue Ford. It and No. 217 were—*Presented by Shannon Commissioners.* No. 213, thin, flat, socket oval; $6\frac{5}{8}$. No. 214, small, narrow, oval-socket; $5\frac{5}{8}$. No. 215, a long sword-shaped dagger-blade, perfect, socket oval; $8\frac{1}{2}$. No. 216, leaf-shaped blade, with bevel edge, collar

round neck of oval socket; $7\frac{1}{2}$. No. 217, ditto, with midrib on blade, socket fractured, slightly corroded; $8\frac{1}{4}$. No. 218, perfect, of graceful form, surface irregular, figured and described at p. 465.—*Presented by Shannon Commissioners*. No. 219, ditto, almost a duplicate, socket circular, very large rivet-holes; 8.—*Presented by Lord Farnham*. No. 220, small socketed dagger-blade with wooden handle; figured and described at p. 465. No. 221, long, sword-shaped, with large oval socket; 9. No. 222, a very well-cast dagger-blade, slightly imperfect at top, smooth, and of the green colour seen on Roman bronze, blade leaf-shaped, grooved, socket quadrangular, and enlarged at juncture with blade; $8\frac{1}{8}$. No. 223, leaf-shaped, narrow, socket corroded; $7\frac{1}{4}$. No. 224, long, leaf-shaped, round pointed, socket four-sided, ending in bifurcated elevation at blade; 11. No. 225, a long leaf-shaped dagger; flattened socket, bifurcated like foregoing; $11\frac{3}{8}$; “found deep in a bog in the King’s county.”—*Presented by A. Molloy, Esq.* No. 226, leaf-shaped, compressed socket, ends in square elevation at blade; $11\frac{3}{8}$; found in bed of River Annalee, at Butler’s Bridge, parish of Castleterra, county of Cavan.—*Presented by Board of Works*. No. 227, a large, perfect dagger, triangular in section of blade, with deep groove margining edge, like No. 207, socket, a compressed oval; $9\frac{3}{8}$ by $1\frac{1}{2}$ in widest portion. No. 228, a perfect dagger-blade, figured and described at p. 465. No. 229, another fine specimen, also figured and described at p. 465. No. 230, leaf-shaped, margin of socket concave, double cross rivet-holes; nearly 10 inches long. No. 231, leaf-shaped, short broad socket, ending in raised shoulder; $9\frac{1}{2}$; found in the county of Wicklow.—*Presented by Sir William Betham*. (See Proceedings, vol. i., p. 222.)

SHELF I., *Tray FF*, contains eight large, triangular, massive sword or battle-axe blades, coppery, most of them scythe-shaped, larger rivets remaining, except in No. 233; numbered from 232 to 239. No. 232, a thin, flat blade, described at p. 450 (see Fig. 327). No. 233, a fine specimen of the broad, flat, round-pointed blade, resembling in many respects the former, nearly straight on one edge and slightly curved on the other, flat midrib, five large, perfect rivet-holes, and remains of two others, as if it had been frequently re-handled, of reddish bronze; $12\frac{1}{2}$ by $3\frac{3}{8}$ above rivet-plate.—*Deposited by Sir B. Chapman, Bart.* (see also p. 451). No. 234, point broken, brazed in

centre, probably in modern times, thick, broad midrib, slight side bevels, much notched on edge, three holes, and two large massive rivets; $11\frac{7}{8}$ by $3\frac{1}{4}$. Marked, "Cavan; *Tuagh*, or war axe" (Dawson). No. 235, very perfect, slightly raised broad midrib, round point, double moulding within bevel edge; $11\frac{3}{4}$ by $3\frac{3}{8}$. No. 236, cleaned, copper, with the peculiar leaf-marks on surface, like the celts of the same material; perfect, slightly curved, rather pointed, broad midrib; three large rivets *in situ*; $12\frac{1}{8}$ by 3 (Dawson). No. 237, long, narrow, much curved, pointed, slightly defective on convex edge, thick midrib, three massive rivets; covered with iron incrustation; $13\frac{3}{8}$ by $2\frac{7}{8}$. No. 238, perfect, but rudely cast, nearly straight, differs from others in prolongation of handle-plate, pointed, no midrib, but side bevels, three rivets; $13\frac{3}{4}$ by $3\frac{1}{8}$. "Found in a bog in the county of Meath, in the year 1770." Figured by Beranger, see page 439. No. 239, curved, pointed, flat midrib, square at handle, and running into point at top, three thick rivets, each one inch long; $13\frac{5}{8}$ by $3\frac{3}{8}$.

SHELF II., *Tray GG*, contains nine broad bronze blades, scythe-shaped, curved and riveted, with grooves and midrib; numbered from 240 to 248. All these, except the two last, were found together, as stated in the description of the first, given at p. 451, where that article is figured and described. No. 240, see Fig. 329, as stated above. No. 241, a broad, curved blade, wanting rivets, and somewhat broader in the handle-plate than the foregoing, grooved round margin; $15\frac{1}{4}$ by 4. No. 242, ditto, slender, narrow, rather pointed, three rivets remaining; $14\frac{5}{8}$ by $3\frac{3}{8}$. No. 243, ditto, slightly corroded, notched in handle-plate above rivets, which remain *in situ*; $13\frac{3}{8}$ by $3\frac{1}{2}$. No. 244, ditto, handle-plate shallow, one rivet remaining; 13 by $3\frac{3}{4}$. No. 245, short, notched in handle-plate, three strong rivets *in situ*; $11\frac{3}{4}$ by $3\frac{7}{8}$. No. 246, ditto, broad, appears coppery, both in colour and peculiarity of surface; $11\frac{3}{8}$ by $3\frac{3}{4}$. This was found together with the six foregoing in the county of Galway, as described above, and at p. 451. No. 247, nearly straight, a triple groove surrounds margin, two large rivets remain, each five-eighths thick below the burr; $11\frac{1}{2}$ by 3 in the widest portion of the blade. No. 248, straight, slightly defective in edge, a deep triple groove surrounds margin; three very large rivets, each nearly an inch wide across the burr; see Fig. 328, p. 451.

SHELF I., *Tray HH*, contains twenty-two specimens of broad dagger-blades, battle-axes, and curved, scythe-shaped short swords, numbered from 249 to 270. No. 249, one of the best specimens of broad, double-edged, dagger-blade, figured and described at p. 463. No. 250, a thin, flat, angular dagger-blade, brassy in colour, wanting point, decorated; figured and described at p. 463. No. 251, flat, plain, very thin, three holes and two rivets, handle-plate strengthened by increased thickness of metal and square edges; $5\frac{3}{4}$ by $1\frac{7}{8}$. No. 252, ditto, slight feather-edge, four rivets and one imperfect rivet-hole; $6\frac{1}{8}$ by $2\frac{1}{2}$. Dredged from the Shannon above the new bridge at Athlone. No. 253, copper, a rude, much-corroded dagger-blade, slightly curved, wanting point; $5\frac{5}{8}$ by 2; found in the Shannon, and, with the foregoing—*Presented by Shannon Commissioners*. No. 254, flat, with slight ridge in centre, triangular, sharp-pointed, two small rivet-holes; $5\frac{3}{4}$ by $1\frac{7}{8}$ (Sirr). No. 255, flat, broad, round-pointed, notched on edge, narrow handle-plate, two rivets; 5 by $1\frac{3}{4}$ (Dawson). No. 256, copper, the most remarkable specimen of its kind in the Collection; figured and described at p. 489. No. 257, a bad, corroded specimen of the curved scythe-shaped blade, midrib, but no remains of rivet-holes; $9\frac{3}{8}$ by $2\frac{3}{8}$. No. 258, thin, broad, flat, rasped on surface, slight feather-edge, three rivets; $7\frac{1}{2}$ by $2\frac{1}{2}$ (Sirr). No. 259, a much-battered and corroded specimen of the small, curved, scythe-shaped blade, two incomplete rivet-holes, midrib, like those on *Tray FF*; $7\frac{7}{8}$ by 3 (Dawson). No. 260, another specimen of the curved, scythe-shaped blade, imperfect on concave edge, broad midrib, with square termination; covered with brown crusty oxydation, two rivet-holes; 9 by $2\frac{1}{2}$. No. 261, long, straight, narrow, imperfect on edge, sharp-pointed, rivet-holes incomplete; $10\frac{1}{8}$ by 2 (Dawson). No. 262, a curved, broad, scythe-shaped blade, incrustated with brown oxydation, a portion removed off the handle-piece for analysis; 10 by 3. Mallet describes this specimen as of "copper-coloured bronze of no great hardness; specific gravity, 8.404." Composition, copper 95.85, tin 2.78, iron 1.32, lead 0.12. (*Transactions*, vol. xxii.) No. 263, ditto, narrow, bent, covered with brown oxydation, broad flat midrib, two rivet-holes; $11\frac{1}{8}$ by $2\frac{3}{4}$; found at Keelogue Ford, and—*Presented by Shannon Commissioners*. No. 264, broad, thick, midrib ends short of point, three holes and one rivet; 11 by $2\frac{1}{2}$. No. 265, a much-

worn and corroded specimen of the curved, scythe-shaped blade, two incomplete rivet-holes; 12 by $2\frac{1}{2}$. No. 266, much corroded, point deficient, one perfect and two incomplete rivet-holes; $9\frac{3}{8}$ by $3\frac{3}{8}$. No. 267, a very bad specimen, much worn and corroded, narrow, covered with brown oxydation; three rivet-holes and one rivet; 9 by $2\frac{1}{4}$. No. 268, complete, straight, short, broad, two strong rivets, each an inch long, one incomplete rivet-hole; $8\frac{3}{8}$ by $3\frac{1}{8}$. No. 269, complete, a very good specimen; figured and described at p. 489. No. 270, broad, flat, imperfect in handle-plate, three rivet-holes, wide midrib; $7\frac{1}{2}$ by $2\frac{7}{8}$.

RAIL-CASE O contains twenty-nine articles chiefly appertaining to swords and battle-axes, and numbered from 271 to 299. No. 271, the massive, curved scythe-shaped sword, described as Fig. 330, p. 451. No. 272, the dagger-blade, Fig. 334, p. 458. No. 273, a fragment of the blade and metal handle of a small, narrow sword, with three rivet-holes, and a small portion of the open-work handle, now $1\frac{3}{4}$ long. This is one of the few examples of metal sword-handles ever found in Ireland. No. 274, a thin flat dagger, delineated in Fig. 346, p. 463. No. 275, a piece of decorated sword-blade, Fig. 322, p. 446. No. 276, a much-injured fragment of sword-blade. No. 277, the upper fragment of a sword-blade; $7\frac{7}{8}$ inches long; remarkable for its very high midrib and deep lateral cast ridges, in which respect it resembles some of the spears. No. 278 is a small fragment of sword-blade. No. 279, a small and very thin handle-plate of a rapier-sword, two rivet-holes and one short rivet. No. 280, a very small dagger-blade, with wide notches in handle-plate; $3\frac{5}{8}$; found in Lough Gurr. No. 281, a dagger-point. No. 282, a narrow dagger-blade, with high midrib and ridge on handle-plate, like No. 166; $5\frac{3}{8}$; found at Ballinderry. No. 283, the scabbard ferule figured and described at p. 460. No. 284, the small capsule for scabbard end, see Fig. 336, p. 461. No. 285, another and larger boat-like ferule of thin yellow bronze, apparently formed in one casting; $3\frac{2}{8}$ from point to point; found with the following article in Keelogue Ford, and—*Presented by the Shannon Commissioners*. No. 286, an article similar to the foregoing, but in much better preservation, and somewhat larger and heavier; figured and described at p. 461. No. 287, a specimen of the third

variety of scabbard-end, slightly defective at both extremities. The slender rivets which held the wooden portion of the implement are still *in situ*; it is now $5\frac{1}{2}$ long (Sirr). No. 288, another and somewhat smaller specimen, wanting about $1\frac{1}{4}$ inch of one extremity, but restored in Fig. 338, p. 461 (Sirr.) No. 289, a still larger specimen of this variety, wanting one of the button extremities; now $6\frac{1}{2}$, but must originally have been 8 inches in length. Procured from Mr. Wakeman. No. 290, the small crescent-shaped piece of bronze, probably the end of a scabbard, measuring $1\frac{1}{2}$ from point to point.—*Presented by Marcus Harty, C. E.*, and described in Proceedings, vol. vii., p. 160. No. 291, the wooden-sword model, described as Fig. 331 at p. 452. No. 292, a mixed-metal model of a leaf-shaped sword, resembling several of our Irish specimens; 22. Found with No. 293 in Northumberland, and—*Presented by Lord Talbot de Malahide*. No. 293, a metal model of a sword-blade and handle, found with the foregoing; from pommel to point it measures $21\frac{3}{4}$ inches. The pommel forms a horse-shoe-shaped decoration, precisely resembling some of those semilunar gold articles, with cupped extremities, in the Collection. No. 294, a model of the rapier figured at p. 442.—*Presented by Lady Staples*. No. 295, the bill-shaped blade or battle-axe, figured and described at p. 492. No. 296, the bronze tube, figured and described at p. 492. No. 297, this and the two following articles are the heads of battle-axes, the first of which is figured and described at p. 493. No. 298, another specimen, similar in length, but more slender in the socket, which is decorated with three raised fillets. It has only two sets of spikes, with four in each row; on the lower row one is deficient. It bears the following label: “Unique type of ancient Irish war-club from county of Galway.” No. 299, a short implement of the same character; $3\frac{1}{8}$ inches long, covered with greenish patina, socket conical, and decorated with two fillets below the three sets of conical spikes, four in each set (Dawson). Found in the county of Roscommon. See Dublin Penny Journal, vol. ii., p. 20.

In bottom case, opposite Rail-case O, are placed the two double models of sword-moulds, referred to at p. 452, Nos. 300 and 301.

The BATTLE-AXE, *Tuagh-Catha*, or *Biail*,* usually of iron, was a highly esteemed weapon among the Irish in the middle ages; but neither in the Fenian romantic tale of the *Táin-Bó-Cuailgne*, nor in the Book of Rights, is any mention made of such an article. It is quite manifest that such short, blunt, round-pointed, spade-like implements, as these shown in the two following cuts, could not have been used for stabbing, or, if attached to handles merely intended for a finger-grasp, were not employed for cutting or hacking. They were, we believe, set at right angles, upon stout poles or staves, by means of metal collars, and thus converted into most formidable weapons, occupying a position among our ancient arms, midway between

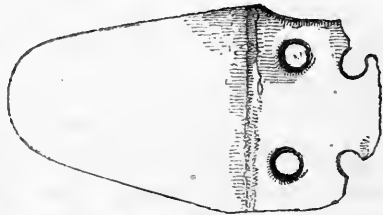


Fig. 356. No. 256.

the bronze, hatchet-shaped celt, and the broad, scythe-shaped sword, which latter they resemble in the

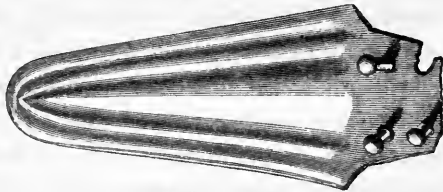


Fig. 357. No. 269.

form and mode of hefting, but partake somewhat of the nature of both. An antiquary, speculating on one or two isolated specimens of this implement, might be inclined to place it among the species Tools, or Agricultural Implements; but with such a Collection as that belonging to the Royal Irish Academy, in which we find so many examples of this pe-

* *Biail* is the word used by the Four Masters, under the years 1157, 1186, and 1213, to express a battle-axe; but it evidently refers to an iron weapon, which was probably analogous with the English "Bill," which Skinner considered to be the "*Securis rostrata*," or beaked axe, so called from its great resemblance to the bill of a bird; and certainly no article in this Collection bears a greater similitude to the beak of a gull than that shown by Fig. 359, p. 492. In Zeuss' *Grammatica Celtica*, *biail* glosses the Latin *securis*.

cular implement of all sizes, from that of the undoubted sword-blade, already described, to a dagger not more than four inches long, it is impossible not to come to the conclusion that they belong to the species Weapon. In this article we have also an ample field for observing the process of artistic development, possibly spreading over centuries, as was already demonstrated in the examination of the celts and true swords. Their antiquity may be gathered from the fact of many being of copper, the use of which metal invariably preceded that of bronze. In the handle-plates they are much larger than swords or daggers, and have frequently four rivet-holes, placed in pairs on each side. No. 256, on Tray **HH**, Fig. 356, is a flat, short, spade-like article of copper, $5\frac{3}{4}$ inches long, and $3\frac{1}{4}$ wide; the blade is $3\frac{3}{4}$ in length, and, like most specimens of this variety, has a large, thick handle-plate for fixing it in a strong metal collar. Fig. 357, drawn one-fourth the size of the original, from No. 269, on the same Tray, measures 9 inches in length, by $3\frac{3}{4}$ broad, is strengthened by a stout midrib, like that in the swords figured on page 451, and is also deeply grooved on each side of that portion. It has four rivet-holes, placed in pairs, as in the former article, and not in a semicircle, as those of the sword and dagger-blades usually are. Three of the strong studs still remain. Some of the curved bills or scythe-like blades, already described, were, in all probability, affixed to long handles like modern halberts.

Heretofore these articles have been denominated "war-scythes," and vague notions have existed as to the way in which they were used, as already stated at page 450. Their precise use may now, however, be learned from the following:—In Holstein, Mecklenburgh, and Saxony, bronze implements, with blades similar to some of those now under consideration, have been discovered, and to these the German antiquaries have given the name of *Commandostab*,—a sort of military baton. Three of these have been figured in Wagener's

Handbuch der Alterthümer (Weimar, 1842), from Fig. 1281 of which is copied the accompanying illustration, in which the blade corresponds, in many respects, with several of those in the Academy, and of which Fig. 358 is

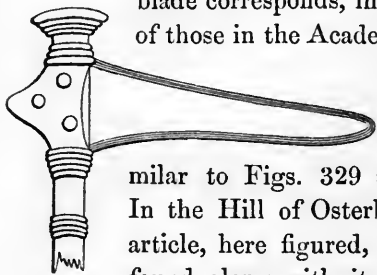


Fig. 358.

the type. In the same work we find the curved variety, with a blade precisely similar to Figs. 329 and 330, also represented. In the Hill of Osterburg, in Saxony, where the article, here figured, was discovered, there were found along with it one thousand urns, several stone war axes (celts), and twelve oval metal disks, supposed by Wagner to have been attached occasionally to the Commander's staff, in signaling. The handles were hollow tubes, strengthened by wooden staves, which projected below a considerable distance, and thus also added to their length.

Among the bronze articles heretofore unexplained in our Collection is a hollow tube, $24\frac{1}{2}$ inches long, and $1\frac{1}{4}$ in diameter, No. 296, in Rail-case **o**, with a moveable ring in the middle, and furnished with four circles of spikes (four in each row), two near the centre and one at each end, where the collars and rivet-holes show that it had been attached to other portions. Hitherto this article has been regarded as a portion of a trumpet, and would appear to be that figured as such in vol. ii. of the *Transactions of the Academy*, and described by Ralph Ousley, Esq., one of our earliest collectors of antiquities; it was found in the county of Limerick in 1787. The trumpets found along with it are still in the Academy, and are described under the head of musical instruments. During the past year another and very beautiful form of bronze battle-axe blade has been procured from the bog of Rock Forest, near Roscrea, in the county of Tipperary; it is $7\frac{3}{8}$ inches long, and $8\frac{5}{8}$ measured along the base, where it has two perfect rivet-holes and two notches, as shown in the accompanying illustration, the lower portion of which represents

the tube alluded to ; the dotted line above marking its probable termination at top. It is possible, however, that the socket for holding the blade may have projected beyond the line of the shaft. This bill-axe, No. 295, in Rail-case **o**, is the only article of the kind, we believe, ever found in Ireland, and resembles in its flat surface and midrib the scythe-shaped blades on Trays **FF** and **GG**.

The fact that some of the broad blades on Tray **GG** were found together, as described at page 451, lends probability to the conjecture that they were battle-axes, wielded by a particular class of soldiers, and not the staffs of officers. In the warfare of the period they must have been most formidable weapons. Vallancey, who figured one of these curved blades in 1784, seemed well aware of its use as a *Tuagh Catha*, and said: "The great rivets of this weapon show it was mounted on a very strong shaft; it was an excellent weapon in the defence of an entrenchment."—*Collectanea*, vol. iv., p. 62.

Most of the articles of this description have been arranged on the three last Trays among the Collection of sword and dagger-blades, the details of which are given from pages 484 to 487.

BATTLE-MACES, or metal batons, from eighteen to thirty inches in length, and furnished with enlarged massive decorated heads, formed part of the usual weapons of the warriors of the middle ages, when they were constructed of iron, and generally hung at the saddle-bow. They were used in close combat, after the sword and lance had been thrown aside, or were cast from a distance, as graphically related by Scott in his description of the encounter between Richard Cœur de Leon and Saladin. In



Fig. 359, No. 295.



Fig. 360.
No. 294.

still earlier times, however, they consisted of hollow spiculated bronze heads fastened on wooden handles, and must have been very effective weapons in the warfare of the period. They are of very wide distribution, for there are few collections in north-western Europe in which we do not meet with some of them. In length they run from two to five inches, and are generally one and a quarter across the socket. There are three such articles in the Academy's Collection, numbered from 297 to 299 in Rail-case O: and of which, that here figured one-half the natural size, with three sets of spikes, six on each row, arranged on alternate spaces, is a good specimen. Each spike is lozenge-shaped at the base, and the upper ones curve downwards; it is $3\frac{7}{8}$ inches in length, and $1\frac{1}{2}$ at the bottom of the conical socket. It formed originally a portion of the collection of the late Mr. R. C. Walker, and was—*Presented by the Duke of Northumberland*, when he purchased that gentleman's collection.



Fig. 361. No. 297.

BRONZE IV. AND V.

SPEARS, JAVELINS, DARTS, BOLTS, and ARROW-HEADS, of bronze, in great variety, and of the most graceful forms, have been found in abundance in Ireland. Those in the Academy's Collection are arranged on two large Trays, **II** and **JJ**, in the northern extremity of the Western Gallery, and on five small Trays in the first compartment of the northern side of the ground-floor of the Museum, from **KK** to **OO**. The largest spear-head yet found in Ireland is 36 inches long (see the model of it in Rail-case **P**); but of the originals in the Academy, the length varies from No. 18, the central specimen on Tray **II**, which measures $26\frac{3}{4}$ inches, see Fig. 366, to

No. 136, on Tray **LL**, Fig. 38, which is only $1\frac{7}{8}$ inch long, and which specimen is the type of the majority of the small bronze bolts and arrow-heads.

The distinguishing characteristic in our Irish spear-heads is the loop or ear for securing them to the handles, and possibly for attaching tassels or other decorations to. This loop was gradually removed upwards from the side of the socket several inches below the blade, first up to, and then into the blade itself, which it lightened as well as ornamented.

Next to the sword, the arrow projected from the bow, the dart cast by the hand, and the spear driven against the foe, would appear to be the earliest weapons used in the warfare of all primitive nations, and were brought to great perfection in this island. Our collection of such articles is, undoubtedly, one of the most extensive in Europe, and amounts to as many as two hundred and seventy-six specimens. Although the generic term for a spear is *Sleagh* (probably a missile weapon), the word *Laighean* is thus noticed by Charles O'Connor in his Dissertations on the History of Ireland:—“After his return from his exile in Gaul, Labra-Loingseach brought the Lagean in use, a sort of broad-edged lance, from which the provincialists of Leinster derive the name of Laignidh, and their country, the name of Laighean.”—page 67. The names of the agricultural implements known in the present day as the “slaine” and “loy” are probably derived from these terms. Besides the foregoing, the following words were used to designate spears, javelins, or darts—possibly of different shapes,—*manaís*, now applied to a mason's trowel, which, in form, resembles many of our broad, leaf-shaped spear-heads; *cruiseach*; and also *fogha* [*faga* in MS. H. 2, 16, col. 42, T.C.D.], *gae* [the Gaulish *gaesum*], and *gabhal*.*

From the following circumstance, related in the *Táin-Bó-*

* See note afforded by Mr. Curry in Dr. Robinson's account of the Dowris Find, described in the Proceedings, R. I. A., vol. iv., p. 240. *Deleann*, *muirenn*, *carr*, *vincne*, *cnarr*, *celtair*, *slissén*, are also names for spears or javelins; *ruibhne*, *omna*, *ceis*, are given by Lhuyd as names for a lance.

Cuailgne, it would appear that the word *Clettin* was applied to the shaft of the bronze spear. Redg, the satirist laureate of Queen Meave, threatened to lampoon Cúchullain, who thereon cast his clettin at him, and striking him in the pole of the neck it passed out through his mouth, and killed him on the spot, at the “ford, which henceforth received the name of *Ath-Solom-Seoid*, or the Ford of the Ready Gift [in Louth]; and its bronze head was hurled from off the clettin upon the stream, whence it is called *Umhan-Shruth* [Bronze Stream] ever since.”*

For the sake of arrangement, the spears and darts, &c., may be divided into four varieties:—1. The simple leaf-shaped, either long and narrow, or broad, with holes in the socket for passing the rivets through which fixed it in the handle. 2. The looped—with eyes on each side of the socket below, and on the same plane with the blade—generally of the long, narrow, straight-edged kind. 3. Those with loops in the angles between the edge of the blade and the socket. 4. In this variety we find the loops moved upwards, so as to form side apertures in the blade. These two latter varieties, but especially the last, are peculiarly Irish. Each variety has its diminutive, as already observed with respect to the swords and daggers.

By the five following cuts are represented good typical specimens of each of these varieties, as well as examples of the long, straight, and the recurve-edged forms of spear or javelin heads. The two first and the fourth figures present us with examples of the narrow elliptical, and the broad leaf-shaped varieties; and Figs. 364 and 366 exhibit the long narrow weapons of the third variety. Fig. 362 is drawn from No. 6, on Tray II, a very fine and perfect specimen of the long, plain, leaf-shaped spear-head with a feather-edge, and large rivet-holes across the conical socket. It is $13\frac{1}{4}$ inches long

* Extract supplied by Mr. Curry from his MS. translation of the *Táin-Bó-Cúailgne*. *Diceltair* is Cormac's word for a spear-shaft.

by $1\frac{3}{4}$ in the widest portion of the lanceolate blade; found in cauldron No. 14, see p. 540. Nos. 2, 3, 7, 55, 64, 65, 68, 74, 87, and 91, are of this variety. Figure 363, drawn from No. 79, on Tray **JJ**, represents a very fine spear-head slightly defective at top; $13\frac{7}{8}$ inches long by $2\frac{1}{4}$ broad at the base of the blade, which differs from the former in being widest below the middle: a subvariety, of which we have good examples in Nos. 28, 32, 249, 250, and 252. There is a loop on each side of the long narrow socket in a line with the edge of the blade, but not opposite each other, in which respect this specimen is unique. In all other instances the loops are placed opposite each other. A third sub-variety of the leaf-shaped spear-head is very broad in the middle of the blade, as in Nos. 10, 232, and 258. Figure 364, from No. 26, on Tray **II**, is a fine and very perfect specimen of the long narrow spear, with concave or

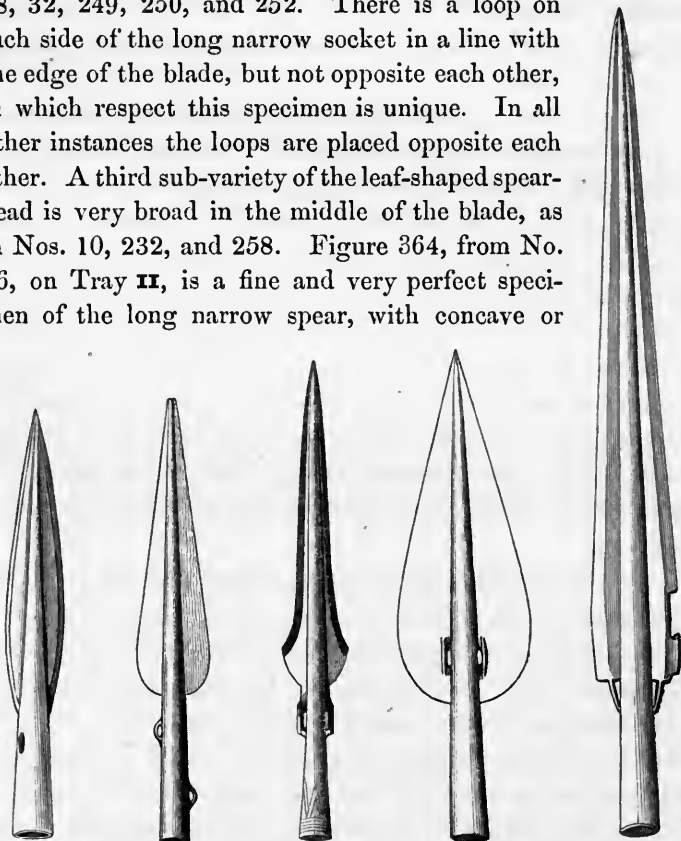


Fig. 362, No. 6. Fig. 363, No. 79. Fig. 364, No. 26. Fig. 365, No. 249. Fig. 366, No. 18.

recurved sides, and long, lozenge-shaped loops on each side of the socket, where the circular form of that portion of the weapon becomes angular. Narrow, lateral ridges connect

these loops with the base of the blade, which has hollow bevelled edges, and is as sharp as the day it came from the mould. The socket margin is decorated with a fillet of five elevations, and a double linear engraved or punched ornament, forming a triangular pattern, like that seen in some antique gold ornaments. A sharp ridge extends along the middle of the socket from the loops to the point, on each side of which, as well as in the angles between the blade and socket, there are lines of small oval punched indentations, apparently effected by the hand. It is 15 inches long by 2 wide across the base of the blade. In Fig. 365 the loops are still further raised into the blade, but are small, and furnished with external flanges. This cut is engraved from No. 249, on Tray **OO**, one of the finest specimens of broad-leafed spear ever discovered in Ireland; $13\frac{1}{2}$ inches long, and $3\frac{3}{4}$ wide across the blade. It is in the highest state of perfection, and has been cleaned to exhibit its original golden colour.

The final illustration, Fig. 366, represents the largest bronze spear-head in the Collection, and the second largest found in this country,—No. 18 in the centre of Tray **II**; $26\frac{3}{4}$ inches long by $2\frac{3}{4}$ in the widest part of the blade—with an ancient mending near the point, and a slight defect in casting at the base of the blade, which has a broad concave bevel round the edge. The socket is circular throughout, but short in proportion below the straight-edged blade. In the angles formed by these two portions are attached narrow slender loops—thus placing it in the third variety of this classification. It was found near Maghera, county of Londonderry.

In the four following illustrations are shown some of the sub-varieties of small dart or javelin heads. No. 132, on Tray **LL**; $3\frac{1}{2}$ inches long, is a rare form of leaf-shaped dart or arrow-head, represented one-half the natural size, by Fig. 367. Figure 368, from No. 125, on Tray **LL**, is the type of the plain triangular-bladed lance, or hunting spear, of which there are a great number, and of different sizes, in the Museum. (See

in particular Nos. 19, 59, 62, 125, 129, 164, 172, and all those in the bottom row of Tray **MM**, except No. 192.) It is $5\frac{1}{8}$ inches long, and 2 across the base of the blade; and has a very slender quadrangular stem, or socket, not hollow beyond its junction with the blade, in which respect it differs from all others in the Collection. It was found under two and a half feet of clay in the bed of the Quinn River, 20 perches east of Danganbrack Castle, barony of Upper Bunratty, county Clare; and—*Presented by the Board of Works.*



Fig. 367, No. 132.

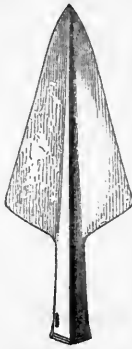


Fig. 368, No. 125.

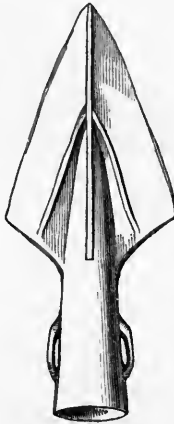


Fig. 369, No. 59.



Fig. 370, No. 239.

Figure 369 has been engraved one-half the natural size from No. 59 on Tray **JJ**, broad and triangular in thin flat blade, with raised cast ornaments on the sides, and along the upper portion of the wide conical looped socket, which terminates at the junction of the decorated lines. It measures $4\frac{1}{8}$ inches by $1\frac{3}{4}$. Figure 370 is an illustration of No. 239, on Tray **NN**, a rather rare and remarkable specimen of spear-head, with long triangular recurved-edge blade, deeply indented on each side of the very broad flattened oval socket. The loops spring from the margin of the socket. It is $6\frac{1}{2}$ inches long, and $1\frac{7}{8}$ across the junction of blade and socket.

The four annexed engravings, two of which are drawn from imperfect specimens, represent the best examples of the

highly decorated spear-heads, with large lateral apertures in the blades: which form the fourth variety in the classification of these weapons, of which there are sixteen in all, including No. 249, already figured on page 496. No. 100, on Tray **KK**, from which Fig. 371 has been engraved, is the lower fragment of a very beautiful and unique spear-head, with circular apertures below the large side openings. The wings of the blade above these openings are now detached from the socket to which they were there originally joined by an almost imperceptible line of adhesion; and



Fig. 371, No. 100.



Fig. 372, No. 36.



Fig. 373, No. 252.



Fig. 374, No. 24.

the raised mouldings round their inner margins continue along the edges of the socket, which is also decorated by an elevated ridge, which probably coalesced at the point with those of the blade, when the article was perfect. It is now $4\frac{1}{4}$ inches long, and 3 wide. Figure 372 exhibits, No. 36, on Tray **JJ**, another fragmentary specimen of this variety, now $10\frac{1}{2}$ inches long by $3\frac{1}{2}$ wide; the lateral apertures in the bevel-edged leaf-shaped blade of which are not symmetrical. The socket margin is surrounded by a cast decoration for $1\frac{1}{2}$ inch of its length, above which there is a large rivet-hole. In No. 252, on Tray **OO**, Fig. 373, we observe another form of this variety, strong, thick, short in lower portion of quadrangular socket, with holes at the angles of the elliptical lateral aper-

tures. It measures $11\frac{1}{4}$ inches long by $1\frac{1}{2}$ broad; has rivet-holes; and was—*Deposited by the Royal Dublin Society*. Fig. 374, from No. 34, on Tray **JJ**, illustrates a very graceful long-leafed spear-head, highly decorated in casting, by a series of raised roped lines extending over the surface of the socket, and forming an ornamentation round the rivet-holes, and along the outer edges of the narrow lateral apertures; the blade is bevel-edged. This article, which is $11\frac{1}{2}$ inches long and 2 wide, has all the appearance of having suffered from exposure to great heat.—*Presented by the Shannon Commissioners*.

By the following cuts are shown some sub-varieties of spear and arrow-heads. Figure 375, from No. 12, on Tray **II**, represents a small leaf-shaped spear, with the loops placed in the angle between the blade and socket; of fine yellow bronze, $6\frac{7}{8}$ inches long, by $1\frac{1}{2}$ broad. No. 190, Fig. 376, is a small, narrow specimen of the triangular-bladed hunting spear, with the loops low down on the circular socket,



Fig. 375,
No. 12.



Fig. 376,
No. 190.



Fig. 377,
No. 153.



Fig. 378,
No. 160.



Fig. 379,
No. 215.



Fig. 380,
No. 213.

$7\frac{1}{4}$ inches, by $2\frac{1}{2}$. Figure 377 represents the thick, short, large-socketed, small-bladed bolt or arrow-head of which there are about sixty specimens in the Collection, ranging from $2\frac{1}{2}$ to 6 inches in length, of which the socket always forms the major part. This specimen, No. 153, on Tray **MM**, $2\frac{1}{2}$ inches in length, is deeply indented in the blade on each side of the thick socket. No. 160, shown one-half the natural size by Fig.

378, is a good example of the same form of bolt-head. Figures 379 and 380 illustrate the small narrow-bladed, sharp-pointed, straight-edged javelin, of which there are many examples in the Collection. The former is drawn from No. 215, on Tray **NN**, $5\frac{3}{4}$ inches long, and $\frac{7}{8}$ across the widest part; the loops touch the lower margin of the blade. The latter, from No. 213, is of the same description, but wider in the socket. It is slightly defective at both extremities, but the top has been restored in the drawing. It now measures $5\frac{1}{2}$ inches.

The first cut in the following series of illustrations is a facsimile of No. 136, on Tray **LL**, the smallest dart or arrow-head in the Collection, but appearing in the engraving much larger than the original; the conical socket is hollow almost to the very top. See page 513.

Several of our spear and javelin-heads are most elaborately decorated both in casting and by hand, as shown by the accompanying illustrations. Figure 382 shows, one-half the natural size, the lower portion of the socket of No. 251, on Tray **OO**, a very beautiful and highly decorated spear-head of the long leaf-shaped variety, with raised bands, highly decorated with a chevron pattern.



Fig. 381, No. 136.



Fig. 382, No. 251.



Fig. 383, No. 191.



Fig. 384, No. 191.

This spear-head is 14 inches long by $2\frac{3}{4}$ wide, and was found near Athenry, county Galway. Figures 383 and 384 pre-

sent side and front views of No. 191, on Tray **MM**, a middle-sized, graceful, broad-bladed spear-head, with a sulcus on each side of the socket, where, in most other specimens of this variety, there is a raised line. It is in fine preservation, and most beautifully decorated by minute punched or incised lines all over the socket, as well as on the surface of the broad lozenge-shaped loops: see Fig. 383. It is $7\frac{1}{4}$ inches long by $1\frac{1}{4}$ wide at the base of the blade; and was found in the Shannon, at Athlone.

The perfection of spear-head decoration appears, however, to have been attained in those round-pointed, short articles, with deep depressions on each side of the socket in the angular blades, of which there are two fine examples in Nos. 192 and 193, on Tray **MM**, one of which is here represented, two-thirds the natural size. No. 192, Fig. 385, is 5 inches long by $1\frac{7}{8}$ wide, and has a central circular stud opposite the base of the blade, beneath which there are a series of minute continuous lines, margined on both sides by a row of elevated dots. This ornament, although now much

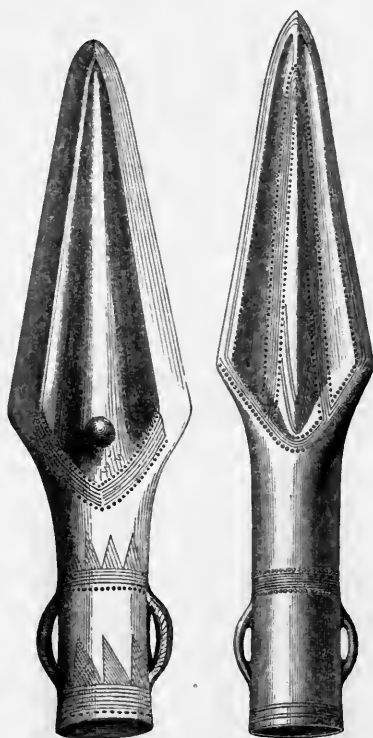


Fig. 385, No. 192.

Fig. 386, No. 234.

effaced, evidently passed along the sulci on each side of the socket, as shown in No. 234. The outer surfaces of the loops are also beautifully decorated with incised and dotted lines of ornamentation. Figure 386 faithfully exhibits the beautiful

and delicate details of ornament on No. 234, which is $7\frac{1}{2}$ inches long. In several places this ornament may be observed in relief; but in one spot, where there is a patch of dark-coloured polished incrustation, or patina, it is depressed; a circumstance which, with our present knowledge of casting, it is difficult to account for.

The ornament on the circular portion of the socket in this specimen was evidently formed in the mould; but the triangular decoration on that in Fig. 385 was made subsequent to casting, and apparently by a chisel-edged tool.

ARROWS—in Irish, *Saigts*—of bronze were usually socketed, as shown by Figs. 377 and 378, page 500, selected from the large assemblage of these articles on Trays **MM** and **NN**, and described under the head of *Bolts* in the foregoing observations. Most of these would, from their shape, appear to have been projected from the cross-bow, or other engine of that nature.* The three following cuts are drawn from small, thin, flat, bronze arrow-heads, probably used for shooting with the simple bow at birds or minor animals, and were inserted into their shafts by means of slender tangs: see Rail-case **P**. Figure 387 represents a thin, flat, spear-shaped specimen, of

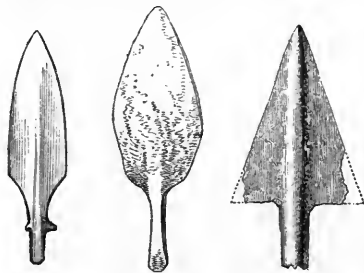


Fig. 387, No. 300. Fig. 388, No. 299. Fig. 389, No. 298.

yellow metal, slightly defective at the point, and flatter on one side than the other; now $3\frac{1}{2}$ inches long. Fig. 388, also flat and leaf-shaped, is hammered out of a piece of metal, and measures with the tang $4\frac{1}{4}$ inches, of which

the blade is about 3. The third figure shows a triangular arrow-head, $3\frac{3}{8}$ inches long, and flat on one side, as if cast in a single mould.

* In the writings of Harris, Vallancey, Walker, and others of their school, we read of the *Crann-Tabhuil*, stated to have been a sort of sling; but no authority is referred to for the assertion.

Handles and Ferules.—Notwithstanding the immense length of time which must have elapsed since these spear, javelin, and arrow-heads were in use, portions of their original oak and ash shafts remain in the sockets of several, see Nos. 45, 52, 76, 93, 116, and 133; but we possess few means of judging of their original length.* Many of them were, probably, long and slender. The simple leaf-shaped spear, or lance, was fastened to its shaft by a metal rivet passed across the socket; in the looped variety, a ligature, possibly, passed down from the socket, and was fastened to the shaft; but some of the spear-heads, with lateral apertures, have also rivet-holes in the socket.

To Tray **PP**, in the Northern Ground-floor, have been attached seventeen tubular articles, varying in length from $3\frac{1}{4}$ to 18 inches,—averaging about $\frac{3}{4}$ in the diameter of their central portions; and numbered in continuation of the spears from 274 to 290, both inclusive. These, at first sight, resemble bellows-nozzles; but upon a closer examination it will be found that some of them are imperforate at the small ends; and several specimens are filled with pieces of wood, evidently the extremities of the ancient clettins, or spear-shafts, to which these articles were ferules. Their small, decorated, pipe-like ends are but little worn, proving, should this conjecture as to their use be correct, that the but-end of the Irish spear, was seldom applied to the ground. Much art has been displayed

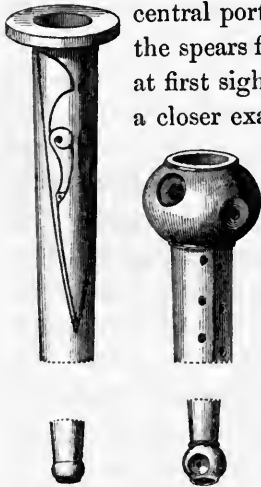


Fig. 390, No. 277. Fig. 391, No. 279.

in the manufacture of these articles, as shown in the two typical illustrations, here represented one-half the natural size, of the large and small ends of Nos. 277 and 279. Figure 390 is drawn from one of the largest of these ferules, 16 inches in

* In O'Davoren's Glossary (British Museum, Egerton, 88) is mentioned a *cnarr* (spear), of "twelve fists in length, as well iron as shaft" (*fochuir .i. urlann.*)

length, probably soldered originally along the seam, but the joining is now open. It is decorated at top with the pattern shown above. Fig. 391 is from a smaller and differently-decorated specimen, with the seam joined by a number of oblique rivets, the holes for which are shown in the cut. Both the bulbous head and small extremity are cast; and the former has four counter-sunk indentations, probably for holding stones, enamel, or glass; there are two in the latter. It measures $1\frac{1}{4}$ inches; and was found in the river, at the site of the old bridge of Banagher, and—*Presented by the Shannon Commissioners*. It rather strengthens the opinion as to the use of these articles, that the majority of them were found upon the fords of the Shannon, along with several spear-heads and sword-blades, &c. A third form, of which there are four specimens at the bottom of Tray **PP**, is shorter, and more conical. See details of all these at p. 517.

Moulds, for spear and arrow-heads, are of rare occurrence; but there is one stone mould of this description in the Academy's Collection, with three separate indentations upon it; figured at page 91. See description of first Cross-case in the Northern Gallery, page 92.

The following is a detailed catalogue of the spears, javelins, and arrow-heads:—

WESTERN GALLERY.—BRONZE IV.

SHELF I., *Tray II*, contains thirty-six bronze spear-heads of different shapes and sizes, typical of the several varieties of this weapon; and consisting of simple leaf-shaped, both long and short; broad bolt-heads, with and without loops; those with apertures in the blades, and the long, narrow variety with straight side edges. Those of the simple leaf-shape pattern, Nos. 1 to 8, are arranged on the upper and lower rows of the left-hand corner of the Tray. The specimens chiefly of the long, narrow variety, with loops either on the sides of the sockets, or at their angles with the blades, occupy the middle

space in both rows, from Nos. 9 to 26; and those of the variety with lateral apertures are placed in the right-hand corner, from No. 27 to No. 36. No. 1, a broad, leaf-shaped spear-head, remarkable for the great length of the socket, and its angularity in the blade portion, as also for not having a rivet-hole; $10\frac{3}{4}$ inches long by $2\frac{1}{4}$ across the widest part of the blade. Found in 1847, with bronze sword, No. 35, and also an iron sword, three feet under a gravel deposit, in the River Glyde, to the south-east of Derrycrammagh Ford, parish of Mansfieldstown, county of Louth. No. 2, a beautifully perfect, long, leaf-shaped spear-head of Dowris-coloured bronze; grooved feather-edge round blade; cross rivet-holes, as in all the other specimens of this form; 10 by $1\frac{3}{4}$. Both this and the foregoing have been rubbed down in the point, evidently in modern times. No. 3, a beautiful specimen, of rare form, and in high preservation, having a raised line within the grooved feather-edge; very sharp point; $10\frac{3}{4}$ by $1\frac{5}{8}$. Found in deepening bed of Yellow River, below Ballinamore, townland of Ardrum, parish of Oughteragh, county of Leitrim. No. 4, a remarkably short specimen, with angular socket, which is not quite one inch long, below plain flat blade; $7\frac{3}{4}$ by $1\frac{3}{4}$. No. 5, in fine preservation, broad in blade, edges sharp; $12\frac{1}{4}$ by $2\frac{3}{8}$. Found in old bed of River Brusna, opposite ruins of Wheery Abbey, near Gallen, barony of Garrycastle, King's County. No. 6, a fine specimen of long leaf-shaped spear; figured and described at p. 496. No. 7, leaf-shaped, long, fractured near top, corroded; $15\frac{1}{2}$ by $2\frac{1}{4}$. No. 8, very perfect and remarkably large, slight feather edge, socket four-sided; $17\frac{1}{2}$ by $2\frac{1}{2}$ near base of blade. No. 9, long and narrow, has remains of brown patina, looped at junction of blade and circular socket, one loop defective, no rivet-holes in this or any other of the same variety; chamfered edge exquisitely sharp; $12\frac{3}{8}$ by $1\frac{3}{4}$. Found at Cutts, near Coleraine, on the River Bann. See sword, No. 23, p. 470. No. 10, broad, short blade, long socket, with side loops not touching blade; $7\frac{1}{2}$ by $1\frac{7}{8}$. No. 11, small, of the long straight-edged variety, bronze gold-coloured; loops flat, leaving triangular apertures between junction of blade and socket; $6\frac{7}{8}$ by $1\frac{1}{4}$. No. 12, ditto, but more leaf-shaped in blade, loop apertures less angular, slightly defective; $6\frac{5}{8}$ by $1\frac{1}{4}$. No. 13, a very perfect small bolt or javelin-head, broad, leaf-shaped

in blade, with ridge running along the most prominent portion of two upper-thirds of socket, feather-edge, broad loops in angles of blade and socket; covered with a smooth patina; the only specimen of its kind in the Collection; $4\frac{1}{4}$ by $1\frac{1}{8}$. No. 14, slightly imperfect in casting, edge of broad blade bevelled, lower portion of socket long, loops below angles of blade, but touching them; $10\frac{1}{2}$ by $2\frac{1}{4}$. No. 15, of bright-yellow metal, leaf-shaped, flat loops at angles of socket with broad bevel of blade; $13\frac{1}{8}$ by $2\frac{3}{8}$; said to have been found at Cootehall shoal, on the Boyle Water, county of Roscommon. No. 16, a perfect specimen of the long narrow spear, with straight edges; loops at angle of slender socket with broad bevelled blade; $16\frac{1}{4}$ by 2 at base of blade. Found with sword No. 1, and other articles, at Toome Bar, River Bann. See p. 468. No. 17, one of the finest specimens of long, narrow spear-heads in the Collection, and in excellent preservation, socket circular, but having a ridge along its blade portion; broad feather edge, running into flat compressed loops at junction of blade and socket; nearly 23 inches long, and $2\frac{1}{8}$ broad at base of blade. Found at Lough Gurr, county of Limerick. See p. 223. No. 18, the largest specimen in the Collection, and the second longest known to have been found in Ireland; figured and described at p. 496. No. 19, a good example of the triangular leaf-shaped spear, with concave lower edges; $7\frac{3}{4}$ by $2\frac{1}{8}$. No. 20, a short-bladed specimen of the straight-edged spear or javelin point, slightly decorated on blade, like the foregoing and following, by raised lines running downwards and outwards, so as to form a triangle with base of blade; loops on side of socket, which latter forms an angular projection in its blade portion; $8\frac{1}{4}$ by $1\frac{3}{8}$. No. 21, another specimen, identical in character, although not cast in the same mould; $8\frac{1}{4}$ by $1\frac{1}{8}$. No. 22, fractured in blade, and defective in socket, the remains of a very beautiful and rare form of long, rather leaf-shaped spear-head, with a raised cast ornament in blade, running along edge of four-sided socket, and prolonged below into long narrow loops, meeting the socket by a sharp bend, slight feather edge; 12 by $2\frac{1}{2}$ at base of blade. No. 23, a fine specimen of the long narrow spear, with concave side edges, welded near the top, point slightly defective, very large lozenge-shaped loops on sides of socket, where the circular form of that portion of the weapon becomes angular; lateral ridges between loops and blade; broad, hollowed bevel

edges, socket margin decorated with a circular cast moulding, and angular engraved or punched line ornament; now $19\frac{1}{4}$ inches long—but was originally probably 23—and $2\frac{5}{8}$ across widest part of blade. “Found 10 feet deep, near the remains of an ancient fortification.” No. 24, another specimen of somewhat the same variety, fractured in blade, and much battered on bevelled edge, socket circular, with very small loops below blade; $17\frac{1}{2}$ by $2\frac{1}{4}$. No. 25, a very beautiful specimen of the same variety as No. 23, but wanting about three inches of point, broad, lozenge-shaped loops, with lateral projections between them and the indented edges of the blade; a cast fillet surrounds socket margin; and a dotted line, apparently punched like celt No. 32, extends along the line of junction between the blade and socket, and on each face of the angular projection of that part; now $16\frac{5}{8}$ by $2\frac{1}{4}$. No. 26, a very perfect specimen of the same variety, and in fine preservation; figured and described at p. 496. No. 27, and all the remaining specimens on this Tray, have the loops brought into the blade, where, in some cases, they form large apertures on each side of the socket. In this specimen the blade is leaf-shaped, with small side apertures, the socket large and conical; $7\frac{3}{4}$ by 2. No. 28, a short, very broad, leaf-shaped spear-head, with small lateral apertures, having raised flanges on their outer edges; socket circular and conical, with rivet-holes not opposite each other, and appearing to have been drilled after casting—the maker probably finding the lateral apertures insufficient for retaining the weapon in its shaft; $5\frac{7}{8}$ by $2\frac{1}{4}$; found in gravel, in bed of River Clare, one foot under surface, in 1851, in townland of Pollacorrage, parish of Kilbennan, barony of Dunmore, county Galway. No. 29, another of the same variety, not so broad in bevel-edged blade; lateral apertures plain, wider, and lower down; socket large, trumpet-mouthed, and angular in blade portion; $6\frac{1}{2}$ by $1\frac{3}{4}$. No. 30, long and conical in socket; semicircular lateral apertures, with raised cast outer margins; bevelled blade edge, slightly concave; 7 by $1\frac{7}{8}$. No. 31, long, leaf-shaped in blade, with slightly indented margin; very large lateral apertures, with raised edges, meeting elevated lines running on each side of large conical socket; $10\frac{5}{8}$ by $2\frac{3}{8}$. No. 32, a very broad, leaf-shaped spear-head; small lateral apertures, with outside flanges; 11, of which the blade is 7 by $3\frac{1}{4}$ in its widest part. No. 33, a long, nar-

row blade, in bad preservation; lateral apertures near junction with circular socket; $13\frac{2}{5}$ by $2\frac{3}{8}$. No. 34, a long, leaf-shaped spear-head; figured and described at p. 499. No. 35, a rare specimen, wanting about three and a half inches of top; lateral apertures like foregoing; the bevelled edge of blade extends down on each side of circular socket to rivet-holes; now $10\frac{1}{2}$ by $1\frac{3}{4}$. No. 36, the lower fragment of a spear-head; figured and described at p. 499.

Of the foregoing articles, Nos. 1, 3, 5, 9, 16, and 28, were—*Presented by the Board of Works*. Nos. 33 and 34—*by the Shannon Commissioners*. No. 15—*by R. A. Gray, Esq., C. E.* No. 27, *by the executors of Leslie Ogilby, Esq.* Nos. 7, 21, and 32, were procured with the Dawson collection; and Nos. 4 and 12, from that of Mr. Murray, of Mullingar.

SHELF II.—*Tray JJ*, contains fifty-five spear-heads, arranged in three rows; the first, from Nos. 37 to 51, consists of small spear or javelin-heads, chiefly of the short leaf-shaped variety: and, with two exceptions, Nos. 40 and 44, without loops. The sockets in this variety are proportionably larger and more conical than those of the long leaf-shaped specimens on *Tray II*; and also extend almost to the very point, so that the leaf or blade portion is secondary to the socket, and forms, in many specimens, but a slight wing; for example, in No. 43. In size, the specimens in this row vary from No. 37,—which is little more than 4 inches in length, and $1\frac{5}{8}$ broad,—to 41, which is 5 in length, and $1\frac{1}{8}$ broad in the blade. Except the two with loops, and No. 47, they have all rivet-holes placed laterally, and larger in proportion to the size of the article than in any of the foregoing. See especially Nos. 41, 46, and 48: they are all perfect specimens. In No. 40 the loop is at the junction of blade and socket, and in No. 44 there are small lateral apertures in the blade. In No. 45 the rivet remains, and the socket is filled with a portion of the handle. No. 43 was found at Keelogue Ford; No. 45, in the channel of the River Boyne, above Stoneyford Bridge, county Meath. No. 50 was discovered four feet under alluvial deposit resting on limestone gravel, in the drainage cut through Brooklodge demesne, near Knockmoy, parish of Killreran, county Galway; it has been much hacked on the edges. No. 51 was found in the same locality, but only three feet under the surface.

The second row, extending from No. 52 to 72, contains a great

variety of spear-heads, bolts, and javelins. The first six, from No. 52 to 57, are of the leaf-shape variety, and vary in length from 8 to 9 inches. Nos. 54 and 57 have loops between the blade and socket. No. 52, which was found at Cutts, on the River Bann, has a portion of the oak shaft still remaining in the socket. No. 55 was found resting on gravel below bog, five feet under the surface, in side cutting of the River Deel, in the neighbourhood of a crannoge, described, upon the label attached to this article, as "a little mound, formerly an island, which contained a quantity of human bones, and some iron spears," in the townland of Joristown, parish of Killucan, county of Westmeath. See "Proceedings," vol. v., App., p. 55.

The six next specimens in this row are small, broad spear-heads, numbered from 58 to 63; those which are perfect, vary in length from $4\frac{1}{8}$ to $4\frac{5}{8}$ inches. Nos. 62 and 63 are imperfect in the shafts. No. 58, short and thick, has lateral apertures in blade. No. 59, a miniature of No. 19, is figured and described at p. 498. Nos. 60 and 61 are looped on the sockets. No. 62 has a decorative line on the flat of the blade, like No. 59; and No. 63 is deeply grooved in the blade on each side of socket, like Fig. 385. The remaining nine spear-heads on this row, numbered from 64 to 72, are, except 69, of the plain leaf-shaped pattern, and vary in length from $7\frac{1}{8}$ to $9\frac{1}{2}$ inches. No. 64, is $8\frac{3}{4}$ inches long, and measures only $\frac{3}{4}$ in the length of the socket; it was found in the River Boyne, along with sword No. 104: see page 477. No. 65 was found near Headford, county of Galway. The antiquity of No. 69 has been questioned; the blade edges are very thick and blunt, and the casting ruder than the veritable antique specimens. No. 70 is remarkable for the length of the socket, compared with the blade. No. 72 was found at Athlone.

The bottom row of this Tray consists of nineteen spear-heads, chiefly leaf-shaped, and varying in length from $17\frac{1}{2}$ to $8\frac{3}{4}$ inches. Nos. 73, 75, 80, 81, 82, and 90, are looped in the angles between the blade and socket, and 88 has large lateral apertures, like No. 251. No. 73, a perfect, narrow, leaf-shaped spear-head; $10\frac{1}{8}$; was found 5 feet deep in Logstown bog, near Blessington, county Wicklow. No. 75 was found in the Shannon, near Banagher. No. 76, slightly defective in socket, but very perfect in blade; has a portion of the charred handle remaining; was procured from Lough Gurr, county

Limerick. No. 77, of a bright yellow metal, was found at Corryolus, parish of Kiltoghert, county of Leitrim. No. 78, a very fine, perfect spear-head; $12\frac{5}{8}$ long; was found at Ardee. No. 79 is a spear-head, figured and described at p. 496. No. 80 is $16\frac{1}{2}$ inches long, slightly ornamented round socket margin; was found near Athlone. No. 81, defective in point, and injured where very thin blade meets socket; it is now $16\frac{1}{8}$ inches long. No. 82, of the same variety; $17\frac{1}{2}$; was found at Athlone. No. 83, a very fine spear-head of the narrow variety, like Nos. 53 to 56; is only $\frac{5}{8}$ across middle of socket; decorated margin, $17\frac{1}{4}$ long. No. 84, a fine specimen of the broad leaf-shaped spear-head, of reddish-yellow metal, with very large rivet-holes; 13; was found at Keelogue ford. No. 85, resembling in its short socket Nos. 71 and 77, is defective near the base; $12\frac{1}{4}$; found at Cornacarrow, on the Shannon, near Jamestown, county Roscommon. No. 86 has been mended with modern solder; figured by Beranger.—See p. 439. No. 87, a very beautiful spear-head of the narrow leaf-shape, and in fine preservation; $11\frac{5}{8}$ long; was found, with No. 256, two sword-blades, Nos. 22 and 83, and a great number of other antique articles of a like nature, on the lands of Knockadoo, not far from the banks of Lough Gara, the property of Viscount Lorton, by whose permission they were deposited in the Museum, on 16th May, 1840, by W. R. Wilde, Esq., and thus served as the nucleus of that great collection of the ancient bronze arms of Ireland which has since accumulated in the Academy. No. 88, defective on one side; remarkable for large size of blade-portion of socket. Nos. 89 was found in Athlone; it and 91 are leaf-shaped; No. 91 is looped between blade and socket.

Of the foregoing, Nos. 38, 39, 41, 42, 46, 47, 48, 61, 63, 66, 67, 71, and 90, were procured with the Dawson Collection. Nos. 43, 58, 72, 75, 80, 81, 82, 84, 85, 89, and 91, were—*Presented by the Shannon Commissioners*; and Nos. 45, 50, 51, 52, 55, 64, 77—*by the Board of Works*; No. 65 was—*Presented by G. J. St. George, Esq.*; No. 73—*by the Rev. R. Galvin, C. C.*; and No. 69—*by Executors of Leslie Ogilby, Esq.*

GROUND-FLOOR, FIRST COMPARTMENT, END CASE.—BRONZE V.

SHELF I., Tray **KK**, contains twenty-five incomplete or fragmentary narrow spear-heads, numbered from 92 to 116. The only

nearly complete specimen is the arrow-head, No. 95, found at Kilbride shoal, on the Shannon; but which is deficient in a portion of the socket; $3\frac{3}{4}$ inches long. No. 92 is covered with an eruginous incrustation. No. 93, part of a socket, shows by what very thin edges the blades were attached to this portion, how fine the casting, and how accurate must have been the adjustment of the moulds; some of its wooden shaft still remains. No. 96, the lower fragment of a long, very narrow leaf-shaped spear, looped and decorated round socket margin, of very fine yellow bronze; analyzed by Mallet. See No. 5, Trans. vol. xxii., p. 323. "The bronze was," he says, "hard and uniform, and had received and retained a very good edge. Specific gravity, 8.581;" composition—copper, 86.28; tin, 12.74; lead, .07; iron, .31; cobalt, .09. No. 99 was found at Athlone. No. 100, the lower fragment of an unique spear-head; figured and described at p. 499. No. 101, a very rude piece of metal, in the shape of a broad arrow; 4 by 3; procured from Mr. Wakeman, and believed to have been discovered at Dunshaughlin; 4 by $2\frac{1}{2}$. No. 102, a very rude, flat spear-head, without a socket, and which was probably fixed in a shaft by means of a tang; procured as the foregoing. No. 106 was found at Athlone. No. 112, the remains of a very beautiful, and remarkably long, spear-head, with thin, narrow wings, and side apertures. No. 115 was found at Keelogue Ford. No. 116, the fragments of a long, looped spear-head; $15\frac{3}{8}$ long, with the top of the original shaft *in situ*, and showing that it passed up the socket to within about $4\frac{1}{2}$ inches of the top. Found at Cutts, on the Lower Bann.

Of the foregoing, Nos. 92, 94, 97, and 112, were procured with the Dawson collection. Nos. 95, 99, 106, 110, 113, and 115, were—*Presented by the Shannon Commissioners*; and Nos. 103 and 116—*by the Board of Works*.

SHELF I, Tray LL, contains thirty-six small spear, javelin, and arrow-heads, chiefly of the narrow, leaf-shape variety, arranged laterally in two rows, the largest specimens occupying the centre; numbered from 117 to 152. In length they vary from $1\frac{1}{8}$ to $7\frac{3}{4}$ inches. Nos. 117 and 136 are small arrow-heads, consisting almost entirely of the large conical sockets, and with scarcely any wing or blade portion. They are the smallest specimens of this description of weapon in the Collection. Many of the others may have been

used as hunting spears. No. 125 is figured and described at p. 498. No. 129 is of precisely the same form, but somewhat larger, ruder, and in bad preservation. No. 131 is believed to be modern. No. 132 has been figured and described at p. 498. No. 133, remarkable for the extreme narrowness of the blade, is $3\frac{1}{4}$ long, and scarcely $\frac{3}{4}$ across the widest part; it contains a portion of the ancient handle. No. 135 is an exceedingly elegant arrow-point, in form like the long, leaf-shaped spears. No. 136, the smallest arrow-head in the Collection (see Fig. 381, p. 501), was found in the River Blackwater. No. 137 was found at Dowris. No. 140, a very beautiful and most perfect spear-head, in the highest state of preservation; $6\frac{1}{2}$ long; was found in gravel, five feet below the surface, near Inchamore Bridge, on the River Boyne. No. 141 is very narrow in the blade compared with its length. No. 146, a very perfect and rare form of leaf-shaped spear; $6\frac{1}{4}$ by $1\frac{3}{4}$ across middle of blade; found in the Shannon, at Carrick, county Leitrim. No. 148 is remarkable for the large size of its conical socket, which extends to within $\frac{2}{4}$ of an inch of the extremity of the blade.

Of the foregoing, Nos. 120, 123, 129, 133, 134, 145, 151, and 152, formed part of the Dawson collection. Nos. 125, 139, and 140, were—*Presented by the Board of Works*; No. 127—*by the Shannon Commissioners*; No. 131—*by executors of Leslie Ogilby, Esq.*; No. 141—*by Lord Farnham*; and 146—*by R. A. Gray, C. E.*

SHELF II., *Tray* **MM**, contains forty-nine small spear and arrow-heads of the looped variety arranged in three rows, and numbered from 153 to 201. The first row consists of eighteen bolt or arrow-heads, in which the length of the socket is as much as that of the blade. With one exception, No. 166—which is provided with lateral apertures—the loops are placed on the sides of the socket; in length these specimens vary from $2\frac{5}{8}$ to $3\frac{3}{8}$ inches. No. 153, a small bolt-head, figured and described at p. 500. No. 154 is $2\frac{7}{8}$ inches long, but the blade portion is only $1\frac{1}{8}$. No. 160, figured and described at p. 500, is a small specimen with indented blade, resembling No. 192. The second row, from No. 171 to 187, is made up of larger specimens than the foregoing, varying in length from $3\frac{3}{4}$ to $4\frac{7}{8}$, and generally broader in the blade than the former. Nos. 171 and 172 resemble the broad, triangular spear-head, Fig. 369, p. 498. No. 179, is a miniature example of No. 32, on *Tray*

II. No. 180 and 181 have depressions in the blade on each side of the socket, like No. 192. No. 186 was found two feet deep in a gravel shoal, between Lough Rynn and Lough Sallagh, close to Rynn Castle, near Mohill, county Leitrim. See description of the crannoge adjoining that river, in *Proceedings*, vol. vii., p. 147. The third row consists of fourteen specimens, all, except No. 192, of the broad, triangular-bladed variety, with elevated angular decorations on the flat of the blade. No. 188 was found in the county Westmeath. No. 190 is figured and described at page 500. No. 191 is figured and described in p. 501. No. 192, one of the most beautifully decorated spear-heads in the Collection, is figured and described at p. 502. In No. 193, with narrow, leaf-blade, the loops are placed in the angles between the socket and blade, which latter is prolonged into them. No. 197 was drawn by Beranger. See p. 439.

Nos. 153, 156, 157, 166, and 198, formed part of the Dawson collection; Nos. 158 and 189, of that belonging to the late Major Sirr. Nos. 59, 175, 177, 180, 183, 184, and 196, were purchased from Mr. Murray, of Mullingar, county Westmeath; and were probably collected around that locality. Nos. 169 and 191 were—*Presented by the Shannon Commissioners*; No. 186—*by Board of Works*; No. 188—*by Rev. Mr. Fitz Gerald*; and No. 190—*by Lord Farnham*.

SHELF III., Tray NN, contains forty-five small spear and arrow-heads, numbered from 202 to 246, and arranged in two rows. They are chiefly of the long, narrow variety; and, with five exceptions, have the loops placed on the sides of the sockets. The specimens on the top row vary in length, from $3\frac{3}{4}$ to 6 inches. No. 202 is of bright-yellow bronze, scarcely affected by time. Nos. 206, 212, and 214 have the loops placed in the angles between blades and sockets. No. 207 is remarkable for the position of the loops, immediately below the short socket. No. 213 is figured at page 500. No. 214 has a remarkably narrow, straight-edged blade. No. 213, ditto; figured and described at p. 500. No. 221 is remarkable for the shape of the indented blade.

The second row contains twenty-two specimens, varying in length, from $5\frac{3}{4}$ to $8\frac{5}{8}$. No. 230 has a peculiar ridge on the flat of the blade on each side of the socket. No. 228 was found at Athlone. No. 234, in very perfect preservation, is a fine specimen of spear-head, with indented blade, like No. 192, but differing from it in

the angularity of the blade portion of the socket. It is highly decorated, both in casting and by hand, all over the surface of the socket, and along the sulci in the blade; $7\frac{1}{2}$ by $1\frac{5}{8}$. Figured and described at p. 502.

Of the foregoing, Nos. 204, 205, 207 formed part of the Dawson collection; No. 228 was—*Presented by the Shannon Commissioners*; No. 235, *by the Board of Works*; and No. 242, *by Executors of Leslie Ogilby, Esq.*

CENTRAL CASE, SHELF I., Tray OO, contains twenty-three spear, javelin, and arrow-heads (chiefly procured since the Collection was arranged in 1857); numbered from 247 to 273. Some of them are the finest specimens in the Collection; but others are merely fragmentary. The three first have been cleaned, to exhibit the colour and texture of the metal. No. 247, a very perfect and gracefully-shaped spear-head, in fine preservation, with conical socket, and slight feather-edges to blade; is of reddish-yellow bronze, slightly corroded on surface, large lateral rivet-holes; $10\frac{3}{8}$.—*Presented by Dr. Kelly, of Mullingar.* No. 248, a very perfect specimen of the narrow re-curve-bladed spear-head, with large lozenge-shaped loops on socket; remarkable for the beautiful golden colour of the bronze, and the extreme smoothness of the casting—a smoothness which, in the present day, could only be produced by burnishing; $9\frac{1}{8}$; found in Killyon Demesne, under eighteen inches of hard gravel in bed of River Deel, a tributary of the Boyne, barony of Upper Moyferath, county of Meath. No. 249, a very perfect and most beautiful specimen of the broad leaf-shaped spear-head; figured and described at p. 496. No. 250, one of the finest spear-heads in the Collection, and in the highest preservation; in colour it resembles the Dowris bronze; mottled with a brown and yellow varnish, but of what date is unknown; leaf-shaped, with side rivet-holes in large conical socket; slightly recurved feather-edge; $13\frac{5}{8}$ by 3. This specimen forms a portion of the *deposit made by the Royal Dublin Society* in 1860. In the socket was found the following label:—“A copper spear, found near the old castle of Streamstown, near Banagher, 14th of January, 1829.” No. 251, a very beautiful and highly decorated leaf-shaped spear-head, but wanting point, and fractured below the centre, where it has been both brazed and soldered; socket decorated; and figured at p. 501; cross rivet-holes.—*Deposited by Sir B.*

Chapman, Bart. No. 252, a most perfect spear-head, in the highest state of preservation, with wide lateral apertures, and four circular perforations; socket angular externally, with three elevations on each side, and only an inch of it below blade; $11\frac{1}{8}$ by $2\frac{1}{2}$.—*R. D. S.* No. 253, a very remarkable unique form of narrow leaf-shaped spear-head, with narrow lateral apertures high up in blade, the lower edges of which pass down imperceptibly on long conical socket to rivet-holes; decorated on surface by a number of raised cast lines; 12 by $1\frac{3}{4}$. No. 254, a broad, leaf-shaped spear-head, with wide lozenge-shaped loops; much battered, and slightly corroded; $9\frac{3}{8}$ by $2\frac{3}{4}$. No. 255, perfect, narrow, leaf-shaped socket, conical, large rivet-holes; slightly corroded; irregular on surface; $9\frac{1}{8}$ by $1\frac{3}{8}$.—*Presented by T. B. Huthwaite, Esq.* See Proceedings, vol. vii., p. 279. No. 256, ditto, perfect, and in fine preservation; bevel-edged blade prolonged to rivet-holes; $8\frac{5}{8}$ by $1\frac{1}{4}$; found with No. 87, and — *Presented by Lord Lorton*, No. 257, ditto, but somewhat smaller and plainer; 8 inches long by 1 across blade. No. 258, short, broad, leaf-shaped, perfect, but much corroded, and in bad preservation; $8\frac{5}{8}$ by 2. Found in the bed of the River Glyde. No. 259, a small, perfect arrow-head; $2\frac{3}{4}$. Described as No. 249, in Proceedings, vol. vii., p. 130. No. 260, a much-battered and defective portion of spear-head of the broad angular variety; $3\frac{1}{8}$ (Sirr). No. 261, upper fragment of spear-head; $3\frac{3}{4}$. No. 262, portion of bronze blade, with thick circular solid midrib and bevel edges; $3\frac{1}{4}$. Analyzed by Mr. Mallet, who says it is “tarnished, of a deep brown colour, resembling, I believe, the appearance of the bronze called ‘cinque cento;’ when filed, the metal was found to be exceedingly hard, and of a yellow colour; specific gravity, 7.728.” Its composition was found to be—copper, 84.64; tin, 14.01; with a trace of iron and sulphur. No. 263, fragment of spear-blade; $2\frac{3}{4}$. No. 264, a very perfect, short-bladed bolt-head, with narrow loops; $3\frac{3}{4}$ by $1\frac{3}{4}$ in width: from Ballindery. No. 265, a narrow, straight-edged javelin, wanting point and side loops; $6\frac{5}{8}$; found at Ballymore, county of Westmeath; described as No. 87 in Proceedings, vol. vii., p. 130. No. 266, a very perfect, narrow javelin-head, straight-edged, lozenge-looped; $6\frac{7}{8}$ by $1\frac{1}{4}$. No. 267, a small-javelin-head, narrow in the blade; $4\frac{7}{8}$. No. 268, ditto, smaller, curved in point; $4\frac{1}{2}$; looped. No. 269, a small, leaf-shaped javelin-point,

notched in the edge; $4\frac{1}{8}$; described as No. 248 in Proceedings, vol. vii., p. 130. No. 270, a very perfect bolt or javelin-head, the only one of its class or size in the Collection, in which the side loops run into the blade; described as No. 247 at p. 130, vol. vii. of Proc.; $3\frac{3}{4}$. No. 271, a small narrow javelin-point, in bad preservation; $4\frac{1}{4}$. No. 272, a short, broad-leaf, triangular, spear-head, with broad, lozenge-shaped loops; 6 by $2\frac{1}{8}$.—*Deposited by Sir B. Chapman, Bart.* No. 273, the broken-off point of a large, long spear-head; $6\frac{1}{2}$.

Besides the foregoing presentations, Nos. 248 and 258 were the *gift of the Board of Works*.

TRAY **PP** contains eighteen bronze tubes, which probably formed the ferule-ends of spears, numbered from 274 to 291. No. 274, a plain bronze tube, closed at the small extremity, and imperfect at the other; now $8\frac{1}{2}$ inches long. Found at Curries, near Carnarrow, on the Shannon, between the counties of Leitrim and Roscommon. No. 275, another of the same description, but more perfect, and having a rivet hole; $14\frac{1}{2}$ long; found in Lough Gurr, county of Limerick. Both of the foregoing have been brazed at the junction of the tube. No. 276, the largest and most perfect specimen of its kind in the Collection; in the highest state of preservation; of fine, light-yellow metal, with an ornamented projecting collar at top, and also at the small extremity; perforate throughout, soldered by a delicate line of junction; found in the river, at Carrick-on-Shannon. No. 277, another of the same variety, but rather shorter. Figured and described at p. 504. No. 278, ditto, but still shorter, and imperfect at joining; 12 inches long; found in the Shannon, locality unspecified. No. 279, a different variety from the foregoing. Figured and described at p. 504. No. 280, a cast, slender tube, with double ring head ornament; contains a portion of the ancient wood; $11\frac{1}{2}$; found in the Shannon, near Jamestown, county Roscommon. No. 281, ditto, also cast; shorter, and in better preservation; contains portion of ancient wooden shaft; $9\frac{1}{2}$. Found at Carrick-on-Shannon. No. 282, cast; thick, short, with bulbous extremities; $6\frac{3}{4}$; found at Toome Bar, on the River Bann, three feet under surface; contains a piece of the ancient shaft. No. 283, ditto, somewhat longer, with double bulbous ornaments at each extremity; $7\frac{3}{4}$. No. 284, a different variety of spear-ferule, cast; short, conical, with chisel-edge, resembling similar objects

found in Scandinavia; $3\frac{1}{2}$. No. 285, also cast, resembles 283, and is $7\frac{7}{8}$. No. 286, plain, somewhat corroded; with slight bulbous extremities; $5\frac{5}{8}$. No. 287, ditto, shorter; $5\frac{1}{4}$. The four next specimens are larger at the upper extremity, and more conical. No. 288 is cast; $5\frac{1}{8}$ in length by $1\frac{5}{8}$ across upper end; found in the Shannon, at Banagher. No. 289, ditto, longer; contains a portion of the ancient wooden shaft; $6\frac{1}{2}$; found on site of old bridge at Banagher. No. 290, short, thick, conical, and imperfect; 3. No. 291, ditto; $3\frac{3}{8}$ in length (Dawson).

Of the foregoing, Nos. 274, 278, 279, 280, 288, and 289, were—*Presented by the Shannon Commissioners*; Nos. 276 and 281—*by R. A. Gray, C. E.*; and No. 282—*by the Board of Works*.

There are only eighty-nine spear-heads, chiefly of the plain leaf-shape variety, in the Copenhagen Museum.

RAIL-CASE **P**, part of—contains ten articles connected with the subject of spear and arrow-heads, described in the foregoing details of Trays. No. 292, a metal model of the longest spear-head which has yet been discovered in Ireland, and of the same variety as No. 18, on Tray **II**, figured and described at p. 496. It is 32 inches long, and was—*Presented by Mr. Carruthers*. The original is now in the British Museum. Nos. 293 to 297, are metal models of spear-heads. Found in the county of Northumberland.—*Presented by Lord Talbot de Malahide*. No. 293 is plain leaf-shaped, and $12\frac{1}{2}$ inches long. No. 294, ditto; a good specimen, like No. 6, figured at p. 496; it is $14\frac{3}{4}$ inches long. No. 295, with side apertures, is $16\frac{1}{2}$. No. 296, leaf-shaped, with flat socket; $11\frac{3}{4}$. No. 297, ditto, small; $7\frac{3}{5}$. Nos. 298, 299, and 300, small flat arrow-heads, figured and described at p. 503. No. 301, a spear or halbert-end, of bronze, with a short screw passing through one side; counter-sunk at top, as if to receive another piece of metal.

For the remainder of Rail-case **P**, see conclusion of Tray **GGG**.

The SHIELD,—in Irish *Sciath*,—and which was used in lieu of the sword-guard, should here follow in the enumeration of antique arms; but as yet we do not possess any well-marked vestiges of such articles appertaining to the bronze period. The principal materials of which such ancient articles were composed

—being probably of wicker-work and leather—were of too perishable a nature to have lasted for any length of time. All the shields figured either in our ancient manuscripts, or sculptured on early Irish monuments, are circular (see p. 299.) With the gift of shields from the Irish kings to their inferior chieftains were also invariably combined “war swords,” or “swords for wounding.” We read of “shields with the brightness of the sun;” also “fair shields from beyond the seas,”—showing that such articles were imported; likewise “golden shields: red shields,” and “shields for deeds of valour.”—See *Book of Rights*. The only bronze articles in the Academy’s Collection likely to have served the purpose of shields are those embossed plates of bronze on Tray **UUU**, decorated with what has been denominated the trumpet-pattern, from its resembling an arrangement of curved horns, and regarded as a peculiarly Celtic form of ornamentation. As, however, their use has not been determined, they have been classed under the head of “miscellaneous articles.” In the ancient historical tale of the Battle of Magh Rath, we read of an Irish hero having “a protecting shield with a golden border upon him; two battle-lances in his hand; a sword, with knobs of ivory [teeth], and ornamented with gold, at his side: he had no other accoutrements of a hero, besides these.” This shield is said to have been of such a size as to act as a protection against the weather, as well as a defence in battle.* Walker, in his *Memoir on the Arms and Weapons of the Irish*, relates the discovery of a gold-adorned shield, found near Lismore.† The same author mentions the fact of a golden helmet, found in the county Tipperary, having been offered for sale in Dublin—see page 137. For further particulars relating to shields, see the notice of them under the head of Iron weapons.

* See O’Donovan’s translation for the Irish Archæological Society, p. 65.

† At p. 177 of that work, the antique alluded to above is conjectured to have been a corslet. It was sold for £600 to a goldsmith in Cork.

SPECIES II.—TOOLS.

WITH the exception of the celts, which, as already stated, served the double purpose of tools and weapons, like the axe and tomahawk, there are but few implements in antiquarian collections that appear to have been used in the domestic arts of the bronze period. Those articles that may be considered the representatives of the iron tools of the present day have been arranged on Trays **QQ** and **RR** in the first compartment of the northern ground-floor of the Museum, and consist for the most part of small celts, chisels, and gouges, some of the first of which are copper. The two latter varieties were evidently furnished with handles, like modern implements for a like use; some have stops or collars to prevent them passing in too far, and splitting their wooden handles; while all the gouges have hollow sockets. The eleven plain, chisel-shaped tool-celts, arranged on the top row of Tray **QQ**, are smaller and slighter than any of those in the Collection of such articles already described under the head of Weapon-Tools. Of these, Nos. 1, 6, 7, 9, and 10, are of copper.

CHISELS.*—Of these there are four varieties:—1, long and narrow, with cross studs or guards projecting from the sides, like those represented by the three first figures in the following series of illustrations, drawn from Nos. 16, 25, and 36. There are nine such articles in the Collection, varying in length from $3\frac{3}{4}$ to $5\frac{5}{8}$ inches. No. 16, Fig. 392, is $5\frac{3}{4}$ inches long. No. 36, Fig. 393, is a very remarkably shaped and decorated tool, with shoulder studs, grooves, and loops; $4\frac{7}{8}$ inches long. No. 25, Fig. 394, the largest specimen of its kind in the Collection, is $7\frac{7}{8}$ inches in length, and 2 wide across the stop.—*Presented by R. Mallet, C. E.* See Proceedings, vol. v., p. 323. 2. With broad axe-shaped blades, long, slender

* In the Annals of the Four Masters, the term *Fonsúra* is used for chisel. It is still a living word in the *bérlagair na Saer*, or secret craft-language of masons and carpenters. We do not yet know any ancient Celtic name for gouge.

spikes or tangs, and raised collars, against which the straight wooden handles abutted, are represented by thirteen specimens,

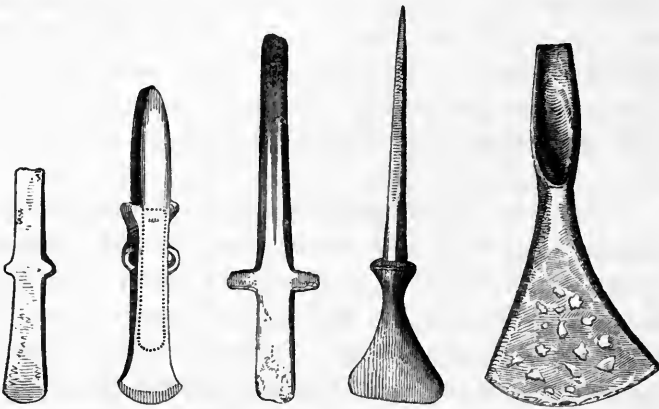


Fig. 392, No. 16. Fig. 393, No. 36. Fig. 394, No. 25. Fig. 395, No. 75. Fig. 396, No. 78.

varying in length from $2\frac{1}{2}$ to $6\frac{1}{4}$ inches; and of which No. 75, Fig. 395, which is $6\frac{1}{4}$ inches long, is a characteristic specimen. 3. Figure 396 is drawn from No. 79, a long, slender, thin, axe-edged palstave, with shallow grooves, and measuring $5\frac{3}{4}$

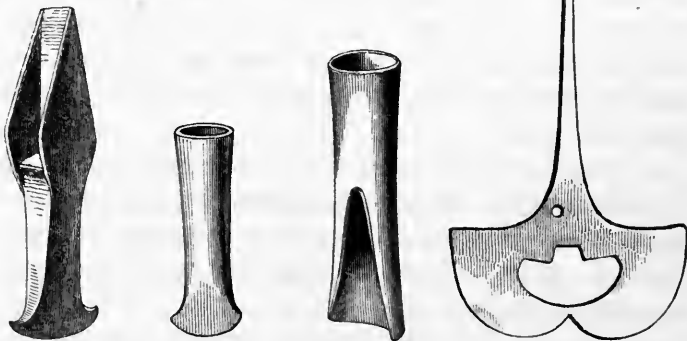


Fig. 397, No. 35. Fig. 398, No. 21. Fig. 399, No. 61. Fig. 400, No. 80.

inches in length by $2\frac{5}{8}$ across the widest part of the blade. There are three specimens of this variety, arranged in the bottom row of Tray **RR**, all of about the same size. Under

the head of this variety may be classed several small, narrow, chisel-edged palstave celts, varying in length from $2\frac{3}{8}$ to $5\frac{1}{4}$ inches; narrower in the blade than any of the true celts, and of which No. 35, Fig. 397, which is $4\frac{3}{8}$ inches long by 1 wide in the blade, is the type. 4. Of the socketed variety of chisels, represented by Fig. 398, drawn from No. 21, which is $3\frac{3}{4}$ inches long, there is only one specimen in the Collection.

GOUGES are by no means uncommon among bronze antiquities; the Academy possesses twenty-one specimens, all, except that described at page 158, arranged on Tray **RR**, and of which No. 61, Fig. 399, drawn one-half the size of the original, is the type. In length they vary from $1\frac{1}{2}$ to $4\frac{1}{2}$ inches; and are numbered from 44 to 62; with one exception, they are all socketed, and most of them are sharp on the cutting edge.

Among the articles which were, to all appearance, used as tools, but of which the precise use is as yet conjectural, may be specified No. 80, on Tray **RR**, a thin, flat bronze instrument; $3\frac{1}{4}$ inches long by about 2 wide in the blade, and represented by Fig. 400, page 521. Supplied with a handle, it would make a good leather-cutter. It was—*Presented by the Shannon Commissioners.*

PUNCHES.—The top row of Tray **RR** contains four round-faced socketed punches, varying in length from 2 to 4 inches.

A small bronze ANVIL,—in Irish, *Inneoin*,—No. 38, on Tray **RR**, is figured the natural size on the opposite page. It appears to have been much worn, and was probably used as a jeweller's "stake." Round the edge are a series of riveting holes of different sizes.

ADZES.—By Fig. 402 is represented one of three curious bronze curved adzes, now in the Academy's Collection, Nos. 81, 82, and 83, on the top shelf of the Cross-case between the first and second compartments on the ground-floor of the northern side of the Museum. They are nearly all alike, resembling

a cooper's hand-adze, but blunt, heavy, and about five inches along the face. Two are altogether solid. No. 82 was found in a rath at Moneygall, county of Tipperary; and No. 83, figured below, has an aperture three-quarters of an inch in diameter in the head, evidently for passing a handle through. It measures $4\frac{7}{8}$ along level face, and weighs 55 oz. In the Brehon Laws we find the following curious reference to



Fig. 401. No. 38.

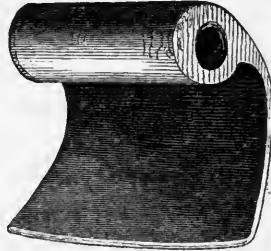


Fig. 402. No. 83.

a bronze adze, evidently referring to pagan times:—When a female desired to clear her character by a certain ordeal, she was required to rub her tongue to an adze, not of iron, but of

brass (*Tal Umhadh*); and it should be heated or reddened in a fire made either of the rowan tree or the blackthorn; and, adds the writer, “it is a druidical ordeal.”* That these articles could not, in their present state, have been used as edged tools is manifest from their bluntness; but one in Mr. Murray's collection has been filed or rubbed down on its edge, although cast blunt.

Among the few implements mentioned in our early Irish writings was the *dirna*, a weight used by the “miner who digs

* I am indebted to Mr. Curry for the foregoing curious notice of the ordeal by licking heated metal. When a boy, I have frequently seen this custom of licking a red-hot piece of iron used in the county Roscommon as a test of truth, and giving origin to the expression, “I dare you to the tongs.” The fiery ordeal was not uncommon in England.

the copper;" but we have no specimen of any such article in the Collection. In the same case with the adzes specified above, may be seen the few other bronze articles coming under the head of Tools in the Collection: viz., moulds—but they are not of any great antiquity. One of these, No. 85, a brass mould for casting coats of arms and heraldic devices, has already been described as No. 97 in the Proceedings, vol. vii., page 130. Ouncels are of the same species, see page 552.

The following list comprises all the antique tools in the Collection:—

BRONZE V.—GROUND-FLOOR, NORTH SIDE, FIRST COMPARTMENT.

SHELF I., *Tray QQ*, contains thirty-seven bronze tools, principally of the celt and chisel-shape; numbered from 1 to 37. The top row mostly consists of small narrow celts, of which Nos. 1, 6, 7, 9, and 10, are copper. No. 8 was found in excavating the bed of the River Scarriff, county Clare. Nos. 12 to 20, in the second row, are chisel-shaped implements, with cross guards, and of which variety Nos. 16 and 25, figured at p. 521, are the types. No. 21 is a socketed chisel, figured and described at p. 521. No. 22, a solid celt-shaped chisel; $3\frac{7}{8}$. No. 23, the narrowest chisel-edged implement in the Collection, with raised shoulders between tang and blade; $4\frac{3}{8}$ long, and not quite $\frac{3}{8}$ across chisel-edge; it resembles a modern carpenter's sash-tool. No. 24, imperfect, a curious chisel-edged tool, with a crutch-like loop at upper end; $4\frac{7}{8}$. No. 25, the large chisel-edged tool, figured and described at p. 521. No. 26, a long chisel-edged, four-sided piece of bronze; $9\frac{5}{8}$ by $\frac{7}{8}$ in the widest part. The two last rows consist of eleven palstave-shaped chisel-edged tools, varying in length from $2\frac{5}{8}$ to $5\frac{1}{8}$, and of which Nos. 35 and 36, figured on p. 521, are the types.

Of the foregoing, Nos. 6, 18, 19, and 33, were procured with the Dawson Collection; Nos. 8 and 17 were—*Presented by the Shannon Commissioners*; No. 11—*by the Executors of Leslie Ogilby, Esq.*; and No. 25—*by R. Mallet, C. E.* No. 32 was procured from Mr. Murray, of Mullingar.

Tray RR contains forty-three tools, chiefly of the chisel, or celt-shape, numbered from 38 to 80. No. 38, a miniature anvil,

figured and described at p. 523. No. 39, the imperfect socketed portion of a narrow four-sided tool, now $3\frac{1}{8}$. No. 40, a socketed hammer-edge tool, possibly used as a punch; 3 inches long by $1\frac{1}{4}$ broad on the blunt face; found at Abbeyshrule, county of Longford. No. 41, a socketed punch, decorated on the surface, like some of the celts on Tray S. No. 42, a narrow socketed punch; $4\frac{3}{8}$ by $\frac{1}{2}$ across the solid extremity. No. 43, a short socketed punch, broader than the foregoing. The twenty articles following are gouges, numbered from 44 to 63; and the type of which is represented by Fig. 399, from No. 61, on p. 521. With one exception, they are socketed. In No. 48, the gouge-groove ends abruptly at top. No. 49 was found at Moate, in the county Westmeath. No. 52 is a portion of the Dowris find, and was "presented to Dean Dawson by Lord Oxmantown." No. 54, the largest in the Collection. No. 55, with very narrow groove, was found at Monasterboice, county of Louth. No. 59 was procured from the county of Monaghan. No. 60 is not socketed, and resembles a scrape more than a gouge. No. 61, see Fig. 399. No. 62, short, plain. No. 63, a fragment of socketed gouge, or chisel, found near Newry, county of Down, and analyzed by Mr. J. R. Mallet, who described it as made of very inferior bronze, copper-coloured, soft, and "not uniform in texture. It contained cavities produced by air-bubbles in the casting, and was very much corroded; oxide of tin, carbonate of copper, and the red dinoxide of copper, were observable on the surface. Its specific gravity, 7.896." Its composition was—copper, 91.03; tin, 8.39; with traces of cobalt and antimony. See Trans. vol. xxii., p. 324. All the remaining articles, except four on this Tray, are of the broad-axed variety of chisel, furnished with long spikes and collars, and illustrated by Fig. 395, on p. 521. No. 64 is $4\frac{1}{2}$ inches long by $1\frac{7}{8}$ wide in the blade, and has been described as No. 98 in Proc., vol. vii., p. 130. No. 65, and all the others in that row to No. 73 are of the same variety, and vary in length from $3\frac{3}{4}$ to $2\frac{1}{2}$ inches; and many of them closely resemble some of the weapon-tool-celts, both in general outline, and in their recurved points: see, in particular, Nos. 66 and 70, the blade of the former, thin and flat, a miniature of Fig. 281, p. 385. No. 65 is decorated round the collar. The last row contains three long articles of the same variety, of which No. 75 has been figured at p. 521. Nos. 74, 76, and 78 are palstave-

chisel tools, with long, narrow, shallow side-grooves, and broad axe-formed blade, of which No. 79, figured on p. 521, is a typical example. No. 77 was found at Keelogue Ford. To this Tray is also attached No. 80, the thin, flat tool, Fig. 400, described on p. 521.

Of the foregoing, No. 41 was—*Presented by W. R. Wilde, Esq.*; Nos. 44 and 62 formed a part of the deposit made by the Royal Dublin Society; Nos. 45, 47, 67, and 77, were—*Presented by the Shannon Commissioners*; Nos. 50, 59, and 68 were procured with the Dawson Collection; Nos. 56 and 72, with that of Major Sirr; and Nos. 57, 74, and 76, with that of Mr. Murray, of Mullingar. For the remaining bronze articles of the tool species, see description of the Cross-case at p. 552.

SPECIES III.—FOOD IMPLEMENTS.

When a people have not only acquired a knowledge of metal, but have become acquainted with the manufacture of articles of that material, they cease to be nomadic, and become agricultural,—tilling, sowing, and reaping,—and do not altogether depend on the produce of the chase, or fishing, for their subsistence; although both pursuits continue to afford food, as well as amusement. The accompanying illustration, drawn the natural size, is from a bronze *Fish-hook*,—in Irish, *duban*,—No. 106, in Rail-case P, the only article of the kind in the Collection.



Fig. 403,
No. 106

The great antiquity of corn in Ireland has been generally acknowledged by archæologists, and references relating to both wheat and mills are to be found in Irish writings so early as the middle of the seventh century.*

SICKLES—*Corran*—of bronze have been frequently obtained in Ireland, and eleven such articles are displayed on Tray

* See Dr. O'Donovan's papers in the Dublin Penny Journal, vol. i. p. 108 and 282; also the author's Essay on the Food of the Irish in the Dublin University Magazine for 1856; likewise an article on a bronze *falx*, or curved pruning-knife, by Mr. C. C. Babington, in the Report of the Cambridge Antiquarian Society, No. ix.; see also the Archæological Journal, vol. ii., p. 186; and vol. vii., p. 302.

ss, on the second shelf of the first compartment of the ground-floor, on the north side of the Museum. In shape they vary from a short angular implement, with a slightly curved blade, $6\frac{3}{4}$ inches long, and a through socket an inch and a-half high, of which Fig. 404, from No. 9, is a good example; to a curved diminutive bronze representation of the modern iron reaping-hook, shown by No. 10, Fig. 406, which is slightly imperfect at top, and measures 7 inches round the convex

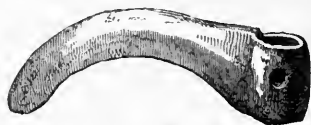


Fig. 404, No. 9.



Fig. 405, No. 6.

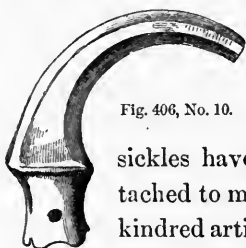


Fig. 406, No. 10.

edge, from the margin of the oval socket to the end of the blade. Of these varieties, there are but two of each in the Collection. The second illustration, Fig. 405, No. 6, is the most beautiful specimen in the Museum, measuring $6\frac{1}{4}$ inches from the point of the blade to the angle which it makes with the oval socket, which latter is 3 inches high. In shape it is the type of the majority of bronze

sickles found in this country, but is more highly decorated than any other yet discovered. It was found in the county of Westmeath. These ancient

sickles have all rivet-holes, and were probably attached to much longer handles than those used with kindred articles in the present day; several are sharp on both edges. Writers have been in the habit of

describing such articles as the sacred sickles, with which the Druids of old cut the mistletoe; but we have no authorities bearing on this subject of sufficient weight to warrant us in assigning any other use than that of corn-sickles to the articles figured and described above. Vallancey has figured an implement like No. 10, and described it as "a small *securis*, called by the Irish a *Searr*, to cut herbs, acorns, mistletoe, &c.; it has a double edge, very sharp."

The Academy's Collection is particularly rich in culinary articles of bronze and brass, including no less than 60 specimens of ancient cauldrons, coolers, pots, skillets, buckets, pans, dishes, ewers, jars, bowls, cups, and other drinking-vessels. They may be arranged into those which were hammered out of single pieces, those formed of several plates riveted together; and the cast-metal vessels, most of which are in high preservation. Nearly all these articles connected with the preparation of food have, for convenience sake, been arranged in the lower glass-case of the Western Gallery, and in the bottom of the first and second compartments on the northern ground-floor. They have been placed according to their several varieties, and are numbered consecutively.

CAULDRONS, &c.,—in Irish *Coiri*,*—are of great antiquity, and from the date of the introduction of the first by the Tuatha De Danaan, as related at page 353, to a comparatively recent period; very frequent mention is made of such articles in our Irish annals and Bardic histories. Vessels of this description were heir-looms in certain families, and formed part of the royal property of our early kings; and some were even made of the precious metals. We read of celebrated cauldrons, with mystical properties, such as Ovid described; or like that which Shakespeare has introduced into the scene of the witches' incantation in *Macbeth*. A magical cauldron is referred to in the description of the destruction of the Palace of Conaire Mor, at Bruighin da Berga, A.C. 25. Another was the cauldron called the "*Caire Ainsicen*," belonging to Eoghan Buihe, one of the Dalriadic or Ibero-Scotic kings, who held his court at Dunstaffnage, in Lorne, "which was used to return its own proper share to each, and no party ever went away from it unsatisfied; for, whatever quantity was put into it, there was never boiled of it, but what was sufficient for the company, according to their grade and rank."† In the ancient account of the ori-

* Coire in the singular glosses Cullendarium.—See Stokes' Irish Glosses, p. 90.

† See Battle of Magh Rath, O'Donovan's translation for Irish Archæological Society, p. 51.

gin of the Boromean Tribute, preserved in the Book of Leinster, we read of bronze cauldrons for brewing the ale of Magh Moain and others, so large that two sheep could be boiled in them together; another, at Tara, it is said could contain twelve hogs, &c. In A. D. 599, the monarch Aed, son of Ainmire, marched into Leinster with an invading army, and encamped near Baltinglass in the county Wicklow, and in the immediate vicinity of the residence of Bran Dubh, the Leinster King. The latter was visited by his relative, St. Moedóc, of Cluainmór, in Carlow, who presented him with a sword, a shield, a cauldron, and a flesh-fork. Conlaedh, the artificer of St. Bridget, made the fork; and Gressach made the cauldron for the son of Niall Laeghaire, by whom it was given to Dubthach of Dublin, the chief poet of Erin, who gave it to his relative, Bishop Fiacc, from whom it came in succession to Dunlang, after whom it was inherited by Aihill, who bequeathed it to Moedóc, the person that gave it to Bran Dubh.* The history of other vessels, of a like nature, has been preserved. Cauldrons and vats are mentioned in the Book of Rights, as part of the tribute paid by one king to another; and in the will of Cathar Mór, now preserved in the Book of Lecan, reference is made to a certain cauldron possessing wonderful mystical properties. When Philip of Worcester, then Lord Deputy in Ireland, pillaged Armagh, in 1184, he carried off the friar's cauldron.

The following illustrations represent typical specimens of ancient culinary vessels found in Ireland. Figure 407 is drawn from No. 12, the largest many-pieced cauldron in the Collection, measuring 19 inches across the mouth, 12 in depth, and 67 in girth. It is composed of a number of pieces of thin bronze, each averaging $3\frac{1}{4}$ inches broad, and decreasing in length near the bottom. These plates bear the marks of hammering; and are joined at the seams with rivets, averaging about half an inch asunder; these rivets have sharp conical

* Extract from the Book of Leinster, supplied by Mr. Curry.

heads externally, and some were evidently ornamental, as they exist in places where there are no joinings; and in the circular bottom portion, they are large and plain. The upper margin of this vessel is $2\frac{1}{4}$ inches broad, and decorated with a



Fig. 407. No. 12.

punched or hammered ornament, like that seen in some of the gold tiaras, and resembling the modern process of corrugating. Its outside edge, next to the solid hoop, has a double line of perforations in it. This vessel has large solid bronze handles, attached by ornamental staples to its rim. Such bronze rings, if found by themselves, might readily be mistaken for armillæ. It was—*Deposited by the Royal Dublin Society.*

Many such vessels have been found in Ireland at different times, and several were exhibited at Belfast, in 1852. It was in a vessel of this description that a part of the great collection of articles of a peculiar kind of bronze was discovered at Dowris.* See Proceedings, vol. iv., p. 360. One of the most perfect cauldrons found in Ireland is that described by Mr. M'Adam, in his learned and ingenious paper on "brazen cauldrons," published in the *Ulster Journal of Archæology*, vol. v., p. 82; the following extract from which applies with equal force to similar vessels in the Academy's Collection:—"The thinness and evenness of the plates, the manner in which these are strengthened by the corrugated rim, and the ingenious mode of fixing the handles so as to

* See Mr. Cooke's description, in the Proceedings, vol. iv., p. 425. See also a drawing of the vessel he described in the Academy's scrap-book, p. 46. See likewise the cauldron, figured in Shirley's "History of the Territory of Farnley." A very fine cauldron, the property of Lord Bandon, is preserved at Castle Bernard. Similar vessels have been found in Wales, and also in Scotland—see *Prehistoric Annals*, p. 274.

equalize the strain when lifting the cauldron full of liquid—are proofs of very considerable mechanical skill. The extreme thinness of the metal, which exceeds anything of the kind used in our modern cooking vessels, may be taken, perhaps, as a proof of the costly nature of the material; but it is also a proof of the skill and judgment of the workman. The labour and dexterity required for hammering out the bronze into such thin and regular sheets must have been very considerable. Their surfaces are almost as even and level as that of modern sheet brass, produced with all the advantage of machinery; and there is no doubt that the metal thus hammered has more tenacity than any rolling process would have given to it.”

The two next engravings, drawn from Nos. 13 and 14, also in the lower case of the Western Gallery, represent articles of the same variety as the foregoing, but somewhat different in size and shape. No. 13 is a conical vessel, formed of eight sheets of thin bronze, joined with the same kind of conical rivets, except in the attachment of the circular bottom-piece. It is 14 inches wide at the mouth, $12\frac{1}{2}$ deep, and 50 in girth. The rim is plain, and strengthened by a strong bronze wire passed within its edge. The massive handle-



Fig. 408, No. 13.



Fig. 409, No. 15.

rings are decorated, and attached to the vessel by ornamental staples, with stout strips passing down, both within and with-

out. It bears the marks of the long-continued action of fire. No. 15, Fig. 409, is a high bucket, or cauldron, formed originally of three sheets of very thin Dowris-coloured bronze, one for the circular bottom, and two for the side and rim, where they are turned round a stout bronze ring—all fastened by large flat-headed rivets— $18\frac{1}{2}$ inches deep, 15 wide in the mouth, and about 56 in girth round the broadest part of the shoulder. It has two slight four-edged handle-rings, passing through very large decorated loops turned inwards, but overlapping the slightly everted edge, so as to strengthen the rim, as well as to give security to the purchase. It originally stood on six feet, each forming an inverted cup. This specimen is now imperfect in several places, and no article in the Collection exhibits the same amount of repair, as shown by the great number of places in which it has been patched; and from the care taken in the mending, it is manifest that it must have been intended for holding fluid. The bottom portion is one of the most ingeniously hammered pieces of bronze in the Collection. This article has been analyzed by Mr. J. W. Mallet, who thus reports upon it:—"From its size, and the thinness of the plates of which it was made, it displays a degree of skill and neatness in the treatment of bronze most remarkable, as existing at so early a period as this vessel probably belongs to. The metal is not very hard, but extremely tough, and is of a beautiful rich bronze-yellow colour ('gold bronze'), scarcely altered by time. Specific gravity, 8.145." Composition—copper, 88.71; tin, 9.46; lead, 1.66; with a trace of iron. See Transactions, vol. xxii., p. 324.

Of these riveted, many-pieced vessels there are six in the Collection, all arranged in the Western Gallery.

The second variety of antique bronze vessels consists of those in which a single plate of metal was hammered into a shallow pan or dish, as shown by the accompanying illustration, drawn from No. 16. It measures $25\frac{1}{2}$ inches from out to out of the open, and is $9\frac{1}{2}$ deep; is in the most perfect state of

preservation, smooth on the outside, but presenting a number of linear indentations radiating from the centre, apparently

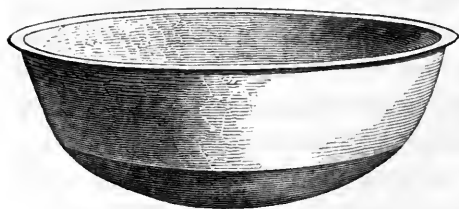


Fig. 410. No. 16.

the tracks of the tool by which the metal was made to assume its present shape; the lip is an inch wide, and rudely decorated with crescentic punched marks. It

was found seven feet deep in a turf bog at Lahern, parish of Killorglin, county of Kerry, in 1849, and—*Presented by Rev. W. De Moleyns.* Nos. 18 and 19, also in fine preservation, resemble the foregoing in all respects, except in size. There are altogether twenty specimens of single-piece bronze vessels, not cast, in the Collection. Among the most remarkable articles of this sub-variety is a beautiful thin, saucer-shaped vessel, No. 28, which has been cleaned to show the rich reddish-golden colour of the bronze; it was hammered out of a single piece of metal; decorated upon the internal surface with a number of curved tooled indentations; it is $7\frac{3}{4}$ inches wide,



Fig. 411. No. 28.



Fig. 412. No. 30.

and has two small holes in the rim, as if for suspending it to a wire. It was found in the crannoge of Cloonfinlough, county Roscommon, described at p: 226.—*Presented by the Board of Works.* Figure 412 is drawn from a very gracefully shaped vessel, exquisitely wrought out of a single piece of sheet brass, as thin as ordinary writing paper, with a globular bottom, and having the handle strengthened by a flat T-shaped projection, extending both above and below its edge; a double

corrugated indentation passes beneath the lip. It is $7\frac{1}{2}$ inches across the mouth; and the handle, which is 6 inches long, has a hammered-up ornament within the circular expansion at its end. This vessel was found in the River Shannon, at Bishop's Island, between the counties of Roscommon and Westmeath.—*Presented by the Shannon Commissioners.* Fig. 413 is a very beautiful cast bronze cup, or drinking vessel, of bright-yellow metal, resembling in shape the wooden article figured at page 211, and having a decorated handle, terminating in an animal's head at top. This is one of the most classic bronze articles in the Collection.

It is $5\frac{3}{4}$ inches in the long diameter of the oval mouth, and $2\frac{7}{8}$ deep; and was found in the river, between Lough Marraw and Lough Oscar, near Keshcarrigan, county Leitrim.

—*Presented by the Board of Works.*



Fig. 413. No 37.

Cast-metal vessels, of both bronze and brass, have been found in great numbers throughout the country, and are frequently presented for sale. They appear to have been in common use before the general introduction of similar articles of cast-iron; and, in addition to the foregoing, chiefly consist of Pots—of which there are seventeen specimens in the Collection, numbered from 38 to 54, and arranged partly in the Western Gallery, and partly in the lower space on the northern side of the Museum, except the two largest, which stand at the foot of the North-western Gallery stairs. In shape these vessels differ from modern iron pots, in their greater height and narrowness, and in some examples by the length of the upper member; a few, however, are quite globular. In size they vary from a capacity for holding one quart to nine gallons of fluid. That here figured, although not by any means one of the oldest, is remarkable for its great size, peculiar shape, external ornamentation, and having a spout inferiorly, showing its probable use in brewing or dis-

tillation.* This vessel of compact sonorous brass is one of the largest and most perfect ever found in Ireland; it rests on three decorated feet, stands 26 inches high, is 68½ in girth round the widest portion, and 14 across the mouth. A large projection, attached to the bottom, shows where the metal was poured into the mould. The spout is 4 inches long, and the legs 9 high. The letters and date, 1640, are in the same relief as the other decorations on the external surface. It is said to have been



Fig. 414. No. 47.

found in the neighbourhood of Macroom, county Cork.

The three small vessels figured below, from Nos. 60, 58, and 55, in the bottom space of the first compartment in the northern side of the ground-floor, and of rather classical shape,



Fig. 415, No. 60.



Fig 416, No. 58.



Fig. 417, No. 55.

are good specimens of small metal articles for culinary and domestic purposes, used in Ireland in former times. Figure 415 is drawn from a copper can or ewer, 8 inches high, which was

* See notices of brewing in *Ulster Journal of Archaeology*, vol. vi., p. 286. See also *Annals of the Four Masters*, under A. D. 1406.

—*Presented by the Shannon Commissioners.* Figure 416 is drawn from No. 58, a small bronze globular pot or skillet, in a state of great perfection, with a horizontal handle, 6 inches in length, and bent at end; it is $6\frac{3}{4}$ inches high, and $16\frac{1}{2}$ in circumference. The third illustration is drawn from No. 55, one of three bronze ewers, with decorated spouts, placed in the same locality as the foregoing; it is 8 inches high, and has been mended by rivetted portions attached to the bottom, but has no remains of solder. It was found in a bog at Drumnaspar, parish of Upper Badoney, county Tyrone. For the remainder of the culinary vessels, see details of these articles from pages 539 to 546, and also p. 553.*

ARTICLES CONNECTED WITH DISTILLATION.—The frequent and very early notice of cups, drinking-horns, and other vessels of a like character, show that the Irish were acquainted with other beverages than milk and water. Mead, or *Metheglin*, chiefly derived from honey, was used in very remote times; and popular tradition asserts that *Heather-beer*, said to have been introduced by the Northmen, was a common drink in the middle ages. Some of the decorated drinking vessels, already alluded to at page 265, were, it is said, employed for “quaffing mead.” In Irish writings of the fifteenth and sixteenth centuries, constant reference is made to spirituous liquors, such as *aqua vitæ* [*uisge beathadth*]; and we still possess some remnants of the apparatus for distillation, the knowledge of which process has never been lost, although we have no Irish names for either still or still-worm.† On

* An article like Fig. 416 has been figured by Dr. Petrie in the Dublin Penny Journal, vol. i., p. 84, in illustration of his valuable papers on the Fine Arts which appeared in that publication. A vessel similar to Fig. 417 has been figured by Vallancey, from a specimen in the Museum of Trinity College. See Collectanea, vol. iv., page 42.

† The earliest notice of distillation in Ireland appears to be that discovered in the Red Book of Ossory, a MS. supposed to be as old as the fourteenth century, in which this passage occurs—“Simple *aqua vitæ* is to be made in the following manner:—Take choice one-year old wine, and rather of a red than of a thick sort, strong, and

Tray **TT** are six fragments of bronze or brass alembics, or still-heads and worms, numbered in continuation of the food implements already described. Three of these are still-worms, the most perfect of which, figured below, is complete, and consists of eight convolutions, of soldered brass piping, joined at acute angles, each pipe about half an inch in diameter. They are fastened down to two strong flat bars by means of bent straps and square-headed rivets, the latter occupying the spaces between the pipes. The length of each convolution is

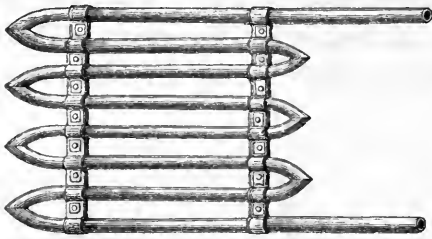


Fig. 418, No. 67.

10 inches, and the total breadth of the article, 7. One extremity of this ends in a kettle-spout shape, evidently for the delivery of the condensed liquor; the other end was probably attached to the still-head. Fig. 419 is drawn from No. 70, a still-head about 4 inches high, and 11



Fig. 419, No. 70.

long in the horizontal tube, the small end of which was inserted into one of the extremities of the worm. About midway down the rather conical head is attached a broad square flange, $3\frac{1}{8}$ inches wide, which acted as a stop, and prevented the head passing down too far into the still. The upper

not sweet, and place it in a pot, closing the mouth well with a *clepsydra* made of wood, and having a linen cloth rolled round it; out of which pot there is to issue a *cavalis*, leading to another vessel having a worm [*serpente*.] This latter vessel is to be kept filled with cold water, frequently renewed when it grows warm, and the water foams through the *cavalis*. The pot with the wire having been placed previously on the fire, distil it with a slow fire until you have from it one-half of the quantity of wine that you put in." I am indebted to the Rev. James Graves for the foregoing extract. It has also been published in the *Ulster Journal of Archæology*, vol. vi., p. 285.

angle, between the head and horizontal tube, has been strengthened by a stay of metal, which is perforated both for lightness and ornament. The whole apparatus is exceedingly small and delicate. We have no precise knowledge either as to the shape of the still, to which these objects were ancillary; or of the method employed for distillation.* Both the articles figured above were found at the depth of four feet in that part of the Bog of Allen near Ballykillen Hill, King's County, and were—*Presented by William Watson, Esq.*

SPoons (*Sponóga*) and LADLES (*Liacha*)—amounting to thirty-three specimens—are arranged on Tray **UU**, and illustrated by the four following types. With few exceptions,



Fig. 420, No. 73.



Fig. 421, No. 78.



Fig. 422, No. 93.

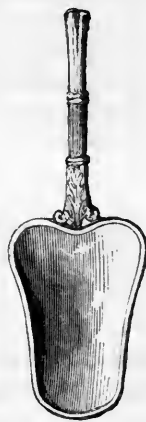


Fig. 423, No. 74.

however, none of these are of great antiquity compared with other bronze articles in the Collection. Figure 420 is drawn from No. 73, a rude massive copper spoon, thick and undecorated in the handle, the only one of this material in the Collection; $9\frac{1}{4}$ inches long, and 2 broad in the bowl. Figure

* The two articles represented above have been figured by Mr. Clibborn in the *Ulster Journal of Archæology*, vol. vii., p. 38. See also Moorewood's *Treatise on Distillation*; and the "History of Inebriating Liquors." The most perfect specimen of ancient still-head and worm is that in the Museum of Trinity College; the portion of tube ending in the head measures 4 feet.

421 represents an exceedingly thin ladle of bright-yellow brass, No. 78, which measures $13\frac{1}{4}$ inches in length, and $4\frac{1}{2}$ across the bowl; has an everted lip, which is prolonged into a T-like flange that runs round the handle, similar to that in Fig. 412, and was evidently intended for giving strength to that portion. From the paper-like thinness of the metal, it could scarcely have been cast in a mould, although it does not bear marks of hammering. Of this sub-variety there are three specimens in the Collection, see p. 545. It was found in the bed of the Shannon, at Grose's Island, near Carrick, county Leitrim, in 1847, and was—*Presented by the Shannon Commissioners*. No. 93, Fig. 422, is one of those middle-age spoons with long, slender, round handles, terminating in decorated knobs or figures, and known as "Apostle Spoons," of which there are fourteen perfect and six imperfect examples on Tray **UU**; it is $5\frac{3}{4}$ inches in length. The fourth figure is drawn from No. 74, a comparatively modern article, $6\frac{1}{2}$ inches in length, highly decorated on both sides, and socketed for the insertion of a wooden or bone handle. For details of spoons, see page 545.

Bronze or brass knives have not yet been received into this Collection; and we have not heard of any being discovered in Ireland. The only other food implement of antiquity, to which reference has been made in Irish history, is the celebrated spit, called the *Bir Deckin*, referred to in Dr. Petrie's Essay on the "History and Antiquities of Tara Hill," see Transactions, vol. xviii., p. 212. There are three nut-crackers of brass in the Cross-case, described at page 553.

The following are the details of the Culinary articles:—

BRONZE, V.—GROUND-FLOOR, NORTH SIDE; FIRST COMPARTMENT.

FIRST COMPARTMENT.—SHELF II., Tray **SS**, contains eleven sickles; numbered from 1 to 11, and varying in length of blade from $4\frac{1}{2}$ to 6 inches. No. 1, angle-bladed; imperfect at point; socket $2\frac{1}{2}$ inches long, and not thorough; rivet-holes as in all the other speci-

mens; a grooved cast ornament on side of blade; found in the county Cavan. No. 2, perfect; slender; of bright gold-coloured metal; blade $4\frac{3}{8}$ from its point to the angle formed with upper part of socket; has a midrib, and side-bevels, like some of the curved swords; socket oval, and $1\frac{7}{8}$ long; both edges of blade are remarkably sharp. No. 3, imperfect at point of ornamented blade; socket 3 inches high, with raised fillet round the margin. No. 4, perfect; of same description as No. 2, but blade and socket form a more acute angle. The blade is 5 inches in length, and traversed by a raised ornament, passing round the oval socket, which is $2\frac{3}{8}$ high, and has a projecting margin inferiorly. No. 5, very plain, and more curved than any of the foregoing; $4\frac{1}{2}$ in blade; oval socket $2\frac{1}{8}$ high. No. 6 is figured and described at p. 527. No. 7, rude, plain, imperfect in socket, which turns round into hooked blade, which latter is $4\frac{5}{8}$ long; found in the county Tipperary. No. 8, fractured; socket $1\frac{1}{2}$ in length; thorough length from point to posterior edge of imperfect socket, $4\frac{3}{8}$; large rivet-holes; resembles No. 9. No. 9, ditto, figured and described at p. 527. No. 10, figured and described at p. 527. No. 11, reaping-hook-shaped, like No. 10, but somewhat different in curve of perfect blade; much corroded; measures $7\frac{3}{4}$ on convex edge; socket imperfect.

The Culinary Vessels referred to at p. 528 here follow in succession, and are numbered consecutively with the sickles. The collection of these articles extends from those in the first bottom glass-case in the Western Gallery, Bronze II. and is continued under Bronze III. and IV. to the foot of the North-Western Staircase, and throughout the bottom shelf of the first compartment on the northern side of the ground-floor of the Museum to the adjoining Cross-Case.

BRONZE, II., III., AND IV.—WESTERN GALLERY, LOWER CASE.

LOWER CASE.—Bronze cauldrons, and other many-pieced riveted vessels.—No. 12, the fine bronze cauldron figured and described at p. 530. No. 13, a smaller article of the same variety, more conical; figured and described at p. 531. No. 14, a larger and ruder specimen of the same form, with flat unornamented rivets joining the four large plates; heart-shaped; decorated with grooved marks under the lip; mended in several places; 19 inches wide in open; about

16 deep, and 32 in girth; massive ring-handles, each $4\frac{1}{2}$ inches in diameter. The spear No. 6 was found in this vessel. No. 15, the large conical vessel, like a plate-bucket, figured and described at p. 531. No. 16, a single-piece dish or pan, figured and described at p. 533. No. 17, another specimen of the same variety, but smaller and shallower; radiating marks on bottom; lip plain, and patched in two places; $19\frac{1}{2}$ from out to out, and 6 deep; found in a deep bog at Sallow-Glin, near Newtown-Sandes, Barony of Iraghticonnor, county of Kerry, and—*Presented by William Sandes, Esq.* (see Proceedings, vol. vi., p. 48). No. 18, very perfect; about same size as former; tool-markings very distinct; decorated lip; $19\frac{1}{4}$ in diameter by 6 deep; found in the bank of the river between Bray and Enniskerry. No. 19, ditto, but flatter in the bottom, and sides more upright; mended in several places round edge; 22 by $16\frac{1}{2}$. No. 20, a small specimen, much worn in bottom; $17\frac{1}{2}$ by $5\frac{1}{2}$ deep. Found at Cornacarrow, near Jamestown, county of Leitrim.—*Presented by Shannon Commissioners.* No. 21, the bottom portion of a large vessel of very thin sheet brass, having on the outside the marks of punching and hammering, like those on No. 16. No. 22, the upper portion of a large cauldron of thin sheetbrass, hammered out of a single piece, and not bearing any ostensible marks of joining; no bottom; looks like top of such a vessel as No. 14; four rivet-holes on each side of upper margin, mark where the staples which held the handles were affixed; 17 in diameter; covered with a whitish incrustation, from lying in water for a great length of time; found at Cloonfinlough, county of Roscommon (see p. 226).—*Presented by Board of Works* (see Proceedings, vol. v., App.). No. 23, a circular brazen dish, decorated on the lip like No. 17; differing in material from any of the foregoing; complete, but much battered; $16\frac{1}{2}$ across mouth; found in a morass, near the spot crossed by the Williamite army at Aughrim, county of Galway, in 1691; believed by the finder to have been part of a kettle-drum.—*Presented by W. H. Hartigan, Esq.* (see Proc., vol. vii., p. 109.) No. 24, a circular brass vessel, hammered out of a single piece. The sharp edge of the upper margin and the rivet-holes around it show that it either had an attached rim, or formed the lower portion of a larger vessel; rudely patched on one side; 12 by 6. No. 25, a similar article, but somewhat smaller, and evidently much used in former times; made of a

single sheet of thin brass, which has been cut in several places, probably with the intention of its being used for other purpose; 9 wide. No. 26, a small dish, formed of one sheet of thin bright brass; everted lip; in imperfect preservation, covered externally with an incrustation from fire; $10\frac{1}{2}$ wide in mouth, and about $3\frac{1}{4}$ deep; found at old castle of Kiltubrid, King's County, in peaty soil, five feet under surface.—*Presented by Board of Works* (Proceedings, vol. v., App. p. 57). No. 27, a small circular cup-like vessel; formed of a piece of thin sheet brass; surrounded at top by a number of rivet-holes, in some of which the studs still remain. No. 28, the beautiful, cleaned bronze bowl, figured and described at p. 533. No. 29, a circular vessel, with handle, of the saucepan-shape; hammered out of a single piece of brass; round in bottom; everted lip, with double corrugated indentation on side, below that part; $6\frac{1}{2}$ across mouth; handle 6 inches long; found in River Blackwater, a mile below Charlemont, between the counties of Armagh and Tyrone.—*Presented by Board of Works*. No. 30, another article of a like description, figured and described at p. 533.—*Presented by Shannon Commissioners*. No. 31, a stout circular brass vessel, quite perfect, hammered out of a single piece; sides contract to everted lip; $10\frac{1}{4}$ wide, and $4\frac{1}{2}$ deep. No. 32, a large greenish-yellow brass pan, or basin, formed of two pieces, the bottom, and the rim with its lip, joined by mutual interlapping, like that employed in the manufacture of tin-ware; joining of side-piece effected by stout rivets; slight crescentic hammered ornament round broad horizontal edge; patched in several places round the bottom; $14\frac{1}{2}$ from out to out, and about 4 deep. No. 33, a shallow single-piece bowl of stout bronze; $9\frac{3}{4}$ in diameter. No. 34, another vessel of the same description, formed of thin sheet brass; very imperfect; originally of two pieces, the bottom, and the side and lip; 4 high, $5\frac{1}{2}$ wide; patched with very rude rivets; found, filled with coins, under a mound at Sheemore Hill, barony and county of Leitrim; given to Dean Dawson (with whose Collection it was procured) by—C. D. Latouche, Esq. This article, and No. 32, properly belong to the many-piece rivetted bronze articles, but are placed here for convenience. No. 35, a bronze pan, with broad lip and raised centre, probably cast; 14 inches in diameter, and 3 deep. Its history is unknown. No. 36, another vessel of the same description, but ham-

mered out of thin metal; margin of broad lip and bowl indented; 16 in. diameter by $2\frac{1}{2}$ deep.

The true cast bronze vessels commence here with No. 37, the beautiful bowl, of classic shape, figured and described at p. 534. The following sixteen articles are bronze pots, of various sizes, each standing on three legs:—No. 38, a globular cast metal pot, wanting one leg; $11\frac{1}{4}$ inches high, and 9 wide in the mouth.—*Presented by Arthur A. Nugent, Esq.* No. 39, ditto, with wide handles, defective in lip; $12\frac{1}{2}$ high, $9\frac{1}{2}$ across mouth. No. 40, like a modern pot, with small handles attached below rim; perfect, with the exception of one foot; $11\frac{1}{2}$ high, and the same wide. Found with No. 43 in Lough Ramor, near Virginia, county of Cavan. Both—*Presented by Lord Farnham.* No. 41, a large metal pot; wide at bottom; perfect; sides turning gradually into rim; feet decorated; three raised lines spread from each foot over bottom; $12\frac{3}{4}$ high, and 13 wide in mouth. No. 42, another, almost identical in shape, ornament, and size. Both have ridges round their top margins. Nos. 43, 44, and 45, all of the same variety, are placed in the bottom of the third glass-case under the Spears; BRONZE, IV. They are wide at the bottom, narrowing towards the top, with high feet. No. 43, perfect, has three transverse raised lines on side; trident-shaped ornaments spring from the base of each leg; angular handles attached between junction of rim and conical pot; $15\frac{3}{4}$ high, and 12 across mouth. Found and presented along with No. 40. No. 44, a very perfect specimen, in fine preservation, similar to foregoing in almost every particular, but somewhat higher in legs; upper members of handles slope downwards; $16\frac{1}{4}$ high, 12 in mouth. This vessel was recently sold to a brass-founder in Dublin as old metal. No. 45, a rare and peculiar specimen, which originally stood on three very high legs, one only of which now remains; very flat at bottom; three broad, raised bands encircle the side; handles differ from all other specimens, except No. 51, in forming graceful loops instead of acute angles; 18 high, $2\frac{1}{2}$ wide; defective in lip.

Nos. 46 and 47 stand at the bottom of the north-western staircase. The former a very fine boiler, in the highest state of preservation, with broad bottom narrowing towards the top, like No. 47; is $64\frac{1}{2}$ inches in girth, 21 high, and $13\frac{3}{4}$ across the mouth; three raised lines encircle the side of the vessel externally, and at top are

the letters AD. It was originally intended to have a spout, and a metal plug marks the site of that aperture; the legs are decorated with three lines, which spread over the vessel to the central bar. In the Sirr Catalogue it is described as having been obtained from a bog at Lowtown, county of Westmeath. No. 47, the large brewing boiler figured and described at p. 535.

BRONZE, V.—GROUND-FLOOR, NORTHERN SIDE, FIRST COMPARTMENT.

LOWER SHELF.—No. 48, a small bronze pot, imperfect originally; mended in the bottom by rivets; $9\frac{1}{2}$ high, 10 across mouth (Dawson). No. 49, ditto, also imperfect; $8\frac{3}{4}$ high, and 10 wide. No. 50, ditto, but more perfect, and of very thin metal; $9\frac{1}{2}$ high, 10 across mouth.—*Presented by R. W. Reynell, Esq.* No. 51, a very perfect bronze pot, or skillet, with three elevated lines on side, and also decorated on the lip; handles round at angles; $8\frac{1}{2}$ high, $9\frac{3}{4}$ wide across mouth. The three next specimens are globular. No. 52 stands on three legs, imperfect at top, mended in several places; 31 inches in girth (Dawson). No. 53, globular; defective on side of lip; $9\frac{1}{4}$ high, 30 in girth (Dawson). No. 54, ditto, also imperfect in lip; it is $27\frac{1}{2}$ in girth. The cast metal pots end here, and the remaining articles are of a different variety of vessel. No. 55, a cast metal ewer, figured and described at p. 535. No. 56, ditto, imperfect at one side, decorated spout; $7\frac{1}{2}$ high; found at Lecale, and—*Presented by Lord de Roose.* No. 57, ditto, of a larger size, perfect, one leg apparently attached subsequent to casting; spout decorated in the form of an animal's head; $10\frac{1}{2}$ high; found at Swords. No. 58, a small globular bronze skillet, figured and described at p. 535. No. 59, a copper jar, formed of three pieces,—the body of the vessel, the bottom, and the handle, the latter fastened by rivets; the seam in the back brazed, and the bottom inserted by interlapping, like modern tin-work; it is 13 inches high, and 27 in girth; it was probably originally intended for a powder vessel, and, as such, was used by the insurgents at the battle of Vinegar Hill; it is much battered on one side, said to have been caused by a shot. No. 60, a copper jug, figured and described at p. 535. No. 61, a brass mortar, decorated on the outside, solid handles; 6 high, and $7\frac{1}{2}$ wide at mouth; marked with raised cast letters A K. No. 62, bottom fragment of a cast bronze vessel; found in River Deel, county of Meath.

—*Presented by Board of Works.* No. 63, a highly ornamented piece of bronze, fractured in centre; $10\frac{1}{2}$ inches long; evidently the handle of a skillet. No. 64, a bronze curved moveable small pot-handle, twisted in the torque fashion; a very rare culinary article. Nos. 65 and 66 are two solid, rather conical pieces of finely cast bronze; one grooved on the surface, both perforated at chamfered top; apparently moveable pot-legs. For remainder see Cross-case at page 553.

SHELF II., *Tray TT*, contains six articles employed in distillation, and numbered from 67 to 72, in continuation of the culinary vessels already described. No. 67, an ancient still-worm, complete; figured and described at p. 537. No. 68, the fragments of another still-worm, somewhat larger in the tubing, and consisting of two and a half turns; fastened to the back-stay by means of wedge-like pieces of metal, which originally held in its place a thin overlapping strap; the back-stay is perfect, and measures $9\frac{7}{8}$; found in Inchmore Island, Lough Ree, Shannon. No. 69, fragments of a still-worm, much broken, and consisting of portions of five tubes, and the two back-stays arranged on the same principle as the two foregoing articles; the tubing is very thin, and joined at the angles by a more perfect and elegant form of brazing; it was found in 1828 beneath the foundation of an old castle of the O'Dowds, at Carrownrush, parish of Easky, county of Sligo. No. 70, the still-head figured and described at p. 537. No. 71, a specimen of bronze tubing of the same diameter as that in No. 67; 13 inches long; fractured; it appears more likely to have formed part of a worm than a fragment of a still-head tube. No. 72, the tube of a still-head precisely resembling that of 67; the conical end of the tube and flange where it was inserted are the same in both specimens; $12\frac{1}{2}$ inches long.

Tray UU contains thirty-three spoons and ladles, numbered from 73 to 105. No. 73, a rude copper spoon, figured and described at p. 538. No. 74, an ornamented spoon, figured and described at p. 538. No. 75, a tinned brass spoon; $6\frac{3}{8}$ inches long; having a curious trade-mark on the inner side of the bowl, consisting of three spoons, enclosed in a circle, evidently struck after cast-in; described as 52 in Proceedings, vol. vii., p. 161.—*Presented by Er. Ringland.* No. 76, a large single-piece ladle, imperfect in bowl; $12\frac{1}{4}$ long, 4 wide; found in townland of Ardress, near Kesh, county

of Fermanagh.—*Presented by Board of Works.* No. 77, a small brass ladle, with cup-like bowl riveted to handle. No. 78, a ladle, figured at p. 538. With few exceptions, all the remaining spoons are very thin and shallow in the bowl, and have slender handles. No. 79, imperfect in both bowl and handle. No. 80, of remarkably thin brass, perfect in bowl, but wanting greater portion of handle. No. 81, ditto. No. 82, handle of spoon, with circular stud at top. No. 83, ditto, with portion of bowl attached.—*Presented by Very Rev. Dean Butler.* No. 84, fragment of a circular spoon-handle, with decorated top. The two next rows contain fourteen complete spoons of the fashion called Apostle Spoons, with wide shallow bowls, slender stems, and decorated tops; in length they vary from $5\frac{1}{2}$ to 7 inches, and, with the exception of No. 90, which has a figure at top of stem, all the handles terminate in circular seal-like projections. No. 93 has been figured and described at p. 538. The last row consists of articles of a ruder description, and, with one exception, have flat handles. No. 99 was found at Ballyhennan, barony of Fassadinan, county of Kilkenny. No. 102 was—*Presented by Lord Farnham.* In No. 103, the shank is grooved, like that of a marrow spoon. No. 105, the end of the handle of which is trident-shaped, was, with No. 98—*Presented by the Shannon Commissioners.* Nos. 87, 101, and 104, were procured with the Dawson Collection; and No. 91 was deposited by the Royal Dublin Society.

For remaining Catalogue of food implements, see description of Cross-Case at p. 553.

SPECIES IV.—ARTICLES OF HOUSEHOLD ECONOMY AND DOMESTIC
USE, ETC.

BRONZE articles employed in household economy, or for domestic purposes—not enumerated under the head of utensils used in the procurement or preparation of food, or for the decoration of the person—are here classed together, and consist of needles, or bodkins, tobacco-pipes and boxes, candlesticks, locks, keys, inkstands, &c.; and also razors, tweezers, and such like objects connected with the toilet.

NEEDLES—in Irish, *Miadh* and *Snaithe*, a needle)—of

bronze, may be considered of an age prior to the use of steel for such purposes. Figure 424 represents, the size of the originals, two bronze needles,

Nos. 77 and 78 in

Rail-case P. There

are altogether eighteen bronze needles in the Collection, ranging from $1\frac{5}{8}$ to $4\frac{1}{2}$ inches in length; besides several on Find Trays.



Fig. 424. Nos. 77 and 78.

BRASS TOBACCO PIPES have been occasionally found in

Ireland: that here figured the natural size,

from No. 4, on Tray **vv**, is curiously formed

out of two symmetrical portions, either cast or struck in a mould, and then brazed to-

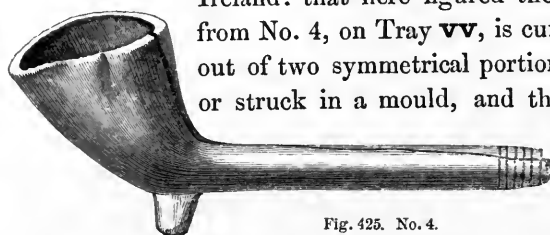


Fig. 425. No. 4.

gether above and below.

Tobacco-

boxes, either cast, or manufactured out of thin sheet brass, with removeable or hinged lids, generally oblong in form, averaging about 6 inches in length, and embossed or engraved with various devices on the exterior, have been found in considerable numbers in Ireland, and presented at different times to the Academy. Most of them are Flemish. They appear to have been first introduced about the end of the seventeenth century. There are thirteen of these arranged on Tray **vv**.

Bronze or brass candlesticks of sufficient antiquity to be placed in a Museum are generally ecclesiastical, and to be considered under the head of articles of that class. In the first Cross-case on the ground-floor may be seen three specimens of this variety, and some curious antique snuffers, &c.

LOCKS and KEYS [*Glas*, a lock, *Eochair*, a key].—We have no ancient stock, door, or box locks of antiquity in the Museum; but there is a large and varied collection of bronze keys, several of which are curiously decorated in the rings. The only antique

brass lock in the Collection is that here figured, the actual size, from No. 111 in Rail-case P.

At first sight, this unique article would appear to be the ring of a brooch, which, in form of ornamentation, as well as shape and size, it greatly resembles. It certainly belongs to the period of the ring brooches; but whether used as a padlock solely, or attached to a pin, is now matter of speculation.



Fig. 426. No. 111.

All the bronze or brass keys, amounting to forty specimens, varying in length from $1\frac{3}{8}$ to $4\frac{1}{4}$ inches, are arranged on Tray **ww**, in the top shelf of the first compartment on the northern ground-floor; for the details of which see page 551. They may be divided into the latch or lifting key, like that still in common use in the Orient, and the ordinary warded key, of both which varieties the five following illustrations are typical examples. Figure 427 is drawn from No.



Fig. 427. No. 30.



Fig. 428. No. 59.

30, a flat piece of brass; $1\frac{1}{2}$ inch long. Figure 428, from No. 59—*Deposited by the Royal Dublin Society*—is in high preservation, and measures $1\frac{5}{8}$ inches in its greatest length. The three following cuts illustrate different varieties of the bronze warded-key, with decorated ring. Figure 429 is drawn one-half the natural size from No. 45, a padlock key, curiously decorated at top, and having broad wards cleft along the front edge. It appears to be that found in the Abbey of Thurles, county Tipperary, in 1830, and figured in the *Dublin Penny Journal*, vol. iv., p. 237. No. 54 has a diamond-shaped ring, and is $3\frac{1}{2}$ inches long. No. 46, a very perfect and highly decorated door-key, $2\frac{7}{8}$ inches long, with a

pipe in the shaft;—was found at Tory Island, on the coast of Donegal, and—*Presented by Lord George Hill.* For the details of the other keys in the Collection, see page 551.

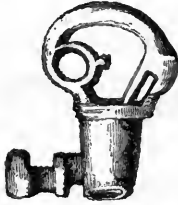


Fig. 429. No. 45.



Fig. 430. No. 54.



Fig. 431. No. 46.

TOILET ARTICLES.—Compared with Scandinavian Collections, there are but few toilet articles of bronze in the Museum of the Royal Irish Academy. In the former we find a large assemblage of tweezers, some of them decorated with gold; and knife-like articles in great variety, that appear to have been used as razors, thus showing that the Northmen either shaved or plucked the beard, probably both, whereas the ancient Irish allowed the hair to grow on the face, as intended by nature. Of the three annexed cuts, the first, drawn from No. 104, in Rail-case P, represents a tweezers, 3 inches long, and decorated all over the surface; one of the few articles of this description found in Ireland. It was procured from the Ballinderry crannoge. No. 101, Fig. 433, in Rail-case P, represents the largest specimen of three bronze articles, which, it is conjectured, were used as razors,—in Irish, *Ailtin*. It is all of one piece, $3\frac{1}{2}$ inches long, $1\frac{3}{4}$ wide; has a stout flat stem, decorated on the surface, with



Fig. 432. No. 104.

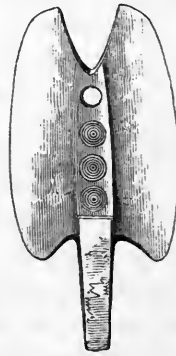


Fig. 433. No. 101.



Fig. 434. No. 96.

an aperture near the top; and has exceedingly hard, sharp side-edges; the two other specimens are smaller. There is a large specimen in Trinity College Museum. The third illustration is drawn from No. 96, one of three similar articles, with decorated stems and fork-like terminations, the most rational use of which would appear to be connected with the toilet.

The following list comprises all the articles of Household Economy, except those in Rail-case P, and in the First Cross-case on the northern side of the ground-floor:—

BRONZE, V.—GROUND FLOOR; FIRST COMPARTMENT.

SHELF I., *Tray* **VV**, contains twenty articles, chiefly connected with the use of tobacco, and consisting of pipe-stoppers, bronze pipes, a decorated pipe-case, and fourteen boxes, principally oblong, and used either for tobacco or snuff; numbered from 1 to 20. No. 1, a bronze pipe-stopper, in the shape of a horse's leg and foot, very well cast. No. 2, a pipe-stopper, resembling the hind-legs of a frog; 3 inches long. No. 3, a pipe-stopper, in the shape of a human leg and foot. No. 4, a bronze pipe; figured and described at p. 547. No. 5, a decorated pipe-case of wood, inlaid with brass; extreme length $8\frac{1}{2}$. No. 6, the bowl of a brass pipe; belonging to No. 5. The remaining articles on this tray are boxes. No. 7, a tobacco box; $6\frac{1}{4}$ inches long, 2 wide, and $1\frac{1}{8}$ high; hinged; top ornamented with the figure of Frederick the Great, beneath which is the inscription, "Fredericus Magnus Borussorum Rex," and the date 1767. No. 8, ditto, of about the same size, copper sides, brass lid and bottom, with several devices of animals, and a Dutch inscription upon it. No. 9, ditto, and of similar materials; the engraved devices on it represent drinking and hunting scenes. No. 10, ditto, ditto, with scriptural devices raised upon the cover; described as a Walloon tobacco-box, with a Flemish inscription; said to have been "found on the person of a soldier slain in the battle of the Boyne."—*Presented by the Rev. W. Thompson* (see Proceedings, vol. vi., p. 10). No. 11, an oval brass tobacco-box; $4\frac{3}{4}$ long; with loops at end, as if for passing a strap through; graven devices; date, 1734. No. 12, a circular puzzle-lid tobacco-box; $3\frac{1}{2}$ in diameter.—*Presented by Major*

General R. K. Birch, R. A. No. 13, a flat oval tobacco-box; $4\frac{1}{8}$ long; engraved device, with Flemish inscription. No. 14, an oblong, four-cornered box, top and bottom copper, sides inlaid with brass; covered with floral devices. No. 15, a snuff-box, brass, with mother-of-pearl inlaid corners, each having a raised figure making up the date 1690, and bearing the following inscription on the side:—"This box was made out of one of the brass cannon used at the siege of Londonderry, and was presented by Mr. Thomas Locke to Henry Maxwell, M.P., December, 1825." On top is a circular piece of mother-of-pearl, with the name "Farnham, 1847," written thereon, and covered with a watch-glass; on the bottom are warlike devices, and the Derry motto, "No Surrender." No. 16, a flat oblong brass box, four corners; $5\frac{1}{2}$ by $2\frac{2}{3}$; on the lid is a view of Haarlem. No. 17, an oval tobacco-box, well made, and in fine preservation, highly engraved; $6\frac{7}{8}$ by $1\frac{7}{8}$; found at Vinegar Hill in 1798. Nos. 15 and 17 were—*Presented by Lord Farnham* (see Proc., vol. iii., p. 529). No. 18, another, of the same shape, but somewhat smaller, and bearing at top, a calculating table, and the date "1497;" found at Bantry Bay, and—*Presented by F. M. Jennings, Esq.* No. 19, an oblong brass box, with embossed cover, having a Dutch inscription; 6 by $1\frac{3}{4}$. No. 20, another Dutch box, very perfect; $9\frac{1}{2}$ inches long, 2 wide; covered with well-graven devices.

Tray WW, contains forty bronze keys, numbered from No. 21 to 60, varying in length from $1\frac{3}{8}$ to $4\frac{1}{4}$ inches. No. 21, the smallest in the collection, rude, flat, no pipe, but instead thereof, a small projection. Nos. 22, 25, 31, 33, and 37, are of the same description. No. 30, is a latch-key, flat, figured and described at p. 548. No. 31, was found at Trim, and—*Presented by Dean Butler*. No. 34, another latch-key, of a different shape, with a ring. Several of those on the two first rows are very rude, and apparently of a great age. In the third row are several remarkable specimens. No. 39 is like the key of a beer-cock. No. 40 resembles No. 59, figured at p. 548. In No. 42, the ward portion is at a right angle with the plane of the ring. No. 44, a bad specimen of the same variety as No. 45, which is figured and described at p. 549. The fourth row contains seven specimens of a larger size than the foregoing, probably door-keys. No. 46, is figured and described at p. 549. No. 51 is decorated on the outer side of the ring. No. 52 is a unique specimen, with a broad ring,

having a square knob attached to its upper edge. No. 54 is figured and described at p. 549. No. 55 is decorated in the ring. No. 56, is a plain, rude specimen, unwarded. No. 57, a very perfect and highly decorated house-key; $4\frac{1}{8}$ long; found in an old castle near Newtownbarry, county of Wexford, and, together with No. 33, was—*Presented by Lord Farnham*. No. 58, a rude latch-key. No. 59, a lifting key, figured at p. 548. No. 60, a rude, bulky latch-key.

FIRST CROSS-CASE, GROUND FLOOR, NORTH SIDE—Contains some articles connected with the species Tools, Food Implements, and Household Economy, which could not be attached to trays. TOP SHELF.—Nos. 81, 82, and 83, are the three bronze adzes described at page 523, and of which the last has been illustrated by Fig. 402. No. 84, a brass button-mould, in three pieces; $7\frac{1}{2}$ inches long, and $\frac{7}{8}$ wide (Dawson). No. 85, a small brass mould for casting coats of arms, referred to at p. 524, and described in Proceedings, vol. vii., p. 130. All these relate to tools. On the SECOND SHELF are several articles connected with Household Economy, and numbered in continuation of the keys on Tray **WW**. No. 61, a brass door-bolt; $8\frac{1}{4}$ inches long, by $1\frac{1}{4}$ wide, and $\frac{5}{8}$ thick. No. 62, a brass candlestick; $9\frac{1}{2}$ high, massive, having large holes in the socket, and a broad circular flange about half-way down the pillar; “found in Dunshaughlin bog, county Meath.” No. 63, another candlestick, rudely decorated in the pillar, large holes in socket, no flange; $10\frac{3}{8}$ high. No. 64, ditto, but more modern, and with a slender pillar; $9\frac{1}{2}$ high; found in what would appear to be the remains of a crannoge, at Manorhamilton, county of Leitrim, and—*Presented by Rev. John Hamilton* (see Proceedings, vol. vii., p. 346). No. 65, an antique snuffers, without a top to the box; $6\frac{3}{4}$ long; found in Clonave Island, Lough Derravarragh, county Westmeath. No. 66; an imperfect snuffers, slighter and of more modern form than the foregoing; $6\frac{1}{4}$. No. 67, a small hinged implement, apparently the top of an article for holding a taper; $3\frac{1}{4}$ long. No. 68, a small ounce or steel-yard, a description of instrument very common in Ireland, especially in those parts of the country where flax and yarn were much sold until the compulsory use of the standard weights and measures; quite perfect, beam quadrangular, wanting weight, much worn; $8\frac{3}{4}$ inches in length (Dawson). No. 69, ditto, small, beam circular, complete in all respects, even to the straps, iron

hook, and copper weight; $7\frac{3}{4}$ long. No. 70, the beam of an ounce, $10\frac{1}{2}$ long; found in the river at Athlone, in 1849, and—*Presented by the Shannon Commissioners*—see Presentation Book, p. 62. No. 71, a small circular brass box for holding standard weights; $1\frac{5}{8}$ in diameter; found in the demesne of Stranocum, in levelling the bank of the River Bush, about twenty feet below the surface of the ground.—*Presented by James R. Hutchinson, Esq.* (see Proceedings, vol. vi., p. 161). No. 72, ditto, smaller, and apparently more modern; $1\frac{3}{8}$ wide across lip; found in a bog near Cullybackey, county of Antrim.—*Presented by Rev. Dr. Reeves.* Nos. 73, 74, 75, and 76, are four bronze moveable legs, possibly belonging to ink-stands, the longest measuring $3\frac{1}{4}$ inches, and the shortest 2. For the remainder of articles of this species, see Rail-Case P, at p. 597.

In the bottom space will be found some Food Implements, in addition to those already described and numbered in continuation of the spoons on Tray **UU**, at p. 546. No. 106, a copper cheese-scoop; $5\frac{1}{8}$. No. 107, a rim of thin brass, like top of saucepan; 3; found in River Glyde.—*Presented by the Board of Works.* Nos. 108, 109, and 110, three brass nut-crackers; the latter rude, and decorated with concentric circles, like some of the gold ornaments; $3\frac{1}{2}$ (Sirr); the two others are apparently more modern, and each about 4 inches in length. No. 111, the bottom of an ancient chafing-dish; $4\frac{5}{8}$ in diameter, perforated in bottom. No. 112, ditto, wide mouth, narrow bottom, cast; $5\frac{1}{4}$ at top, 2 deep. No. 113, ditto, imperfect in rim; $4\frac{3}{4}$ by 2. No. 114, ditto, massive, in good preservation, square moveable stud in bottom, as if for stem; $4\frac{1}{2}$ by $2\frac{1}{2}$. No. 115, ditto, plain, perfect; $5\frac{1}{4}$ wide, $2\frac{1}{4}$ deep. No. 116, a bronze chafing dish, tolerably perfect, one handle remaining, aperture in bottom capable of holding vessel No. 114. Nos. 117 and 118, two small thin brass plates, fellows, imperfect in edges; each 6 wide (Dawson). No. 119, the small handle of a brass skillet, like No. 63, only $4\frac{1}{4}$ long.

SPECIES V.—ARTICLES OF DRESS AND PERSONAL DECORATION.

Personal decorations form a large numerical proportion of the bronze articles in the Museum, and at present amount to upwards of five-hundred specimens, excluding those on “finds.”

This part of the Collection is increasing daily, each addition presenting some new variety, either of form or ornamentation. It consists of cloak, mantle, or hair-pins, brooches, bracelets, arm-rings, buttons, buckles, fasteners, armour-decoration, and massive rings of different sizes, connected with costume, &c.

For convenience' sake, and in order to display them in the best possible light, according to the present construction of the Museum, the bulk of this part of the Collection, especially the smaller articles, has been arranged on four large Trays, **XX**, **YY**, **ZZ**, and **AAA**, placed between the swords and spears in the Western Gallery. A few may be seen in Rail-case **P**, and the remainder on Trays from **BBB** to **GGG** in the top shelf of the Middle Compartment on the northern side of the ground-floor.

PINS, FIBULÆ, and BROOCHES—styled in Irish, *dealg*, *briar*, *duillenn*, and *brolagha* [spear-like], *es*, *cartait*, *casán*, *roith croir*, *mílech*, and *breathnas*—have been discovered in Ireland in greater numbers and variety, and of more beauty in design and workmanship, than in any other country in Europe. In these articles the process of development is displayed in a most remarkable manner; for, from the simple unadorned pin or spike of copper, bronze, or brass, the metallic representation of the *dealg*, or thorn, to the most elaborately wrought ring-brooch of precious metals—the patterns of which are now re-introduced by our modern jewellers—every stage of art, both in form and handiwork, is clearly defined; not one single link is wanting, as may be learned from a glance at those three large Trays, **XX**, **YY**, and **ZZ**, in the Central Compartment of the Western Gallery. In the first stage, all the artist's powers seem to have been exhausted on the decoration of the pin itself, or in the development of the head, which was enlarged and modelled into every conceivable shape, and decorated with a great variety of patterns. When it was scarcely possible to effect further improvement on the head, a shank-ring

was added, either by means of a rivet passed through the head, or a simple loop running through a hole in the neck. In the next step the ring was doubled, or several distinct rings were employed. Then the ring itself became the chief object in this article of personal decoration, and the acus, or pin, was of secondary importance. Finally, the ring was enlarged and flattened out, decorated, enamelled, covered with filigree, and jewelled, until, in those magnificent specimens of silver and gold, and *findruine*, or white metal, found in Ireland of late years, it reached a degree of perfection which modern art can with difficulty imitate.

The three annexed figures, drawn the natural size from Nos. 170 and 184, Tray **xx**, and 399, on Tray **zz**, afford the reader a good idea of the simple pin, with decorated head and shank, used as a cloak-fastener, or for any of the ordinary purposes to which such articles are applied in the present day. Figure 435, from No. 170, on Tray **xx**, represents the length, shape, and style of ornament, in a great number of simple pins. Figure 436 is drawn from No. 184, in which the crooked head resembles that of a horse. Figure 437 illustrates No. 399, on Tray **zz**, one of the most elegant antique articles of its class which has yet come to light. The pin itself is bronze, with an elaborate scroll, formed in the casting; and to a groove in the raised portion which traverses the centre of this indented scroll has been soldered, in high relief, a thin line of silver or white metal. It would not appear that the depressions on each side were filled with enamel; but in No. 383, on the same Tray, a portion of the enamel paste still

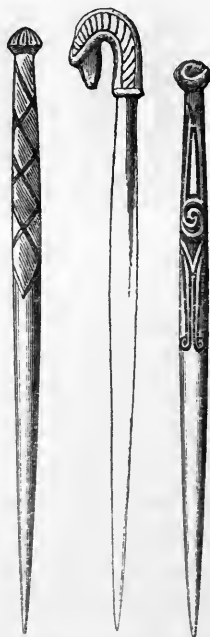


Fig. 435. Fig. 436. Fig. 437
No. 170. No. 184. No. 399

fills up the indented scroll, but it has been constructed on a different plan from that figured above.

By the eight following figures, drawn from Nos. 114, 113, 123, 69, 45, 63, 62, and 66, on Tray **xx**, are shown typical varieties of pin-head ornamentation in articles of this description; they are all drawn the size of the originals. Some of these simple pins, which vary in length from 3 to $12\frac{1}{4}$ inches, have flat shanks, several of which are decorated for about a third of their length. In others the lower third of the pin is quadrangular, and in a few there is an elevation at the juncture of the upper and middle thirds, as is well shown in Fig. 453, on p. 559, like those in several examples of bone pins on

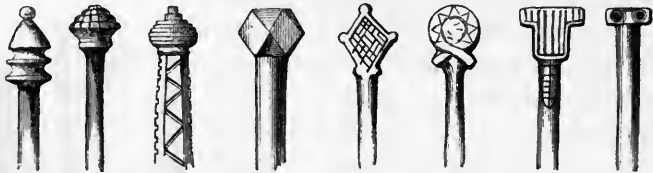


Fig. 438. No. 114. Fig. 439. No. 113. Fig. 440. No. 123. Fig. 441. No. 69. Fig. 442. No. 45. Fig. 443. No. 63. Fig. 444. No. 62. Fig. 445. No. 66.

Tray **c**, see Fig. 216, page 233. The pins in the foregoing cuts vary in length from $2\frac{1}{4}$ to $7\frac{1}{4}$ inches. No. 69, Fig. 441, was found in the Ardakillen crannoge, and—*Presented by the Board of Works*. Crannoges and street-cuttings have been the principal localities from which these small pins have been procured. No. 123, Fig. 440, was—*Presented by the Shannon Commissioners*. Varied as are the designs and style of ornament shown by the eleven foregoing figures, they scarcely include even the typical forms. So minute is the decoration, both in casting, scroll-work, and inlaying in many of these small pins, particularly of those in the top row of Tray **zz**, that it can only be properly seen with the aid of a large lens.

The next form of pin-head decoration, shown by the three following illustrations, may be frequently observed in Irish

collections. It consist of a circular disk, varying in size from $\frac{3}{4}$ to $1\frac{1}{2}$ inch, with a central conical stud, placed at first horizontally, and then vertically, or on the same line with the shaft, which is bent into its obverse side. Of this variety there are three horizontal, and fifteen vertical specimens on Tray **XX**. At first, the circular top plate was plain, and the central boss small, as in No. 127, which has a stem $11\frac{3}{4}$ inches long, and was probably used in the hair; but as the pattern became the fashion of the day, this portion was decorated both in casting and by the punch and graver, and at the same time the cone was enlarged, as shown by Figure 448, from No. 207. In the Museum of National Antiquities at Copenhagen, there are a few pins of this description (probably Irish)—see Fig. 239 in Worsaae's *Oldsager*—in one of which the bronze disk is covered with a thin plate of gold pressed into all the lines of the ornament on the plate,—a form of jeweller's work specially alluded to in our annals, where Ucadan is said to have covered brooches with gold,—see page 354. Some of



Fig. 446. No. 127.



Fig. 447. No. 128.



Fig. 448. No. 207.

these circular-headed pins are very long, as in No. 128, one-third the true size, which measures $13\frac{1}{2}$ inches, but No. 207 is only $5\frac{1}{2}$ inches in the stem and $2\frac{1}{4}$ across the top. The same form was repeated in those manufactured from bone: see Fig. 213, page 234. The foregoing are drawn one-half the natural size; other specimens have been found in Ireland with the

disks of greater magnitude. See Dublin Penny Journal, vol. iv., p. 45.

By the four following cuts, drawn to a scale of one-half the true sizes, are illustrated other forms, differing somewhat in shape from the former. No. 216, Fig. 449, on Tray **xx**, is a small pin, $4\frac{5}{8}$ inches long, with a head similar to that in Fig. 448, but having the central mamillary projection larger, and the boss proportionably less. No. 498, on Tray **zz**, Fig. 450, which is 5 inches long, has a cup-like head, similar to the termination of some of the gold penannular rings; there are four such specimens in the Collection. No. 489, Fig. 451, is a very rare form, $5\frac{1}{2}$ inches long; with a rivetted plate upon the shoulder, and a sunken oval disk on the front of the ring,



Fig. 449. No. 216.



Fig. 450. No. 498.



Fig. 451. No. 489.



Fig. 452. No. 190.

both evidently intended either for enamel or the settings of stones. No. 190, Fig. 452, is likewise a very rare specimen, and measures $5\frac{1}{4}$ inches in extreme length.

Figure 453, No. 126, on Tray **xx**, illustrates the decorated shank, central elevation, and cleft head, with recurved spires, like that seen in the pommels of some Danish swords, it is $10\frac{1}{2}$ inches long, and the portion here drawn is the natural

size. There are three other such sword-shaped pins in the Collection, Nos. 125, 131, and 188; but in the latter, the head scrolls are wider, and turned downwards and inwards. No. 422, on Tray **zz**, Fig. 454, is a plain pin, with a wheel-like head, having a small hole in the neck, through which a ring passed. See Proceedings, vol. vii., No. 497., p. 130. The third illustration, Fig. 455, from No. 195,

represents, of the true size, the largest of a series of ten *Hammer-headed pins*, Nos. 192 to 201, on Tray **xx**, that appear to be of a special and peculiarly Irish pattern. Each has a central aperture, with a pectinated

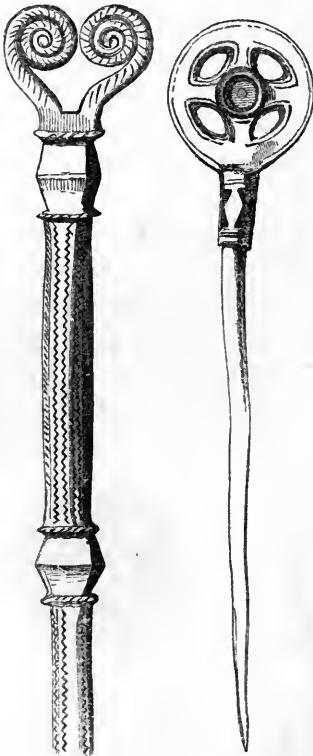


Fig. 453. No. 126. Fig. 454. No. 422.



Fig. 455. No. 195.

set of jewel-holes, generally five, above the flat semicircular enamelled face. The elevated cast decoration within the margin is usually of the bird-pattern, and only rises to the level of the enamel, except in No. 197 where it stands out in high relief. In No. 194, the enamel paste, now of a dirty white colour, is quite perfect; and portions of it remain on other specimens. In two examples the hammer-head is circular. In length they vary from No 192, a miniature specimen, $3\frac{1}{2}$ long, to No. 200, which is $11\frac{1}{2}$ inches. Walker

figured an article of this description in 1788 : see "Historical Essay on the Dress of the Irish," pl. ii., fig. 4.

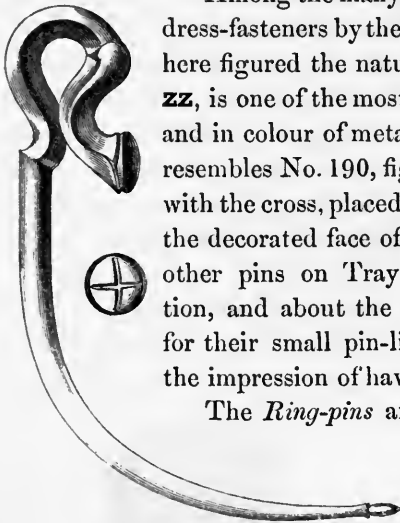


Fig. 456. No. 495.

Among the many curious devices intended as dress-fasteners by the ancient Irish jewellers, that here figured the natural size, No. 495, on Tray **zz**, is one of the most remarkable. It was cast, and in colour of metal, and style of make, much resembles No. 190, figured on page 558 ; the boss with the cross, placed below the curve, represents the decorated face of the head. There are two other pins on Tray **zz** of a similar description, and about the same size and shape. But for their small pin-like ends, they would give the impression of having been used as ear-rings.

The *Ring-pins* and brooches are illustrated

by the fourteen following cuts. Figure 457, drawn the natural size, from No. 420, on Tray **zz**, shows a

very rare form, with three rings passed through apertures in



Fig. 457, No. 420.

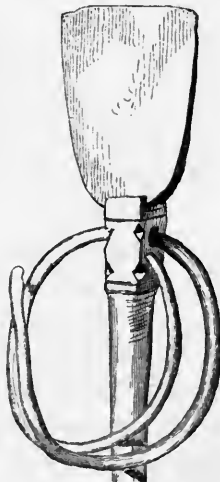


Fig. 458, No. 308.



Fig. 459, No. 305.

the elongated head. It is 3 inches long, was found in the

Dunshaughlin crannoge, and—*Presented by Mrs. Rothwell.* There is no other article of this pattern in the Collection.

Figure 458 is drawn from No. 308, a long pin: with a flat head, like that of the ancient *stylus*, for smoothing the wax on the tablet; and, possibly, it and its fellow, No. 307, may have been used for that purpose. The ring which passes through the neck, consists of a piece of stout brass wire, tapering slightly from the centre to both extremities. The portion here represented is the natural size, but the extreme length of the article is $6\frac{1}{2}$ inches. In Figure 459, drawn the true size, from 305, on Tray **YY**, the head is circular, and highly decorated in the casting, and the ring very small and penannular. It measures $7\frac{3}{8}$ inches; there is an amber stud in the centre.

The four next cuts illustrate still further the development of the ring. In the first, Fig. 460, No. 235, is shown the type of a great number of small pins, in which the broad ring is barely sufficient to pass round the square decorated head, to which it is attached by means of a cross-rivet, which allows it to play like a swivel. Of this description of pin there are as

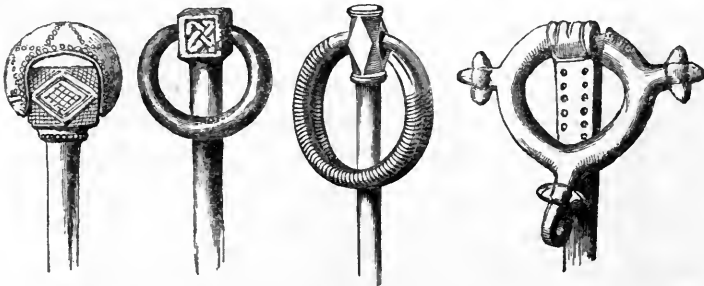


Fig. 460, No. 235.

Fig. 461, No. 263.

Fig. 462, No. 324.

Fig. 463, No. 297.

many as twenty-five specimens in the Collection, varying in length from $1\frac{1}{2}$ to 7 inches. In some of the smaller ones it requires a strong lens to ascertain that the ring and head have not been cast together. Figure 461, drawn from No. 263, on Tray **YY**, shows a simple ring-pin, in which the ring narrows where it passes through an aperture in the square de-

corated head. No. 324, Fig. 462, is $3\frac{1}{8}$ long, and its ring is double, except where it passes through the shaft. It was procured from Gweedore, and—*Presented by Lord George Hill*. Of this sub-variety there are sixteen specimens in the Collection. In No. 297, on Tray **YY**, represented the natural size by Fig. 463, the outer margin of the ring is decorated with quatrefoil ornaments, the lowest of which forms a loop, evidently for the attachment of a pendant; it has a long, flat, decorated acus, 6 inches in length. All the pins from No. 295 to 299 have pendant loops attached to the rings.

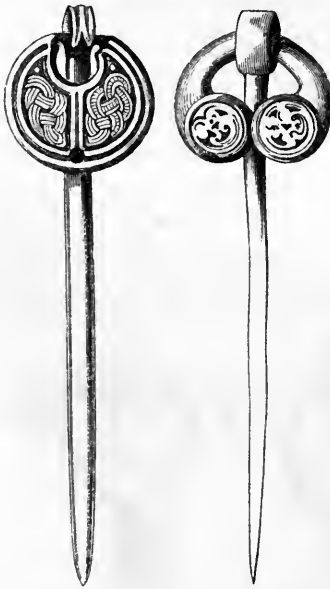


Fig. 464, No. 302.

Fig. 465, No. 26.

In the annexed illustrations, drawn the natural size, may be seen two varieties of rings not uncommon in collections of Irish brooches. The first, No. 302, Fig. 464, is one of a series of four articles of the same description, arranged on Tray **YY**, in which the ring assumes the form of a coin or flattened disk, with a notch at top to allow it free-play in the loop. In some specimens the disk of the coin-pin is quite smooth and plain; but in others, as in that here represented, it is highly ornate, and decorated with a funiform pattern. In No. 326, also on Tray **YY**, is

shown a rude plain specimen of the penannular pin, decorated in the inferior enlargements. This form of ring, as well as that in which the ends are united by a cross-bar, will be further illustrated in the descriptions of the silver ring-pins and brooches. Before proceeding to the description of the fully-developed ring-brooch, so far as that article is represented in bronze, we beg to direct attention to a series of seven stout

rings, about the size of thumb-rings, with projecting knobs on their external margins, which have been arranged on Tray **zz**, from Nos. 479 to 485, and of which the two annexed illustrations, drawn the true size, are typical representatives.



Fig. 466. No. 479.



Fig. 467. No. 484.

In Mr. Murray's collection, already referred to at p. 252, and some illustrations of which have also been presented to the Academy, there is a bronze pin, the ring of which is very similar to No. 479, figured above, so that the use of these articles is no longer a matter of conjecture. Their weight and shape may be one of the causes why so few have been found with the *acus* attached. There is an aperture in that portion of the ring, between the knobs, so that possibly a third decoration may have occupied that space. In No. 483, a portion of the ring is gilt, and the studs are decorated with central discs of red enamel. It resembles a finger-ring more than any of the others. For further details of these articles, see p. 589.

Ring-brooches—in which the *acus* merged into a mere fastener, and the designer's and caster's arts were chiefly expended on the ring—arrived at great perfection in bronze articles, although far inferior in size and workmanship to those composed of silver or *findruine*. The large bronze ring-brooches, about forty-eight in number, are chiefly arranged on Tray **yy**, from Nos. 331 to 371. See, also, those numbered from 463 to 470, on Tray **zz**. In breadth of ring they vary from $1\frac{1}{8}$ to $4\frac{3}{8}$ inches, the largest of which, No. 371, Fig. 468, is penannular, broad, flat, and almost plain below the narrow

hoop, which plays in the slightly decorated wide loop of the pin,

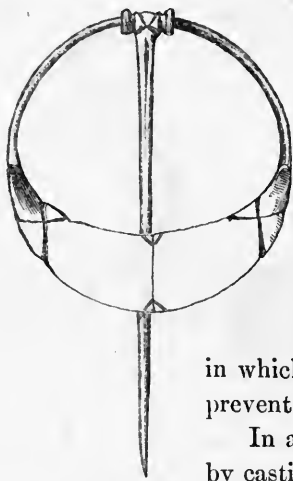


Fig. 468. No. 371.

which is $7\frac{5}{8}$ inches long; it is quite plain on the obverse, and is the only specimen of the kind in the Collection; it was—*Presented by the Shannon Commissioners.*

In a few instances, small brass wire helices, with sharp extremities, encircle the upper portion of the ring, evidently intended to secure that portion to the garment in which the brooch was fastened, and thus prevent its swinging about. See No. 470.

In addition to the decoration produced by casting, three other forms of ornamentation were employed in the construction of these brooches, viz.: by gilding, jewelling, and enamelling. An example of the first may be seen in No. 469; of the second, in several specimens, but in particular Nos. 343, 344, and 346, the first and last of which are figured on the opposite page. Examples of the third form may be seen in Nos. 339, 345, 347, 350, 352, 356, 359, 362, 368, 467, and 470; the colour of the enamel was generally white (now cream-coloured) or red, and in a few rare instances blue. In some cases the ring is separate below (penannular), to allow of the passage of the pin through it, so that when fixed the pin was oblique, and the ring hung perpendicular; but, as already stated, a cross-bar (often highly decorated) joined the large broad portions of the ring. See Nos. 361, 369, 469. In a few instances, the circle of the ring is occupied with a cross-stay, or sometimes three bars uniting in the centre, an example of which is shown in Fig. 469. In some rare cases, a decorated cross was attached to the lower margin of the ring, in addition to the decoration in its centre, of which there is a very good specimen in No. 466, on Tray

zz. The gilding is of two kinds, either by a wash, or a thin plate of gold pressed into the sunken ornament within the outer rim. The stones have been lost in many specimens, but their “settings” still remain; and, where present, they are all amber—that substance being most easily procured when these articles were manufactured. In some instances there were as many as eight amber studs in the front of the brooch. The enamel generally occupied an oval or triangular space on each of the lower enlargements of the ring; and where it is deficient, as in No. 359, 364, and 468, may be seen the roughened surfaces of the cavities on which it was laid.

The two following figures, unreduced, from Nos. 344 and 346, on Tray **yy**, illustrate the middle-sized bronze decorated and jewelled ring-brooches. In the former the pin is 4 inches

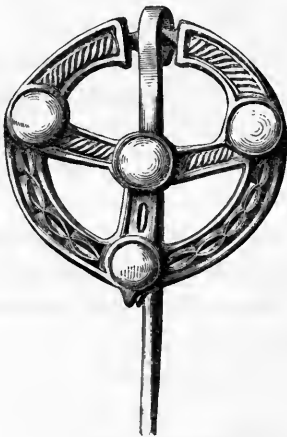


Fig. 469. No. 344.



Fig. 470. No. 346.

long, and in the latter $6\frac{1}{2}$; in which it is also highly decorated, and raised above its usual level into the form of a human head, covered with the hood of the cochal, like that seen in the figure of the ancient steersman, given at page 321. In both the rings are jewelled. In Fig. 469 three bars occupy the centre of the ring; and in both, but especially Fig. 470, the character of the ornament is precisely that shown on the decorated bones figured and described at page 346, figures 229, 230, and 235. The outer margin of the ring in No. 346 is

also decorated. It was found in the Woodford river, near Ballyheady Bridge, townland of Corureen, parish of Kildal-
len, county Cavan, and—*Presented by the Board of Works.*

In 1781, six circular brass plates, with curved stems, were dug up in Slane Park, county Meath, one of which (or properly two joined together) was figured by Vallancey, in his *Collectanea de Rebus Hibernicis*, vol. iv., p. 44, pl. vii., fig. 1, as a musical instrument, under the name of a Crotal, or cymbal: small wire helices encircled its stem. It is still in the Museum of Trinity College, and measures $12\frac{3}{4}$ inches long; but the centre piece is not part of the original, and one of the joinings, neither of which is shown in that engraving, is undoubtedly modern. See Dr. Ball's paper in the Proceedings, vol. iii., p. 136. Subsequent investigation has shown that these were not musical instruments, and are not capable of emitting any sound, except that of an ordinary piece of metal when struck by any hard substance. They appear to have been latchet-fasteners, the curved stem passing through oilet-holes in the garment, and may, from their shape, be styled *Spectacle-Brooches*.

There are four such articles in the Academy, arranged on Tray **zz**, Nos. 490 to 493, on one of which the helix for fasten-
ing it to the cloak still remains. Three are decorated upon the external surface, and vary in length from $3\frac{1}{4}$ to $5\frac{1}{4}$ inches, and from $1\frac{1}{8}$ to $2\frac{1}{4}$ in diameter of disk. The largest, here figured one-

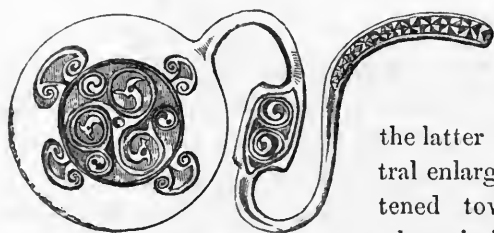


Fig. 471. No. 492.

half the true size, is highly decorated both on the disk and stem,

the latter of which has a central enlargement, and is flattened towards the point, where it is highly finished, thus proving, with others si-

imilarly formed, that such was its original termination. The cast decoration is of especial Irish character; that on the boss and

and central enlargement partaking of the cornuted device, and also the bird-like pattern seen in Fig. 455, p. 559, while that at the extremity of the stem resembles the bone ornaments figured at page 346.

Spring-Brooches.—All the foregoing articles may fairly be considered of native design and manufacture. Some of those, however, now about to be described, and which have been very rarely found in Ireland, present characters that resemble classic fibulæ more than any other articles of personal decoration in the Collection of the Academy. The four following cuts are drawn

the true size from brooches, of which Fig. 472, No. 472, on Tray **zz**, presents more of the classic type than any of the others;

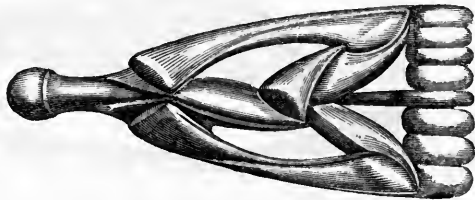


Fig. 472. No. 472.

but at the same time the ornamentation resembles the Celtic trumpet-pattern already alluded to at page 519. Its acus is fixed by a loop; but all the others of this variety have the pin, formed

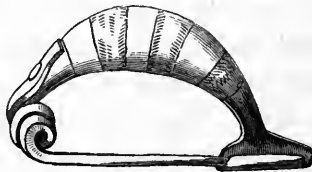


Fig. 473. No. 477.



Fig. 474. No. 478.

by a spire of two or more coils, attached to one end of the article; and passing along the back, it is looped in a catch behind. Figures 473 and 474, drawn from Nos. 477 and 478,—deposited by the Royal Dublin Society,—may be styled spring-brooches of the *Dolphin pattern*, in each

of which the pin, having made two turns, by what is termed a "rat-trap spring," hitches into the curved fish-tail of the article. In the first, the spring has been riveted to the body of the brooch; but in the second, both brooch and pin are of one piece. The circumstances under which the three foregoing articles were discovered, are unknown. In Rhodius's rare old work, "*De Acia Dissertatio*," 1672, there are figures of several such fibulæ.

On Tray **zz** may be seen three fibulæ, resembling coiled snakes, and which may therefore be denominated spring-

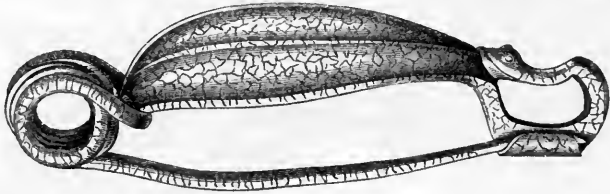


Fig. 475. No. 475.

brooches of the *Serpent pattern*, the largest of which, No. 475, is represented the size of the original by the accompanying illustration. In these, the body of the snake is flattened out—into that form which several of the cobra species assume when irritated, and standing partially erect—while the tail portion is coiled several times on itself, and fastens in a catch formed in the neck. This very beautiful specimen, which is in the highest state of preservation, and was *deposited by the Royal Dublin Society*, is curiously frosted with a raised irregular pattern all over the surface; but whether produced in casting, or caused by sudden cooling of the metal, is uncertain. No. 473, which is almost identical in shape, is said to have been found at Navan Rath, county Armagh, and was procured along with the Dawson Collection. Of all the bronze articles connected with personal decoration in the Academy's Collection, there are few can equal in design and workmanship the hinge-brooch, figured on the opposite page, the natural size, and which was found in the Ardakillen crannoge, near Stokes-

town, county Roscommon. The decoration on the enlarged ends partakes of the Celtic trumpet-pattern, a miniature facsimile of those curious bosses of thin sheet brass on Tray **vvv**, already referred to, and like them hammered or punched up from behind; while the central connecting curved strap, decorated with a raised intertwinement, like that seen on some of our sculptured crosses, and in the illumination of ancient manuscripts, would appear to have been cast. The exceedingly thin ornamented plate in front is fastened by eight rivets

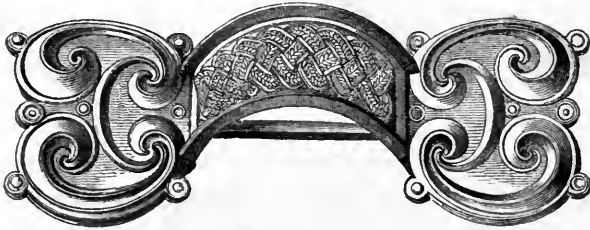


Fig. 476. No. 476.

to a stout flat plate, behind, which also overlaps the edges of the strap. The flat pin is hinged behind.*

The total number of bronze pins and brooches now in the Museum, including those on “Find” Trays, is 600.

ARMILLÆ, BUCKLES, CLASPS, BUTTONS, CHAINS, BREAST ORNAMENTS, AND ARMOUR DECORATIONS, &c.—While the Scandinavian and German museums of fatherland antiquities abound in antique bronze diadems, collars, neck and arm rings, and also greaves, and leg decorations, &c., similar articles of that metal are very rare, some even unknown, in this country—such personal ornaments having been formed of gold and silver, but especially of the former, by the early Irish. To Tray **AAA**, in the Western Gallery, have been affixed a miscellaneous collection of such bronze articles of this nature as have come into the possession of the Academy, and from which the following illustrations have been made.

* The late J. M. Kemble considered this brooch of great antiquity, and the finest specimen of bronze workmanship in the Collection. He made a very careful drawing of it, a few days before his fatal illness.

The torque pattern was employed by our ancient jewellers in the construction of small bronze rings, and also of bracelets and armlets; there are four such specimens in the collection, of which that represented, one-half the true size, by Fig. 477, from No. 506, is a good example. It is composed of two torque rings, meeting in a decoration in front, with a central



Fig. 477. No. 506.

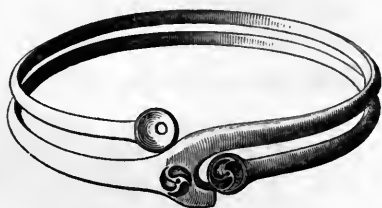


Fig. 478. No. 504.

aperture, and four elevated studs; it is the most massive article of the kind in the collection. Figure 478 illustrates (one-half the size of the original) No. 504, somewhat wider and more slender than the foregoing; composed of a double circlet of thin bronze, with free ends, one of which is perforated for looping on a stud placed behind the central enlargement; the other extremity, as well as the central space, is decorated with an embossed bird-head pattern. It was found at the junction of the Deel and Boyne rivers, in the county Meath, and—*Presented by the Board of Works.*

Figure 479 drawn, one-half the true size, from No. 509;



Fig. 479. No. 509.



Fig. 480. No. 626.

is a penannular ring of pure red copper, and apparently of great antiquity; with slightly cupped enlargements at the

ends, like several of the gold armillæ found in Ireland. It is totally undecorated, and was—*Presented by A. W. Baker, Esq.* No. 511, on the same tray, is similar both in shape and material, but the copper is not so pure; it is also smaller, and not cupped at the extremities. Articles of this kind have been regarded by some persons as ring-money; but no reference to any such mode of barter has yet been discovered in the very ancient records of Ireland; whereas bangles, identical in form, are still worn, both on the wrists and ankles, by the inhabitants of other countries. Of this variety—which was probably worn on the ankle, like those still in use among the Hindoos and some African tribes—is Fig. 480, from No. 626, on Tray **FFF**, $4\frac{1}{4}$ inches in diameter, with two small rings attached to it, each $1\frac{1}{2}$ wide, which may have been used for suspending the anklet by. It was cast or hammered in two pieces, which are joined on the flat. [For finger-rings, see page 598.]

Besides the foregoing, the uses of which are unquestioned, there are a great number of large massive bronze rings in the Collection, two of which are placed on Tray **AAA**, and six on Tray **CCC**; these were probably worn on the limbs, several are solid; some of them may have been the handles of cauldrons, like those described at page 530; but a great many are hollow, and filled either with lead, or some composition, like that used in the construction of Danish sword-handles, already referred to at page 550. Several of these large rings have smaller ones attached to them, like Fig. 480, and some articles of the same description in gold.

The three following cuts represent other antique articles connected with personal decoration. Fig. 481 shows the true size, a curious and not inelegantly formed piece of bronze chain, No. 518; to one end of which a pendant is attached, but not of the same style of workmanship, and apparently of less antiquity. Fig. 482 represents, the true size, a highly decorated and enamelled button, No. 623, in Rail-case **P**. The enamel paste,—nearly deficient,—which was red and green,

filled up all the spaces not occupied by the raised bronze lines. The loop behind is very thin and small, so that it is probable this article was sown upon a garment more as a decoration than a fastener. Fig. 483 represents, the natural size, one of the most beautiful specimens of inlaying bronze with silver, and some dark metal (after the fashion of the ancient niello), which has as yet been discovered in Ireland. It is a pendant hook, No. 520,



Fig. 481. No. 518.



Fig. 482. No. 623.



Fig. 483. No. 520.

on Tray **AAA**, and may have been used for suspending a sword by. The scroll-work is of a purely Irish character. It was procured, many years ago, from Mr. Wakeman. There are a few other articles of this description in the Collection, in No. 521 of which the large decorated boss is covered with green enamel; but it is comparatively modern, and far inferior in style of workmanship to that here represented.

In the centre of the fifth row on Tray **AAA**, may be seen seven articles of different shapes, consisting of studs, plates, and bosses, highly decorated with the most elaborate patterns, each article differing in shape and ornamentation, but all originally covered on their external faces with a thick coating of gold. From the effects of time, and possibly some rude treatment, the gilding has been worn off the sharp raised edges of the pattern, but large quantities of it still remain

throughout the indentations of all; and, when examined with a powerful lens, it is manifest that the plating, or washing, with the precious metal, must have been of considerable thickness. Verdigris has exuded from the exposed red bronze in many places, and filled up the sunken portions of the decoration, but the patterns can be easily made out in all. In length they vary from $1\frac{5}{8}$ to 2 inches, and are about one-eighth inch thick at the outer margin. Posteriorly, they are flat and rough; and have two or more loops, according to their size, for attaching them to the garment on which they were placed,—possibly a buff-coat.

The casting is as fine as that seen in any of the brooches either of bronze or silver; and the style of ornament, although varied in each specimen, has a general resemblance to that on those decorated bones, already figured and described from pages 345 to 347. For a long time these articles were not considered of much value, and regarded as horse trappings,—the beauty of their decoration, and the circumstance of their gold plating, now established by analysis, not having attracted much attention. They were discovered, with several other articles, described hereafter, under the following circumstances, for an account of which the author is indebted to Mr. Wakeman, by whose zeal these valuable relics of the past were procured for the Academy. In July, 1848, the workmen engaged upon the railway, near the Navan station, adjoining the River Boyne, discovered a quantity of human remains, and also the skull of a horse, together with a number of antiquities, consisting of a bronze bridle-bit, and harness plate: some links of a chain and a massive boss evidently for the attachment of a chariot trace; iron rings plated with bronze, some small bronze buttons, and the seven richly gilt articles here referred to; all of which are now in the Museum of the Academy, and four of which have been engraved. In the place where these remains were discovered, the soil was much darker than the adjacent ground. The human bodies do not appear

to have been placed in any order; and in the surrounding earth was found a great quantity of charcoal, extending from 2 to 10 feet below the surface. A small portion only of the grave, or battle-pit (if such it were), was traversed by the railway cutting, so that much of the ground of this very remarkable interment remains as yet unexplored.

By the three following unreduced illustrations are presented typical specimens of the decorations alluded to, the details of all which are given at page 592. Three of the seven articles are more or less cruciform in shape, and have small loops behind for attaching them to the dress; only two are duplicates; and, with these exceptions, all the others, although in pairs, are totally distinct in ornamentation. No. 562, Fig. 484, cast from the same mould as No. 560, has been cleaned by a jeweller, in order to disclose the true nature of the metal, and the extent of

the gilding. It is almost as red as pure copper, and the greater part of the fine yellow gold wash or plating remains on the central boss. It has four loops on the reverse side for attaching it to the buff-coat, or other garment, to which it must have formed a very beautiful



Fig. 484. No. 562.

decoration. No. 559, Fig. 485, which remains in the state in which it was found—is, like the majority of these plates, slightly curved, as if to adapt it to the rotundity of the person, and has a different style of ornament in the head from that shown in Fig. 484. It has three loops posteriorly. Its fellow, No. 563, had originally a stone in the central boss, the setting only of which remains; it resembles this in shape, but

differs in the ornate details. Fig. 486 is drawn from No. 561, and would appear to have been the central decoration. Its style of ornament differs from both the foregoing in the circular pattern which pervades it, and which resembles the trumpet-



Fig. 485. No. 559.



Fig. 486. No. 561.

shaped figure already referred to at pages 519 and 566. It has four loops posteriorly. It is to be regretted that the limits of this work do not admit of having all these plates engraved. It may be asserted that they were horse-trappings or harness decorations; but the brooch-like and highly cast ornament, and the gilding, &c., have led us, in lack of any positive evidence, to a contrary opinion.

The ancient Irish warrior, standing behind the *Ara*, in his two-horse chariot; armed with a heavy battle-axe and long glittering spear; provided with several darts, or lances, for casting at the foe; and having by his side a leaf-shaped, brilliant, gold-adorned sword,—was, in all probability, furnished with more defensive armour than a small, round, brazen-centred shield: but no remnant of either helmet, greave, or leg-plate, has yet been recovered, wherewith the antiquary could present such a chieftain to the modern historian, arrayed in the panoply of the day in which he lived. That coats of mail were in general use here is evident from their frequent mention in

our early histories; but they were probably of iron, and will be taken into consideration in the description of articles of that material. There is, however, in the Royal Irish Academy a very extensive collection of bronze rings of different sizes, which, although believed, some years ago, to have been used as means of barter, and described as "ring money," there can now be little doubt formed portions of costume. Upon Tray **BBB**, in the second compartment on the north side of the ground-floor, is displayed the remains of a suit of bronze ring-mail, which probably served, when worn over or attached to a buff-coat, the double purpose of defence and decorative costume; and was, in all likelihood, a portion of the paraphernalia of office in days gone by. It was discovered, about twenty years ago, three feet under the surface, in burning a reclaimed bog, adjoining the old castle of the O'Conors, near the town of Roscommon. "Owing to the peaty nature of the soil," observes Dr. Heily, through whose means this valuable relic was preserved, "the fire burned down into a pit, from which this armour was thrown up. I had the place most carefully searched, but no trace of human or other bones could be found." This figure represents the article as it was found (and as it is now placed on the tray), consisting of two broad chains, each composed of five strands of rings, with five links in each, except the upper and inner strands, which have but four links,—joined at their centres to curved shoulder-plates, and united in front and rear to large, hollow, ornamented, wheel-shaped bosses, from which proceed portions of other chains, the terminations of which are



Fig. 487, No. 1.

as yet unknown. These chains are chiefly made up of triple rings, cast in single pieces; and are united to each other, and to the shoulder-plates and bosses, by narrow looped slips of bronze. The two inside strands, both above and below, have each a link of only two rings, evidently for the purpose of shortening the chain towards the neck. As placed on the tray, and represented in the drawing, it measures $15\frac{3}{4}$ inches in the clear between the bosses, each of which is 4 in diameter, and provided with seven loops above and below for the attachment of the two sets of chains, as shown in the annexed illustration, drawn one-third the true size. From the lower edge of each boss depend seven fragments of chain, the longest of which is 9 inches. They are chiefly composed of triple links, but contain some specimens of four rings joined together.

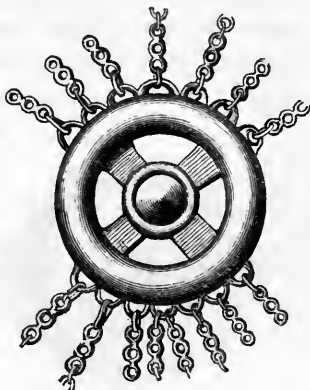


Fig. 488, No. 1.



Fig. 489, No. 1.

The following figure illustrates a link of the chain, which is about $1\frac{1}{2}$ inch long, and $\frac{1}{2}$ wide. The shoulder-plates, each $4\frac{3}{4}$ inches long, and $3\frac{1}{4}$ broad, are cast in single pieces, and decorated on the external surface as well as perforated in the same style of art as that displayed in the chain.

With these articles—which were found united—were discovered a number of detached pieces, which, no doubt, formed portions of the same, or a similar personal decoration, consisting of fragments of chain of a larger size than that figured above; and bosses of various shapes, some of the most characteristic specimens of which are represented on page 578, which, with others found elsewhere, are placed in the same tray as No. 1. Some of these chains were cast with five links to-

gether (see No. 20) and many of the larger ones with but two, as shown in the accompanying figure, from No. 15, each ring of which is thin, flat, and $1\frac{1}{4}$ inch wide.

The remaining rings and bosses are of three kinds—large hollow rings, encircled with loops on their external



Fig. 490, No. 15.

margins, and small trumpet-mouths, also having central inserted bosses, through which circular bronze rods pass for connecting them with other rings, and which also served to fix them in their places. There are two such articles on Tray **BBB**, Nos. 2 and 3,



Fig. 491, No. 3.

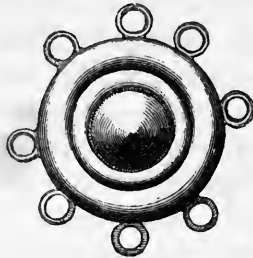


Fig. 492, No. 4.

both slightly defective; and from the latter of which, Fig. 492 has been drawn, one-third the size of the original. No. 4, also reduced two-thirds, and represented by Fig. 493, is of a different pattern from any of the foregoing, and composed of a hollow ring, surrounded by a number of circular chain loops, and the centre filled by a moveable boss, with a conical projection, traversed by a pin, which fixes it within the external ring.* By Figure 493 is shown, one-half the true size, a centre-piece, similar to that in the foregoing, found in the Co. Tipperary. On one edge may be seen the aperture through

* This is the identical article, formerly in Dean Dawson's collection, which Sir William Betham figured in the Transactions of the Academy, vol. xvii., and described as "a Celtic Astronomical instrument, invented to exhibit to the pupil a *diagram* of the Earth's polar inclination, and the phenomena of the phases of the Moon"! !

which the traversing pin passed. The third article of this variety, and that most frequently discovered, is a ring, generally hollow, mostly approaching an oval, and having a trumpet-mouthed aperture on each side, more or less wide, elevated and decorated in the different specimens, which vary in size from $1\frac{1}{2}$ to $3\frac{1}{2}$ inches in their greatest length. No. 93, Fig. 494, is a characteristic specimen of this article. They were traversed by double-looped straps of bronze, which connected them on each side with ring chains, which remain *in situ* in several specimens: see Nos. 7 and 8. There are altogether twenty-three rings of this description in the Collection, viz: Nos. 555 and 556, on Tray **AAA**; Nos. 6 to 11 on Tray **BBB**; and Nos. 80 to 94 on Tray **CCC**. Vallancey, who figured one of these in 1784, under the name of *Iogh Draoach*, or “Druids’ chains of knowledge, or chains of Divination,” says, “they are found in our bogs in great plenty.”

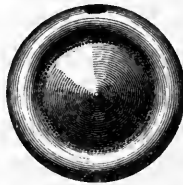


Fig. 493, No. 5.



Fig. 494, No. 93.

On Trays **CCC** to **FFF** have been arranged a collection of five hundred and seventy-eight bronze rings, mostly single, but some double, and a few interlooped, and varying in size from that of an ordinary finger-ring to specimens $4\frac{1}{4}$ inches in diameter. On the upper portion of Tray **CCC** have been arranged twenty-five rings, varying in diameter from somewhat less than an inch to about 4 inches; the smaller are solid, but the larger hollow, perfectly plain, and perforated on each side for the passage of a loop for connecting them to chains or other bosses. They have no lips or trumpet margins to their lateral apertures; but from a careful examination of the chain dress on Tray **BBB**, no doubt can longer exist as to their use. Some of these measure $1\frac{2}{3}$ of an inch in the thickness of ring.

Detached rings, bosses, and portions of ring-chain, identi-

cal with those just described, having been frequently found in Ireland, attracted the attention of the speculative and fanciful antiquaries of the last century; and like other articles, the direct uses or object of which is either undetermined or misunderstood, have been usually attributed to Druidism, and had mystical meanings assigned to them, on which the most absurd theories were founded; and on the names assigned to them by theorists, discursive philological dissertations were written. Thus, Vallancey figured five of these links of chain-armor in his *Collectanea* (vol. iv., pl. xiv., pp. 73 to 106), and described them as amulets, divining-rings, talismans, ring-money, and Teraphims, &c., under the names of *Fainidh-Draioieach*, *Tair-Faimh*, *Boil-Reann*, *Soilfeach*, *Iogh Eolas*, and *Ainic Druieach*, &c. &c.

The chain-loops to some of these rings, he says, “represented the Sun, Moon, and Earth, and the large ring in the centre was the Earth.” Other persons, he states, thought “that they represent the Sun, Venus, and Mercury;” but, he adds, “all agree that some of the planets were understood to be thus represented.”* The author of the foregoing was, like other speculators, not quite clear as to the Jewish, Phœnician, or Chaldaic origin of these articles; but he was certain that “the Irish Druids never walked abroad without the ring and staff”—page 83:—although we really know nothing of Irish Druidism, except the bare fact of Patrick and the early Christian missionaries having come in contact with its priests on their arrival, in the fifth century. The ecclesiastical chroniclers of the period, in their zeal for the establishment of Christianity, would appear to have altogether ignored the subject of Pagan worship: and of the Druidism of Gaul and Britain we know little beyond what may be gleaned from the writings of Cæsar.

* See *Collectanea*, vol. iv., p. 84. Sir. W. Betham evidently took his notion of the astronomical instrument, alluded to in the note at page 578, from the foregoing fancy of Vallancey.

With one of the gold penannular ornaments recently acquired by the Academy, from the county Sligo, was discovered a quantity of small ring-chains of a peculiar make: see No. 647, page 599. For Finger-rings, see Rail-case P, page 598. The only other articles of note, appertaining to dress or personal decoration, in the Collection, is a series of large buckles, on Tray GGG; but they are of very modern date.

The following is a detailed catalogue of all the bronze or brass articles belonging to dress or personal decoration in the Collection:—

BRONZE, II.—WESTERN GALLERY, CENTRAL COMPARTMENT.

SHELF I., Tray XX, contains two hundred and forty-four bronze pins, cloak and hair fasteners, of various shapes and sizes; numbered from 1 to 244. They are arranged in four rows, not merely for the purpose of artistic display, but with a certain regard to the forms of each sub-variety. The first row contains 83 simple pins, varying in length from 2 to 5 inches. Their shanks are generally circular, and in most instances smooth and plain; but in Nos. 16, 17, 18, 35, 77, and 83, they are slightly decorated, either by transverse, oblique, spiral, or chequered depressions or elevations. In most specimens the heads are globular, and perfectly plain; but in those numbered from 38 to 83 they are flattened, and either circular or triangular, with graven or cast decorations on the flat surface. In Nos. 68, 69, 70, and 75, they are cubical, with the angles removed. It is manifest that the heads were attached in Nos. 21 and 22. Nos. 45, 62, 63, 66, and 69, have been figured as illustrative of the form of head in simple pins, on p. 556. Nos. 1 and 69, were found in the crannoges of Clonfree and Ardakillen, county Roscommon; and No. 14 in the island in Roughan Lake (see page 223).

In the second row the pin-heads are more developed and decorated, and in the central specimens the shanks are of great length; they were probably hair-pins. This row contains eighty-three specimens, numbered from 84 to 166, which vary in length from $1\frac{3}{4}$ to $13\frac{1}{2}$ inches. The first forty are of the same variety as those in the

top row, but exhibit greater diversity in ornamentation of both head and shank. No. 79 was found at Ardakillen. No. 124, figured with 113 and 114, at p. 556, presents the first instance of a division between the decorated upper portion of the shank and its plain extremity, and of which Nos. 126, 131, 133, 135, and 136, are good examples. In these, a portion (about the upper-third) is enlarged and decorated, either in casting or with the file or chisel. Nos. 125 and 126 have remarkable sword-pommel-shaped heads, the latter is figured and described at p. 559; and in No. 131 the scroll is turned downwards and outwards. The three central pins, Nos. 127, 128, and 129, are the longest specimens in the Collection, and have circular disks at top; the two last are decorated; the first and second are figured and described at p. 557. No. 132 is a unique specimen, cupped at top, probably for holding a jewel, and has a loop attached to the stem. No. 136 has a remarkable open-work head and a central square elevation on the stem; it was found at Clonmacnoise. The heads of all the remaining pins in this row decrease in size to the end, and have been decorated by the file. No. 137 has a hollow on top of solid head. In No. 138 there are projections on the top and sides of the head. No. 139 was found, with several others, in a quarry near Donnybrook. Nos. 140 and 143 were found at Headford, county of Galway. No. 148 was found at Ardakillen crannoge.

The third row contains forty specimens, numbered from 167 to 206, which show still more the development of the head than any of the foregoing. No. 170 is figured at p. 555. No. 174 was found at Ardakillen, and 177 at Roughan Island. Nos. 183 to 187 have curved heads, formed into zoological designs, of which No. 184, figured on p. 555, is a typical specimen. No. 188 has a large recurved head, like No. 131, and a square elevation on the shank. In No. 189 this peculiar form is still further developed. The ten specimens numbered from 192 to 201 present a peculiarly Irish form of fibula decoration, the type of which, from No. 195, is figured and described at p. 559. No. 192 was procured from Gweedore. In Nos. 200 and 201, the tops of these hammer-headed pins are circular. In No. 194 the white enamel still remains. In No. 197 the bronze decoration on the flat of the head is raised above the level of the enamelled surface. Nos. 200 and 201 have small circular heads, like some of the

silver pins. No. 203, a good specimen, in fine preservation, with a lozenge-shaped head; is $4\frac{3}{4}$ long. It was found at New Grange. The last three specimens on this row commence another description of decorated head, of which there are fifteen examples in the Collection, ending with No. 218 in the bottom row, and of which 207 and 216, figured and described on pp. 557 and 558 are typical examples. In these the shield-like boss is attached to the bent portion of the pin, and has a large conical projection in the middle; in length of stem they vary from $2\frac{1}{8}$ to $8\frac{1}{2}$, and in diameter of boss from $\frac{3}{4}$ to about $2\frac{1}{4}$; the central projection rises from $\frac{1}{2}$ to about an inch above the surface. The external surfaces of these bosses are, in most instances, highly decorated; see, especially, No. 206, where it is formed by a series of minute concentric circles; that pin was found at Croghtenclogh, parish of Castlecomer, county Kilkenny.

In the bottom row, consisting of thirty-eight specimens, numbered from 207 to 244, the first twelve belong to the variety just described. No. 214 has been cleaned, to show the reddish copper colour of the metal before it was tarnished by time. All the remaining pins on this tray, except No. 219, present the same form of semi-circular head, which in No. 228, and all after, becomes a loop. No. 215 was found at Loughran's Island, on the Lower Bann. No. 216 was procured from Keelogue Ford. Nos. 223 and 244 were found in Ardakillen, and No. 235 in Cloonfinlough crannoges. No. 237 was procured from Lough Gurr, county Limerick.

Of the foregoing, No 1 was—*Presented by the Rev. Peter Browne*; Nos. 20, 124, 136, 156, to 160; 209 and 216—*by the Shannon Commissioners*; Nos. 69, 79, 148, 173, 233, 235, and 244—*by the Board of Works*; No. 88—*by Executors of Leslie Ogilby, Esq.*; No. 203—*by R. Maguire, Esq.*; No. 130—*by R. A. Grey, C. E.*; Nos. 140 and 143—*by R. J. M. St. George, Esq.*; Nos. 131, 133, 213, and 236, were procured with the Dawson Collection.

SHELF II., *Tray VY*, contains one hundred and twenty-seven pins and brooches, all supplied with rings, and showing the process of development in that portion of the article; most of them are highly decorated, and numbered from 245 to 371. The top row contains forty-three pins, varying in length from $2\frac{5}{8}$ to 10 inches, and in diameter of ring from $\frac{1}{2}$ to $1\frac{1}{8}$ of an inch. Most of the stems are circular and plain; but in Nos. 255, 256, 259, 260, 264, 266, 269, 270,

271, 272, 277, 279, 280, and 284, they are flattened towards the points, and also decorated,—some of them with the most minute and elegant ornamentation, apparently produced in the casting. At the commencement of the row the heads are large, and decorated,—up to the long central pin, No. 268; after which, that part decreases in size until it becomes a mere loop, or turn-over, for retaining the enlarged ring. In the first specimens, the ring narrows in substance where it passes through the pin, so as to form a swivel; but in others, towards the end of the row, as in Nos. 277 and 285, it passes through without any diminution in size. With the exception of the first, all the other rings are plain. Nos. 268 and 278 were found in Cloonfinlough crannoge, described at p. 226. No. 286, originally plated, was found in a bog, close to an ancient ford, near Anadruse bridge on the River Deel, townland of Derrymore, parish of Killucan, barony of Farbill, and county Westmeath.

The second row contains forty-three specimens, in which the rings are more developed than in the foregoing. The first six resemble those in the top row, with the exception of No. 293, which has a large burr on the side of the ring-hole. In all the other specimens the ring is either double, split, or more or less decorated. In No. 294 may be seen the rudiments of those enlargements subsequently observed upon the penannular brooches. In No. 295 to 299 there is a loop at the end of the lower margin of the ring, probably for attaching a pendant to. No. 297 has been figured and described at p. 561, to illustrate this variety. It has a long flat acus; the outer margin of the ring is decorated with quatrefoil knobs. In Nos. 295, 296, and 300, may be seen the settings for decorative stones, possibly amber. In No. 298, the pendant loop is in the form of a bird's head. In the four following specimens, Nos. 301 to 304, the ring assumes the form of a flattened disk, like a coin, of which No. 302, figured and described at p. 562, is a typical example. In the four next specimens, from Nos. 305 to 308, the heads are specially developed, and the rings become again the minor part; a good exemplification of which may be seen in No. 305, figured at p. 560. It and the following have large circular heads, with small wire-like loops passed through the necks. Nos. 307 and 308, the latter of which is figured and described at p. 560, resemble in the form of their flat heads the ancient *stylus*, the upper portion of

which was used for smoothing the wax on the tablet, before writing with the point. They have each large twisted rings passed through holes in the neck. The remaining numbers on this row vary in length from $2\frac{1}{8}$ to $6\frac{3}{4}$ inches. Sixteen have either double or split rings—like key-rings—passed through the aperture. The six last are small pins, with highly decorated penannular rings. No. 296 was found at Ballinderry; and No. 306, in the old channel of the River Brusna, opposite the ruins of Gallen Abbey, King's County. No. 317 was found in the bed of the Yellow River, near Ballyduff Bridge, parish of Oughteragh, county Leitrim. No. 321, in Gillstown River, townland of Clooneen-Hartland, barony of Ballintubber North, county Roscommon. No. 324 was procured from Gweedore; and No. 330, from Oldcastle, near Mullingar.

The third row contains twenty-six ring-pins, exhibiting a still greater advance in the process of development of the ring, which in most instances is flattened out, and in some jewelled. They are generally plain in the shank, with simple looped heads; but in a few instances, as Nos. 346, 349, and 355, &c., the loop, or ring, is decorated. In length they vary from $2\frac{3}{4}$ to $6\frac{1}{2}$ inches. The majority are penannular, and vary in diameter from $1\frac{1}{8}$ to 2 inches. Without entering into most minute and voluminous details, or affording a very large number of illustrations, it would not be possible to present the reader with a full description of the character of ornamentation observable on these rings, no two of which are alike. In No. 337, the ring, although apparently cleft, is joined below, a form not uncommon in many of the larger brooches of silver and white metal. In this, and, with few exceptions, all the other specimens on the third row, the lower margin of the ring is enlarged, flattened, and decorated; and in No. 339 was also jewelled. In several specimens, viz. Nos. 338, 339, 340, 342, 343, 344, and 346, the ring is flat, decorated all round the hoop, and passes through the loop in the pin-head by a slender portion, with a raised shoulder on each side. No. 343 has a very perfect and highly decorated ring, ornamented in the style of the bone carvings exhibited by Figs. 229 to 231, on p. 346; the three amber studs still remain; it is one of the most perfect articles in the Collection. No. 344, figured and described at p. 565, has three of the four original amber studs remaining. No. 346 has the acus highly developed at top, and is also figured and

described at p. 565. In Nos. 347, 349, 350, 353, and 356, the upper portion of the circular ring is decorated with a number of transverse and spiral indentations. In No. 350, a portion of the enamel still remains on the face; as also in No. 352, where it is of a white and red colour. See Proceedings, vol. vi., p. 250. No. 334 was found at Loughran's Island, on the Bann; No. 336, in the bed of the Shannon, at Athlone; and 343 at Dunshaughlin.

The fourth row consists of fifteen brooches, in which the ring reaches the maximum of size observed in bronze articles of this description; while the pins are proportionably shortened, and with few exceptions are all decorated on the loops, which are flattened out, some to the extent of $\frac{3}{4}$ of an inch. In length they vary from $3\frac{1}{4}$ to $7\frac{3}{4}$. In No. 361, a ring-brooch, with a connecting bar between the ends of the penannular ring, we first observe that large triangular development of the head of the acus on which the jeweller subsequently displayed much taste and ingenuity, as may be seen in the large brooches of silver and white metal. Most of these developed heads are brazed so accurately to the posterior loops, that the joinings are imperceptible. The rings vary in diameter from $2\frac{1}{5}$ to $4\frac{3}{4}$ inches; and, with the exception of Nos. 357 and 361, they are all penannular. No. 359 has the large extremities of the ring hollowed out for enamel, showing the roughened beds on which that substance was placed. No. 364 presents the same peculiarity. Most of these rings are circular above the lower development, and decorated with transverse lines, like those in the previous row. Some of them are plain upon the reverse; but others are decorated, either in casting, or by engraved or punched lines; and Nos. 364 and 368 have deep hollows on the obverse, opposite the lower enlarged and decorated portions. In No. 369, in which the pin is wanting, the ring is joined below by a cross-bar, and has six jewel-settings. The last article on this row, No. 371, figured and described at p. 564, is the largest bronze brooch in the Collection. No. 357, much corroded, was found a short way under the surface on the Antrim bank of the Portna rapids, on the Lower Bann. Nos. 365 and 366 were found one foot under the surface of the land, in the townland of Droughtville, barony of Ballybritt, King's County; and 370, in the Shannon, at Cornacarrow, county Leitrim.

Of the foregoing, Nos. 251, 293, and 318, were—*Presented by*

Lord Farnham ; 254 and 301—*by R. A. Gray, C. E.* ; 268—*by A. Lawder, Esq.* ; 323—*by Dr. O'Meara* ; 352—*by Rev. C. Graves, D. D.* ; Nos. 209, 216, 244, 266, 292, 327, 336, 361, 363, 370, and 371, were—*Presented by the Shannon Commissioners* ; and 306, 317, 321, 334, 346, 357, 365, and 366—*by the Board of Works*. Nos. 307, 308, 335, 354, and 360, were procured with the Dawson Collection.

Tray **ZZ** contains one hundred and twenty-eight bronze pins, brooches, latchet-fasteners, and other articles of that description, numbered from 372 to 499. The top row contains 43 simple pins, varying in length from $2\frac{1}{8}$ to $6\frac{3}{4}$ inches. Several of them are very slender; see, in particular, 379 and 396, which are not grosser than a large modern pin. The shanks of many are decorated with most elegant patterns, of which No. 399, figured on p. 555, is a good illustration; see also No. 400, which possesses the same style of scroll work. In No. 408 the shaft is plated, and in No. 383 it is inlaid with silver; but the decoration is so minute in several as to require a lens for the discovery of its beauty. In No. 401, which is 5 inches long, and slightly decorated all over the shank, there is an eye near the point like that of a packing-needle; it is the only specimen of the kind in the Collection. In several, the lower third of the shaft is four-sided; see Nos. 382, 384, 385, and from 391 to 394. The heads are chiefly circular, and carved like the rimer used for counter-sinking screw-holes. The first, No. 372, has a large nugget-head, and is evidently unfinished. A few towards the end of the row are looped for the passage of rings.

The second row contains thirty-four pins, most of which are supplied with rings; this series shows the first advance in that form of decoration. In length they vary from $2\frac{1}{8}$ to $5\frac{1}{2}$ inches, and are numbered from 415 to 448. The four first are plain, with decorated heads. No. 419 is a most remarkable pin, $5\frac{1}{2}$ inches long, with a double ring passed through a square decorated collar, from which spring upwards several loops that support a cup-like head, which possibly held a stone, and which is detached from the shaft; on these loops, as well as on the necks, are strung several small rings. No. 420, a small pin with three rings, figured and described at p. 560. No. 421, a very elegant pin, in fine preservation, with wreath-shaped loop. No. 422, said to be from Ballinderry, is figured and described at p. 559. No. 423, ditto, imperfect in point,

circular head, enamelled. No. 424, plain, with large buckle-like quadrangular loop. No. 425, ditto, with flat circular loop. No. 426 has a horse-shoe-shaped ring rivetted across the square top. In No. 427, with two stone settings the ring is enlarged below; a cross-piece joins the ends. No. 428, ring penannular. No. 429, ring, decorated. No. 430, a flat highly decorated ring. No. 431, ditto, with six stone settings. No. 432 has one stone-setting. No. 433, a small plain pin, with large flat circular disk, like a coin, suspended from it. No. 434, ditto, smaller. No. 435, ditto, still smaller. No. 436, a rude plain flat pin of bright yellow metal, with hole in top; no ring or loop. No. 437, a small plain pin, with quadrangular buckle-like ring. No. 438, a long pin, with small broad ring. The remaining articles in this row show the development of the simple ring which in Nos. 439, 440, and 442, is attached to the stem by a cross rivet.

The third row contains eighteen articles, chiefly brooch rings, but with four exceptions having no pins. No. 449, a plain ring. No. 450, ditto, penannular. No. 451, portion of double ring. No. 452, a double ring of two and a half coils. No. 453, ditto, larger. Nos. 454 to 457 are four small brooches, like some of those in the collection of silver articles, in which the pin does not project beyond the margin of the ring. In diameter they vary from $\frac{3}{4}$ to $1\frac{1}{4}$ inch, and are all decorated; the ornament on 456 resembles that in some Scandinavian gold articles, and consists of a number of indentations sunk into the substance of the metal. No. 458 is a large flat ring, with a small narrow neck for passing through the loop of the pin, at which point the ends overlap for about $\frac{1}{4}$ inch. It is $1\frac{3}{4}$ in diameter, and decorated with Ogham-like marks. No. 459, a small, plain, penannular ring. No. 460, a ring decorated below. No. 461, ditto, with cross bar. No. 462, penannular, decorated. No. 463, highly decorated on lower flat expansions. No. 464, ditto, decorated, twisted. No. 465, a ring with cross-bar, decorated. No. 466, a very remarkable ring; the loop for fastening it to the acus is placed behind, like that seen in some of the pins in large decorated silver brooches. The ring is rendered wheel-shape by a central cross, and has a pendant cross below its external margin. It has nine countersunk elevations, probably stone settings: see p. 564.

The fourth row contains four perfect brooches, numbered from 467 to 470. No. 467, a penannular ring brooch, with four red

enamel studs. No. 468, ditto, with large shallow enamel indentations in lower margin of ring; highly decorated head-loop to pin; $4\frac{3}{4}$ long, and $2\frac{1}{4}$ wide in ring. No. 469, a very beautiful and highly decorated bronze brooch gilt, loop attached to posterior side of decorated head, cross-bar to ring; $4\frac{3}{4}$ by $2\frac{3}{4}$. No. 470, a penannular ring-brooch, with large decorated looped head to pin, like 468. Portions of red and yellow enamel paste still remain in ring. Two helices, or wire-spires, for attaching it to the dress are still *in situ*.

The fifth row consists of spring brooches, and the knobby rings of pins, like those figured at p. 563. No. 471, a spring brooch, wanting the pin, of classic, and what has been styled Helvetic form. No. 472, a triangular brooch, with trumpet ornament; figured and described at p. 567. No. 473, a spring-brooch of classic form, representing a serpent, with enlarged neck, forming the body of the article, while the tail coiled round several times, ends in the pin, which catches in a fastener formed below the head; $2\frac{1}{2}$. No. 474, ditto, longer and broader, with five-coiled spring; head of serpent very well cast; decorated down the centre, and along the outer edge; $3\frac{1}{8}$. No. 475, the very beautiful specimen of the same variety, figured and described at p. 567. No. 476, the buckle-brooch, with trumpet pattern; figured and described at p. 569. The two next specimens, Nos. 477 and 478, are of a different variety, and both figured and described at p. 568. The remaining articles on this row consist of rings about the size of thumb-rings, with two or more knobs attached to the outer rims of each; and believed to have been attached to pins. The first, No. 479, is figured and described at p. 563. No. 480, ditto, with three knobs; central one defective. No. 481, ditto, three knobs in a cluster. No. 482, ditto. No. 483 like a finger-ring; lower portion gilt, with central red enamelled studs in each of the three knobs. No. 484 is figured at p. 563. No. 485, ditto, unsymmetrical.

The last row consists of a series of pins, and other articles connected with personal decoration. No. 486, the acus of a ring-brooch, with triangular gilt head; $2\frac{1}{2}$. No. 487, a remarkably long, slender pin; of unusual pattern; $7\frac{1}{2}$; with a thin flat rim of white metal, two jewel-settings; $1\frac{5}{8}$. No. 488, the long acus of a large ring-brooch, with decorated head, and wide loop posteriorly; 7. No. 489 is figured and described at p. 558. The four next specimens

are spectacle-brooches. No. 490, figured below, measures $4\frac{3}{8}$ in its greatest length; and has a small circular termination to decorated stem; disk plain; $1\frac{7}{8}$. No. 491, ditto; $4\frac{3}{4}$; disk slightly decorated in centre, as if struck with a die; $1\frac{7}{8}$ in diameter. No. 492, ditto, highly decorated; figured and described at p. 566. No. 493, a small plain specimen of spectacle-brooch; $3\frac{1}{4}$;

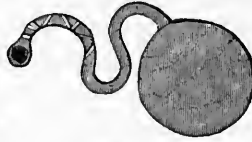


Fig. 495. No. 490.



Fig. 496. No. 493.

disk, $1\frac{1}{8}$, with a helix of six coils encircling the slender, sharp-pointed stem, as shown above. The three next specimens are curved pins, of a peculiar shape; of which, No. 495 is figured at p. 560. They differ but slightly either in character or ornament. The three last articles are slender pins, with cup-shaped heads, of which the central one, No. 498, has been figured and described at p. 558.

Of the foregoing, the first, No. 372, was found in Bride-street, Dublin, and described as No. 504 in Proceedings, vol. vii., p. 130. For Nos. 373 and 397, see Nos. 502 and 503, in Proceedings, vol. vii., p. 130. Nos. 375, 376, 378, 408, 409, and 432, were procured in the Ballinderry crannoge. Nos. 381 to 392, and Nos. 395, 396, 417, and 421, were obtained from Gweedore Strand, on the coast of Donegal, and—*Presented by Lord George Hill*. See Proceedings, vol. vii., pp. 41, 159. Nos. 374, 402, 442, 403, 404, 444, 446, 476 were procured from the Strokestown crannoges; 499, found at Loughran's Island, on the Bann, was—*Presented by Board of Works*. Nos. 377, 381, 413 and 418, procured from Arranmore, in Galway Bay, were—*Presented by W. R. Wilde, Esq.*; and Nos. 374, 419, 470, 487, 488, were—*Deposited by Sir Benjamin Chapman*; and Nos. 416, 443, 475, 477, and 478—*by the Royal Dublin Society*. Nos. 452, 463, 491, 493, 495, 496, were—*Presented by the Shannon Commissioners*; and No. 445, found in Upper Exchange-street—*by Park Neville, C. E.* See Proc, vol. vii., p. 162. No. 448, found in a fort in the townland of Drumgurragh, in Farney, county Monaghan, was—*Presented by Rev. Mr. Thompson*, April 26, 1853. No. 490 was found in Colonel Pallisser's demesne, county Kildare.

SHELF II., *Tray AAA*, contains a miscellaneous collection of one hundred and twenty-three articles, chiefly relating to personal deco-

ration, and numbered from 500 to 620. The top row is composed of rings,—either bracelets or armlets. No. 500, a thin bronze hoop, apparently a bracelet; $2\frac{1}{4}$ inches in diameter, and about $\frac{3}{8}$ wide. No. 501, ditto, broader and thinner, grooved, and decorated with minute cross-lines, has another enclosed; $2\frac{1}{2}$ by $\frac{3}{4}$ (Dawson). No. 502, ditto, a half-round in section, plain, ends over-lap; $2\frac{1}{4}$ by $\frac{3}{4}$. No. 503, a very perfect armlet, with a central circular aperture; cast, grooved on both sides; ring complete; $3\frac{1}{4}$ by $\frac{1}{2}$. No. 504, the large double bracelet, figured and described at p. 570. No. 505, a thin narrow torque armlet, with a central broad aperture, like No. 503; one end of the slender round twisted hoop is fastened in a rude socket, in the broad circular decoration. Possibly two other bands were originally affixed in the same fashion to the central decoration; it is $3\frac{1}{8}$ in diameter. No. 506, the double torque armlet figured and described at p. 570. Nos. 507 and 508, two pieces of bronze torque, imperfect, probably portions of armlets. No. 509, a bright copper penannular armlet, figured and described at p. 570. No. 510, fragment of a similar article of bronze, but with a wider cup, and much resembling some of the gold ornaments in the Academy's Collection. No. 511, a penannular copper ring, resembling 509, but not of such red metal, and not cupped at the extremities; $2\frac{3}{4}$ in greatest width. Second row.—No. 512, a thin flat ring, with separate and overlapping ends; decorated with cross indentations on external half-round surface; $2\frac{1}{2}$; found in Dublin. No. 513, a perfect, beautifully cast ring, with central lozenge-shaped ornament, and highly decorated with very minute raised circles all round; $1\frac{3}{4}$ in diameter from out to out; it may have been a brooch-ring. No. 514, a small slender torque-pattern ring; $1\frac{1}{2}$ in diameter; found in one of the Strokestown crannoges. The three next articles are chains, the two first of no great age. No. 515 consists of three portions,—a square watch chain; four simple loops; and a pendant termination; $12\frac{1}{4}$ long. No. 516, a slight simple looped chain, 6 inches long. No. 517, ditto; 8 (Sirr). No. 518, a small curiously-constructed chain, with a pendant, figured at p. 572 (Sirr). No. 519, a hooked pendant, with portion of chain attached; $3\frac{1}{4}$ (Sirr). No. 520, the beautiful pendant hook, inlaid with silver, figured and described at p. 572. No. 521, a hook pendant, with large decorated boss, rudely coated

with green enamel. The third row consists of eleven large shoe, belt, knee, and garment buckles, not of any great age, but most of them of patterns long since disused. In shape they are round, flat, quadrangular, and oval, and in size they vary from $2\frac{1}{4}$ to $4\frac{1}{4}$ inches. Nos. 522 and 523 were—*Presented by Very Rev. Dean Butler*; 524—*by the Shannon Commissioners*; 526 and 527—*by R. A. Gray, C. E.*; and 528—*by Major John Brown*. The fourth row consists of seventeen buckles, smaller and more antique than the foregoing, and also three swivel-loops, one of which is quite perfect. Many of the buckles present curious forms, and exhibit the fashion in this article at the respective periods to which they belong. No. 540 was found at Newtown-Trim, and was, with 544—*Presented by the Very Rev. Dean Butler*. See Proceedings, vol. vi., p. 171.

The fifth row consists of articles of undoubted antiquity. No. 553 is a large bronze ring, possibly an armlet; $3\frac{3}{4}$ inches in diameter externally; much corroded on its internal surface, where the thin bronze coating having been removed, allows the central filling with lead to be seen. No. 554, ditto, perfect; 4 massive. On its lower and outer edge may be seen an aperture, covered by a bronze plate, through which, probably, lead was poured in; No. 555, a bronze ring, with side apertures, like those on Trays **CCC**, which are represented at p. 579; 2 in greatest diameter. No. 556, ditto, smaller; $1\frac{3}{4}$. Both these were—*Deposited by the Royal Dublin Society*. No. 557, a thick flat ring, of yellowish-red metal; silver plated; $1\frac{3}{8}$.

The seven following articles are the decorated and gilt plates referred to at p. 572; and found in the railway cutting at Navan. No. 558, a long plate, with curved head rising out of upper edge; slightly curved on the flat; the decoration is very sharp, and much of the gilding remains; $1\frac{5}{8}$. No. 559, ditto, larger; figured and described at p. 575. No. 560, a cross-shaped ornament; identical with, and probably cast in the same mould as, No. 562; much coated with verdigris; a little of the gilt plating still remains on its central portion; it has four back-loops; $2\frac{1}{4}$. No. 561, a large decorated boss, in good preservation, figured and described at p. 575, No. 562, identical with 560, is figured at p. 574. No. 563, another ornament, of a different pattern, consisting of a central boss, and three square arms, with an inferior semicircular enlargement; it is

highly and most minutely decorated, and has a central jewel setting; a considerable portion of the gilding still remains over the surface; the decoration on the lateral portion of this specimen resembles twisted animals, like those on the carved bones figured at page 346, whereas that employed on the upper member of the cross consists of a double spire, not unlike the Scandinavian style of ornament, but the centre of each spire is of the true Celtic character. The general features of the ornamentation in this specimen resemble those in No. 561; four loops; $2\frac{5}{8}$. No. 564, a small, oblong, four-cornered plate, like No. 558, but without upper enlargement; decoration very minute, and well plated with gold; two loops; $1\frac{3}{4}$ by $\frac{5}{8}$. The remaining articles in this row, from No. 565 to 572, consist of simple bronze rings, most of them flat, varying in diameter from 1 to $1\frac{1}{4}$ inches.

The sixth row consists of rings, and small buckles. No. 573, a rude flat copper ring; $1\frac{1}{2}$. No. 574, a twisted bronze penannular ring, fastening by a catch, like a modern key-ring; $1\frac{1}{2}$. No. 575, a penannular ring, very similar to some of the silver armlets; large, and four-sided in centre, becoming flattened towards the extremities, the outer edges of which are beautifully decorated with minute circles; it is one of the most elegantly formed articles in the bronze collection, and looks like a child's bracelet; found in the city of Dublin. No. 576, a plain ring; $1\frac{1}{4}$. No. 577, ditto, flat twisted; $1\frac{1}{2}$. No. 578, ditto, with an aperture, as if for the insertion of a stone; possibly a finger-ring. No. 579, a bronze finger-ring. Nos. 580 and 581, ditto, penannular. The remaining articles in this row consist of twenty-seven buckles, several of which are attached to bronze straps, and were probably used with spurs; some resemble hat-buckles; their history is unknown. Nos. 582 and 608 are large belt-buckles. No. 593 is decorated. The last row contains fourteen articles, of a miscellaneous character, numbered from 609 to 623. No. 609 is a large double swivel. No. 610, a scollop-shaped article, like a locket. No. 611, a lozenge-shaped, flat, decorated article; $1\frac{1}{2}$; with a loop at each angle, and a central stone-setting; possibly the pendant of a breast-pin. No. 612, a thin egg-shaped disk, dished, with five holes; apparently a decoration.—*Presented by the Shannon Commissioners.* No. 614, ditto, with four holes. No. 115, ditto, massive, with loop at upper edge; $2\frac{3}{4}$;

found with the foregoing, and other bronze antiquities, at Tullahogue, near Dungannon.—*Presented by Rev. Dr. Porter.* No. 616, a pendant, like a key-hole cover. No. 617, ditto, of graceful cage-work; possibly an earring. No. 618, an ornamental disk, resembling a badge; $1\frac{3}{4}$. No. 619, ditto, rude, lozenge-shaped; $2\frac{5}{8}$. No. 620, a decorated pendant hook, like No. 521. No. 621, a circular open-work stud; $1\frac{3}{4}$. No. 622 ditto, imperfect; and 623, perfect.

BRONZE, VI.—GROUND FLOOR, SECOND COMPARTMENT.

SHELF I., *Tray BBB*, contains a series of articles connected with a suit of chain-armour, and numbered from 1 to 54. No. 1 is a large neck and chest decoration, composed of chain-bosses and shoulder-plates, figured and described at p. 576. Nos. 2 and 3, large bosses, of light golden bronze, originally encircled with small loops, having central concave studs, and trumpet-mouthed apertures on each side. Both articles appear to be identical, and are slightly imperfect. No. 3 is figured and described at p. 578. For description of No. 4, placed in centre of tray, see Fig. 492, p. 578; and for No. 5, see Fig. 493, on page 579. Nos. 6, 7, 8, 9, 10, and 11, belong to a class of article very frequently found in Ireland, and which evidently formed a portion of chain-dress decoration, each consisting of a massive ring, with lateral trumpet-mouths, through which a connecting strap of bronze joined the ring-chains; see Nos. 7 and 8, in which that portion remains. In size they vary from No. 11, which is only $1\frac{1}{2}$, to No. 7, which is $2\frac{3}{4}$ in greatest diameter. In shape they are somewhat oval, and are well represented by Fig. 494, on p. 579. These articles are connected with a chain of double or treble links, and of a larger size than those belonging to the more complete article, No. 1. To each side of this tray, several other strands of chain have been attached, some of which were found along with No. 1; see p. 576; and are numbered according to their several varieties and shape, from 12 to 54. No. 15 is the large double ring, Fig. 490, p. 578. No. 16, a large double ring; $1\frac{3}{8}$ wide; both together are $2\frac{3}{4}$ long. No. 20 is a link of five rings, measuring $3\frac{1}{2}$ by $\frac{3}{4}$. The other rings decrease gradually to the size of those used with No. 1.

Tray CCC contains forty rings, for armour decorations; numbered from 55 to 94. The three first rows contain eighteen rings,

varying in diameter from less than an inch to about 2 inches; plain, perforated on each side for the passage of a traversing connecting strap, or wire, but without lip or decoration around aperture. In thickness they vary from $\frac{1}{4}$ to $\frac{5}{8}$ of an inch; some are solid, and others are hollow; see Nos. 59 and 60. The fourth row contains articles of the same description, but still larger, and all solid, and varying in size from $1\frac{7}{8}$ to $3\frac{1}{8}$. The fifth row consists of three large hollow rings. No. 77, imperfect, is $1\frac{3}{8}$ thick, and $4\frac{1}{4}$ in diameter of ring. No. 78 is thinner, and only $3\frac{3}{4}$. No. 79 is $3\frac{1}{2}$ wide, and $1\frac{1}{4}$ thick. The remaining fifteen rings have lateral apertures, with raised mouths, and vary in size from $1\frac{5}{8}$ to $3\frac{1}{8}$ in greatest diameter. They present much variety, both in shape of ring and later apertures, the latter of which are but slightly everted, and none of the true trumpet-shape. In No. 81, the tubular margins of the apertures incline inwards, and in No. 91 they are peculiarly small. No. 86 is elongated in shape. They are all more or less solid, either from casting, or by subsequent filling up with lead or composition.

Tray DDD contains one hundred and thirty-seven plain bronze rings, numbered from 95 to 231, and varying in diameter from $\frac{7}{8}$ to 3 inches, and in thickness from $\frac{1}{8}$ to $\frac{3}{8}$. None of them appear to have formed portions of loops or ring-chains, but were cast single, and present great diversity in thickness, as well as fineness of casting. They are all solid, and belong to that class of article heretofore styled "ring-money;" but in their formation there does not appear to be any arrangement as to either size or weight. They were probably used either for harness, or in connexion with armour or personal decoration. The two last articles on this tray are slender and penannular; both may have been used as bracelets.

Tray EEE contains three hundred and sixty-nine small bronze rings, numbered from 232 to 600. The first twelve rows are made up of small thick rings, varying in width from $\frac{5}{8}$ to $\frac{3}{4}$ of an inch; all cast solid; single, and mostly flat. Some are a little worn on one side of the inner edge, as if from attrition; see No. 463. The eleven lower rows are composed of much slighter and larger rings, mostly flat, and varying in size from $\frac{3}{4}$ to $1\frac{3}{8}$; several are corroded on the surface. Nos. 544, 545, and 546, are peculiarly thick. No. 593 looks as if punched out of a piece of metal, and not cast. Nos. 471, 473, 478, 479, and 486, were found at Headford, county Galway, and—

Presented by R. J. M. St. George, Esq. A large proportion of the remainder were discovered near Cashel, county Tipperary.

Tray **FFF** contains thirty-two articles, totally different in character from the foregoing, and consisting of a few small, and a large number of massive rings; numbered from 601 to 632. The top row contains seven thick rings, from $\frac{1}{8}$ to $2\frac{1}{4}$ in diameter. No. 601 is not closed, and has transverse perforations on both sides of section, as if for uniting it by a wire. No. 602, a broad ring, ornamented on surface by transverse and oblique lines. No. 603 was, with 608—*Presented by the Shannon Commissioners.* The latter was found near the site of the old Bridge of Banagher. In the second row, Nos. 609 to 614 form a chain of six rings, varying from $1\frac{3}{8}$ to $3\frac{1}{2}$ in diameter, looped into each other by three enclosed specimens. No. 615 is a solid bronze armlet, not Irish.

The third row contains four slender rings, averaging $3\frac{1}{2}$ inches across, on the two first of which play small perfect cast rings, one of which is much worn, as if from long use. The rings on the fourth and fifth rows are larger and thicker, and were either cast in two sections, and then united, or hammered upon a mandrill, and subsequently filled with a composition. One small ring plays on No. 625, and two on No. 626; figured at p. 570. No. 621 was found in gravel, under 4 feet of peat, in townland of Tinderry, barony of Eliogarty, county of Tipperary, and—*Presented by the Board of Works.* The small rings which play on the larger ones are identical in character with many of those arranged on Tray **EEE**. The six last are very large, averaging $4\frac{1}{4}$ wide; the last is $1\frac{1}{4}$ thick. Some are hollow, and others partially so; see No. 631, where a want on the side shows the interior, as well as the mode of joining. All these were evidently worn as personal decorations on the extremities. No. 630 was found at Headford, county Galway, and—*Presented by R. J. M. St. George, Esq.*

Tray **GGG** contains fifty bronze buckles, double or single, of different patterns, numbered from 633 to 682; but none are of much antiquity; in size they vary from $\frac{7}{8}$ to $\frac{1}{2}$ inches; some were possibly used in harness, but others were evidently personal. No. 660 was—*Presented by R. A. Gray, C. E.*

RAIL-CASE **P**, continued from p. 518, contains a number of small specimens, appertaining to tools, food implements, household eco-

mony, music, personal decoration, and miscellaneous articles, not placed on trays, but numbered in continuation of their respective species, most of which have already been described.

Tools, continued from p. 552.—No. 86, a brass awl, with square shoulder; $3\frac{5}{8}$ inches long. No. 87, ditto, from Gweedore, and—*Presented by Lord George Hill*. No. 88, a curved article, with flattened extremities, like a modelling tool, resembling a stylus; $4\frac{1}{8}$. No. 89, ditto, single, notched at one end; plate portion decorated on one side; $2\frac{1}{2}$. No. 90, ditto, not notched. No. 91, a narrow, curved implement, flattened at one end; 7: see No. 101. No. 92, a very perfect narrow spoon-shaped implement, with circular handle; 7. No. 93, a long narrow tool, sharp at one end, bent and circular at the other, like a modelling tool; $6\frac{1}{8}$. No. 94, ditto, but imperfect in point; $4\frac{1}{8}$. No. 95, a long, narrow, curved implement, with boss near centre; $9\frac{3}{4}$. No. 96, a bronze circular file, straight, like a modelling tool. No. 97, bronze implement, like a tool handle; $4\frac{1}{4}$. No. 98, a straight implement chisel-edged at both ends. No. 99, a small bronze forceps-shaped implement, with half-round spring; holes in legs, as if for the insertion of points; $2\frac{3}{8}$. No. 100, a hinged implement, evidently a tool, but of unknown use; $3\frac{7}{8}$ (Dawson). No. 101, a two-pronged article, like a surgical instrument, riveted at one end; $5\frac{3}{8}$ —*Presented, with No. 91, by Shannon Commissioners*. No. 102, fragment of a delicate jeweller's forceps; $2\frac{7}{8}$. No. 103, a small bronze tool, square at one end, to fit aperture in leg of No. 99.

Articles of Household Economy, continued from p. 553.—Eighteen needles, numbered from 77 to 94, and varying in length from $1\frac{5}{8}$ to $4\frac{1}{4}$. Nos. 77 and 78 are figured at p. 546. No. 96, from Gweedore, was—*Presented by Lord George Hill*; and No. 93, from Dublin—*by Park Neville, C. E.* No. 95, a large brass thimble, found at Trim—*Presented by Dean Butler*. No. 96, the toilet article, figured at p. 549. No. 97, ditto, larger; $3\frac{5}{8}$. No. 98, ditto, plain, with decorated head, wide fork; $3\frac{1}{4}$. No. 99, an ear-scoop, handle decorated; $3\frac{1}{2}$. No. 100, ditto, plain; a fine example of antique bronze, with greenish polished patina; $3\frac{1}{2}$. No. 101, the bronze razor figured and described at p. 549. No. 102, ditto, smaller; $2\frac{3}{4}$. No. 103, ditto, imperfect; $2\frac{1}{4}$. No. 104, a tweezers, figured at p. 549; procured with No. 110; from Ballinderry. No. 105, ditto, slender, decorated; $2\frac{3}{8}$. No. 106, ditto, plain. No. 107, ditto, slender.

No. 108, ditto, small broad blade, with running loop ring at end; $1\frac{3}{4}$. No. 109, ditto, small, rude; $1\frac{1}{2}$. No. 110, ditto. No. 111, the ring-lock figured at p. 548. No. 112, top of weight-box. No. 113, a weight-box, perfect, and highly ornamented, with compartment at bottom for holding small weights; $1\frac{3}{4}$. No. 114, brass ink-bottle, in shape of trooper's boot; $3\frac{1}{8}$ long. No. 115, a brass ink-bottle, with rude decorations on sides; suspending loops; $1\frac{7}{8}$. No. 116, ditto, oval, with detached cover; five suspending loops; $2\frac{5}{8}$.

Personal Decorations—continued from Tray **AAA**. No. 621, a large double-looped button, with rude cast decorations in front, each perforated with double holes behind; $3\frac{1}{2}$ inches in length of article. No. 622, a plain button. No. 623, the enamelled button figured at page 572. No. 624, an enamelled button covered with glass; "found in the mountain, four miles from the Seven Churches, Glendalough." No. 625, a double shirt-stud, or wrist-button; perfect, decorated. No. 626, a portion of antique buckle. No. 627, a pendant, with loops posteriorly. No. 628, a piece of decorated open-work, like the end of an earring. No. 629, a small bronze plate, decorated with the figure of a griffin; riveted. No. 630, ditto, of open-work.

Next follows a collection of antique Thumb and Finger-Rings, the largest of which, No. 631, here figured the true size, is apparently of very great antiquity. The square central depression is roughened irregularly, possibly for the reception of enamel paste; but in the side concave hollows the raised markings are too regular for that purpose, and much resemble some of those lines incised on the stones of the tumulus at New Grange; the hoop is also decorated, but is slightly corroded; it was found in the county Cavan. No. 632, a large brass thumb-ring, with seal, and C. I. H. B. in Irish characters at top; $1\frac{1}{2}$ wide. No. 633, ditto, with monogram on stamp; has remains of gilding. No. 634, a thumb-ring, resembling No. 631. No. 635, a broad ring, rudely decorated on face (Dawson). No. 636, a thumb-ring, with torque-pattern hoop, and seal at top, bearing a heart and ancient inscription; remains of gilding; probably ecclesiastical. The remaining specimens of this description

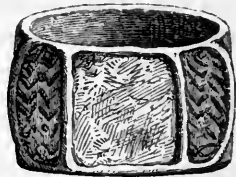


Fig. 497, No. 631.

are finger-rings. Nos. 637, 638, and 639, are small, flat, decorated hoops, enlarged in front. No. 640, a thin, flat hoop of red metal, with a rude decoration representing a heart between two hands. No. 641, a finger-hoop, open at side, rudely decorated with antique markings. No. 642, a plain thick hoop, with an inscription on the inside; found in "an ancient building, in the Co. Carlow." No. 643, a small thin decorated hoop. No. 644, a thin twisted hoop, with a heart-shaped decoration in front. No. 645, a hoop, with a raised antique stone-setting. No. 646, a chain of three decorated rings, looped in each other (Sirr). No. 647, a large collection of ring-chains, like those already described and figured at p. 577; well cast; several consisting of five loops, and one of seven; many are joined together with bronze straps; found, with a gold ornament, in the county of Sligo. Nos. 648, 649, and 650, are three small bronze straps, cleft at one end, and solid at the other—possibly spur loops.

The total number of articles of bronze or brass belonging to Personal Decoration, not including spurs, at present in the Museum, amounts to 1433, viz.:—620 on the four large trays in the Gallery; 30 in this rail-case; 683 on the six small trays in the second compartment of the northern ground-floor, of which there are a great number of duplicates; and 100 upon the different "Find" trays in the third compartment on the southern ground floor.

AMUSEMENTS.—The only object in this Case apparently used in a game of any description, is the bronze die, No. 1, measuring $\frac{7}{8}$ of an inch on each face, and having a heart, diamond, club, and spade, on four sides, the remaining faces being blank.

MUSICAL INSTRUMENTS—are represented by a collection of twenty-two harp pins, varying in length from $2\frac{1}{8}$ to $4\frac{1}{8}$ inches; square in the head, and perforated in the small extremity for holding the string. They are numbered from 17 to 32, in continuation of the trumpets, described at p. 633; the majority were obtained from crannoges. [For miscellaneous articles, see continuation on p. 636.]

HORSE-TRAPPINGS.

Connected with personal decoration and costume, *Horse-Trappings* follow next in order, according to the arrangement and the classification adopted in this Museum. Such frequent mention is made in early Irish writings of the chariot-roads,

together with chariots, horses, harness, and horse-trappings, that we might naturally expect to find some remnants of them even at the present day. Topographers have recognised the sites of some of our ancient roads, especially those in the vicinity of the remains of the royal residence at Tara. Chariots, with their occupants, and mounted warriors, have been sculptured on a few memorial crosses, especially those of Kells and Kildispeen; and one of the largest collections of ancient harness in north-western Europe is that now preserved in the Royal Irish Academy. It is arranged on thirteen Trays, from **HHH** to **UUU**, in the second and third compartments on the ground-floor in the northern side of the Museum; and consists of bronze spurs, stirrups, saddle-knobs, bridle-bits and pendants, harness-studs, bosses, and other decorations, a chariot trace, cro-tals, &c., amounting altogether to as many as 282 specimens.

SPURS, although now fallen into disuse as a portion of the indispensable costume of an equestrian, were articles of great importance from about the middle period of the Christian era to a comparatively recent day. In shape they presented great variety, and had much art expended upon them; some were very costly, and used as the insignia of knighthood. They were made of iron, bronze, silver, and even gold; many were gilt. The Academy possesses a collection of forty spurs, arranged on Trays **HHH**, and **III**, including types of nearly all the known varieties of these articles, which hold a middle place between personal costume and horse-trappings. The earliest form of spur was that known as the "goad" or "prick spur," consisting of a short conical spike projecting from the back of the fork or bow, and without



Fig. 498, No. 1.

a rowel or wheel. Of this very rare variety, the accompanying illustration, Fig. 498, No. 1, is a good specimen. Its total length is $4\frac{1}{2}$ inches; the legs of the fork are unsymmetrical,

the inner one being the shorter, and the strap-holes are different on each side. No. 17, Figure 499, is the representative of several similar spurs in the Collection, remarkable for the curved bars of the fork or bow, with loops on its lower edge, for the attachment of straps or chains; the rowel is of moderate size, and the lower and back portion of the bow is rudely decorated. Small bronze loops are attached to the terminal apertures in the fork; its total length is 6 inches. It was found at St. Wols-tan's, on the Liffey,

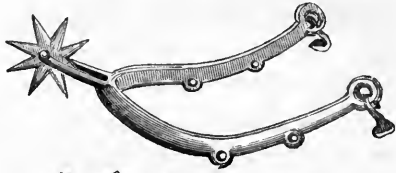


Fig. 499, No. 17

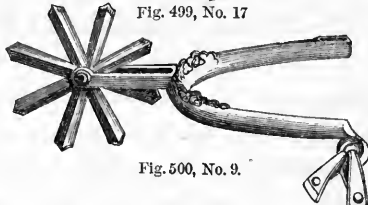


Fig. 500, No. 9.

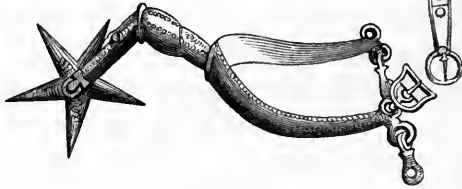


Fig. 501, No. 20.

county of Kildare. The second illustration, No. 9, Fig. 500, represents one of the most perfect and beautiful articles of its kind which has been discovered in the British Isles,—of antique bronze, covered with a smooth greenish patina; very narrow in the bow, and having a large blunt rowel of eight bars, greatly disproportionate to the other parts of the article. It is $6\frac{1}{8}$ inches long, and only $2\frac{1}{2}$ in the clear of the fork, the terminations of which are, as in the case of the prick-spur, unsymmetrical, having on one side a mortice-hole, and on the other a loop, projecting below its edge. From this loop depend two metal straps—one clasped, for the attachment of a leather fastening, the other hinged in the centre, and ending in a buckle; both in the highest preservation, and decorated with minute notches along their edges. These and similar straps and buckles, afford us a clue to the

uses of a great number of small articles attached to Tray **AAA**, or placed in Rail-Case **P**. Posteriorly, the upper edge of the bow is decorated with a minute open-work trefoil pattern. It, and another article of the same description, were procured with the Dawson Collection, and said to have been found in the same locality, with an interval of many years. By the fourth figure is presented the last variety, the characteristic of which consists in having the rowel-stem large, and bent at an angle, so as in many specimens to represent the human arm. In this example, No. 20, Fig. 501, the bow is only $2\frac{1}{2}$ inches in the clear, and bent so as to fit close round the tendo-Achillis, and pass beneath the projections of the ankles. Its total length is $6\frac{3}{4}$ inches, of which the stem and rowel are more than one-half. It is highly decorated all over the external surface, chiefly with that form of beaded ornament shown on the costume of the figure represented among the miscellaneous articles at page 640, so that it probably belongs to the same age. The buckles and loops are of iron. Spurs of this description, with large rowels and angular stems, resemble those shown upon the effigies of knights in mail armour. There are six specimens of this description in the Collection.* It is remarkable, that while the bronze spurs are so small in the bow as to appear like heel-spurs, many of those of iron are wide enough to fit on the calf of the leg.

SADDLES—in Irish, *daillait*, a saddle—are represented among the bronzes by four pommel-decorations on Tray **ooo**, of which the accompanying figure, drawn one-third the natural size, from No. 149,

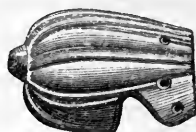


Fig. 502. No. 149.

* Although there is no ancient Irish name for spur or stirrup, the term *Deili-geen brostoe*—"the thorn that incites"—is occasionally applied to a shoe-spur in Connaught. In O'Dugan and O'Heerin's *Tepographical Poems*, golden spurs (*spuir*) are mentioned under A. D. 1372-1420. Spencer says the Irish had neither saddles nor stirrups; but, like many other assertions of that author, it is refuted by modern investigations. Metal stirrups were unknown in England until about the sixteenth century. See Fosbroke's *Encyclopædia of Antiquities*.

is a good illustration. It is cut off beneath obliquely, and spreads out into flanges with rivet-holes for attaching it to the saddle-tree. In the great Brahe Museum at Scokloster, near Upsala, may be seen the largest collection of ancient saddlery at present in Europe; and there several such articles as that figured above have been preserved.* Heretofore, these articles were believed to be sword-pommels.

There are eight bronze STIRRUPS arranged on Tray **JJJ**, of great diversity of form, and some of them highly decorated, of which the following illustrations are good examples.

No. 46, Fig. 503, is a very small triangular stirrup, $4\frac{3}{5}$ inches high, and $3\frac{3}{4}$ wide, with the strap-bar placed behind a decorated plate which rises above its level; but it is all cast in the one



Fig. 503. No. 46.



Fig. 504. No. 47.

piece. The oval ornament in front represents a human face. No. 47, Fig. 504, is small, and highly decorated; 5 inches high, and 4 wide, with a square swivel-staple at top for the attachment of the strap, the wheel-shaped foot-plate being $2\frac{3}{4}$ wide. Some of the bronze stirrups in the Collection were gilt.

BRIDLE-BITS—in Irish, *bealmhach*—abound in the Academy's Collection, amounting to as many as eighty-eight specimens, either complete or fragmentary, and are arranged on five Trays, from **KKK** to **OOO**. They may be divided into—1, the simple riding snaffle or burdoon, with a strong mouth-piece in two parts, having an exceedingly well-fitted hinge-stud between, and large cheek-rings, which, as well as the extremities of the bit, are in many specimens highly ornamented, and in some instances jewelled or enamelled: 2, the double-

* The Author is indebted to the Baron von Kræmer, Governor of Upsala, for great kindness in facilitating his antiquarian researches while in that part of Sweden in the summer of 1859.

rein driving-bit, without an intermediate piece in the hinge, but with metal straps or rods, running on the cheek-rings for the attachment of the reins; and 3, the small (and probably driving) bit with an iron mouth-piece, and no rings, but broad and in most instances highly decorated open-work check-plates for the attachment of the reins.

The uppermost of the three illustrations, on page 605, is a good example of the first variety, with a raised cast ornament on the mouth-piece, and decorated studs raised on one face of the rings, for limiting their play in the holes of the bit. The mode in which these rings were formed is a subject of interest to the inquirer into the manufactures and workmanship of the ancients. In several instances the ring is spliced and riveted: see Nos. 60, and 61. In a few, a brazed joining may be observed on the outer side of the ring. The majority, however, appear to have been cast along with the mouth-piece; but what contrivance in the moulding, both of this portion and in that of the hinge, was employed, is matter of speculation; as in No. 75, on Tray **MMMM**, and which was never used, the narrow portion of the ring barely turns in its collar. In several instances the ring was cast with but one stud, and the second was riveted to an enlarged flat boss on the opposite side. In some cases the pivot passed through the ring, but in others it went down only for a sufficient depth to fasten the stud. By this means this decorated portion of the ring may, in the casting, have been removed from the mouth-piece, and thus interfered less with the flow of the metal; and could also be fitted and adjusted better subsequently. In two very remarkable examples, Nos. 77 and 78, the ring was cast in a penannular form, with hollow bulbs at the extremities, into which the pivot that played in the hole of the mouth-piece passed—by springing back the ring-ends. The pivot was then riveted across; and in No. 77 both it and the rivets were formed of cast-iron, the uncut slag of which still remains. For the details of this curious combination of bronze and iron, see page 617.

No. 55, on Tray **LLL**, Fig. 505, is 10^{2/3} inches long, and 3 in diameter of each ring, the upper decorated studs of which are fastened by pivots; and, like all the others of this variety, the intermediate space between them is smaller than the rest of the ring, although not caused by wearing, as in other cases. It was found with pendant, Fig. 517, and another bridle-bit, on an ancient battle-field in the valley between the hills of Screen and Tara, county Meath. The second and third illustrations, Figs. 506 and 507, from Nos. 67 and 71 represent the second variety. No. 67 is 11 $\frac{1}{2}$ inches long,



Fig. 505, No. 55.

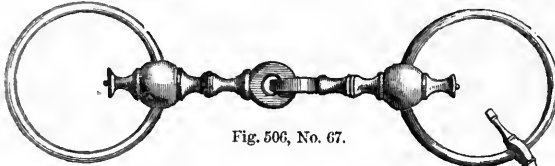


Fig. 506, No. 67.

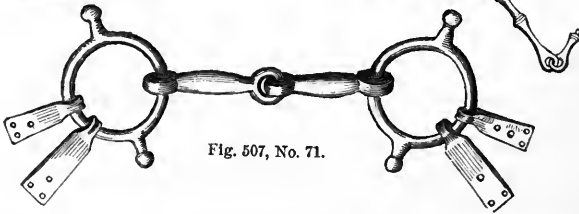


Fig. 507, No. 71.

and 3 $\frac{3}{8}$ across the ring, which plays freely through the bit-hole, and has bronze loops attached to it on both sides, one of which, 5 inches long, is here represented—in what manner the reins were attached to these rods is undetermined. The third illustration, Fig. 507, No. 71, also belongs to the second variety; and, like the foregoing, the mouth-pieces hinge without an intermediate portion. In place of studs, the rings have knobbed bars projecting from their outer margins, and four of the metal rein-staples are still *in situ*. It is much smaller than any of the foregoing, measuring in extreme

length but 9 inches; each ring is $2\frac{1}{2}$ wide, exclusive of the projections; it is one of the articles discovered at Navan: see page 573. Pieces of the buff leather remain between the sides of the metal straps in some specimens.

The details of several of the snaffle-bits of the first variety are well worthy of examination, presenting great beauty both in design and execution, examples of which are afforded by the two following cuts, drawn from Nos. 52 and 64. The former is a portion of a perfect well-preserved bit, $9\frac{1}{2}$ inches long by $2\frac{3}{4}$ wide in

the ring, differing in decoration from that shown by Fig. 506. In the latter, drawn from a slender specimen, $12\frac{1}{4}$ inches long, and $3\frac{5}{8}$ wide in diameter of ring, the studs are counter-sunk for the in-



Fig. 508, No. 52.

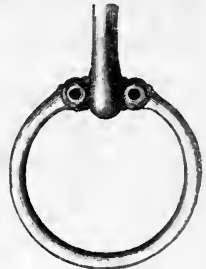


Fig. 509, No. 64.

sertion either of stones, glass, or enamel. There are thirty-seven bits of these two varieties, twenty of which are quite perfect, and most of them in fine preservation.*

In the third variety there is much greater diversity both in shape and ornamentation than in the two former; but, although there are the remains of as many as fifty-one distinct specimens, in no single instance is this form of bridle-bit perfect on both sides, and connected by its iron mouth-piece.† This may be accounted for by the lightness of the cheek-pieces themselves rendering them liable to fracture, but is particularly due to the circumstance of the mouth-piece having been formed of iron. At first the cheek-plate was a plain curved

* In the Proceedings and Papers of the Kilkenny and South-East of Ireland Archaeological Society for November, 1857, may be seen a very beautiful chromo-lithograph of a bridle-bit, with highly decorated and enamelled flat rings, said to be found at Kileevan, near Analore; but neither the Guelloche pattern, nor the Grecian scroll thereon, is Irish—the former is purely Scandinavian.

† In Mr. Shirley's Account of the Territory and Dominion of Farney, may be seen an engraving of a very perfect bit of this description, with bronze cheek-plates attached to the iron mouth-piece, p. 22.

plate of metal turning backwards from a straight bar to which the iron mouth-piece was attached, and having a semi-oval loop behind, on which the rein-staples—generally two in number—played, as shown in the three following illustrations, drawn from specimens on Trays **NNN** and **OOO**. No. 101, Fig. 510 is plain, and measures 6 inches in its extreme width. No. 99, Fig. 511, imperfect, is beautifully decorated

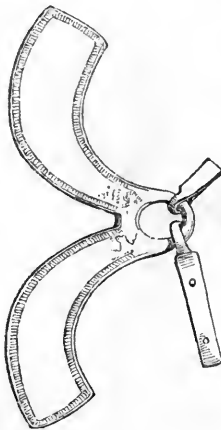


Fig. 510, No. 101.



Fig. 511, No. 99.

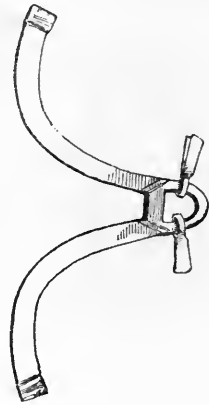


Fig. 512, No. 95.

with a raised ornament somewhat in that of the style of the twelfth century. No. 95, Fig. 512, is remarkably slender, and measures 6 inches across; the two metal rein-straps still remain on the posterior loop of this variety, of which there are two examples in the Collection;—both found in the river Bann, and—*Presented by the Board of Works*.

In the next series of illustrations, we perceive an advance both in ornamentation and purpose; for, by attaching the reins at a distance from the mouth-piece, a better purchase was secured, and the power of a curb effected. This is well shown in No. 103, Fig. 513, in which the cheek-pieces, composed of single bars, $4\frac{3}{4}$ wide, end in dogs' heads, and to the posterior member of which the rein-staples are attached. A still more simple bridle-bit is that shown by No. 91, Fig. 515: it is $4\frac{1}{4}$ wide, flat on one side, but triangular, and also decorated

on the other. A portion of the iron mouth-piece and two rein-staples remain. Of the decorated specimens, there are at least three sub-varieties—the *Horse-pattern* of which, No. 132, Fig. 514, imperfect, is a good example. It is much worn, but, when complete, measured $4\frac{3}{4}$ inches in width; it was—*Presented by W. Longfield, Esq.* Of this variety there are five



Fig. 513, No. 103.

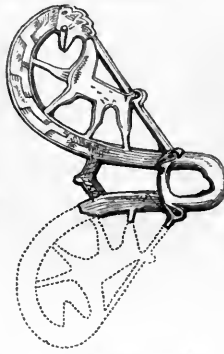


Fig. 514, No. 132.



Fig. 515, No. 91.

other specimens, Nos. 112, 113, 121, 122, and 130. Another form of decoration, belonging to the same description of cheek-piece, is the *Dragon-pattern*, of which there are several specimens, see Nos. 105 to 108, 110, 111, 117, 120, 124 to 128, and 131, &c. A third sub-variety of cheek-piece ornamentation resembles an inverted letter B—all the four specimens of which are beautifully cast, and in high preservation, see Nos. 104, 109, 116, and 125.

The fact of the combination of bronze and iron, perhaps to economise the former, in all the specimens of the third variety, as well as the style of ornamentation, evidently refers these articles to a later period than those of the first and second varieties. In a few comparatively modern specimens—see Nos. 134 and 135—the cheek-piece is straight, like that in a snaffle-bit of the present day. For the details of the cheek-pieces, see description of Trays **NNN** and **OOO**, pages 618 to 619.

PENDANTS.—Scarcely a year passes without some bronze

spur-shaped articles, like those figured below, being found in our bogs, chiefly in Connaught. They vary in length from 10 to 14 inches, and in breadth from 4 to 8. Many are highly decorated, and some were enamelled on the enlarged extremities of the stem and bow (see Fig. 519). The straight portion terminates in a knob, either plain or decorated; or is hollow for holding a plume of hair or feathers, like similar head-stall ornaments attached to the bridles of most cavalry regiments until very recently. By the public these articles have been regarded either as spurs worn on large jack-boots, or decorations affixed to forehead-bands, and which rose above the horses' heads. Others believe them to be censer-holders; but a careful examination and comparison of the thirty-two specimens on Trays **PPP**, **QQQ**, and **RRR**, will show that none of these hypotheses are tenable. They were evidently bridle ornaments, but are too narrow to fit on any horse's head; and the loops at the

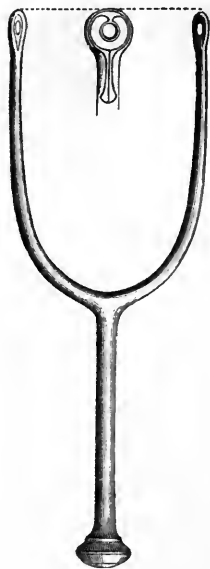


Fig. 516. No. 171.



Fig. 517. No. 177.

ends of the forked extremities, or (as in some cases) on the insides of these portions, are in nearly every instance worn in such a manner as proves that they were

suspended, and not worn in an upright position. Figures 516 and 517, from Nos. 171 and 177, represent typical specimens of this ancient horse-trapping. The former is $12\frac{1}{2}$ inches long, and $4\frac{1}{8}$ wide; it is in fine preservation, and is decorated both upon

the knob and external surfaces of the prongs by a raised cast line, shown in the central illustration of that Figure. It was

found along with the bridle-bit, Fig. 505, and is decorated in the same manner.

No. 177, Fig. 517, is shorter and broader, and the ornamentation more elaborate; it is here drawn in perspective, in order to exhibit the decoration at the ends of the bow and stem, as well as the suspending loops, which are placed at right angles with the line of the fork, and, like all the others of this variety, are worn underneath: one leg is shorter than the other. By the two following cuts (one-half the true size) are shown the details of the extremities of Nos. 171 and 157, the former of which is figured above; and the latter, which is drawn from a very perfect and beautiful specimen—*Deposited by the Royal Dublin Society*—also shows the remains of red enamel upon the decorated boss within the outer rim. These articles would appear to have been slung from the rings of the bridle-bit, or were attached beneath the horse's jowl. In the latter position, they could only serve as ornaments; in the former, they would prevent the horse from grazing: see also the author's observations in the *Proceedings*, vol. vii., page 161.

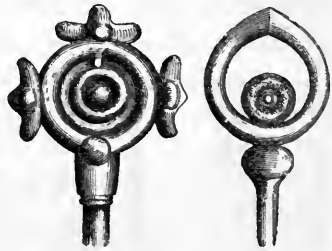


Fig. 518. No. 171. Fig. 519. No. 157.

Vallancey figured one of these pendants, from a specimen which still remains in the Museum of Trinity College, and stated that it had been suspended by *gold* chains from the bridle-rings; but acknowledged that he never saw the chains, as they were “secreted by the peasant that found it.” As, however, in the case of the “spectacle-brooch” alluded to at page 566, an endeavour was made either to carry out the views of the author, or to establish the rumour as to the state in which the article was found—modern brass chains were added, as shown in the drawing in the *Collectanea*, vol. iv., pl. viii., fig. 1, and as may still be seen attached to the specimen. In order to make good the spur theory, a dealer absolutely cut

a slit in the knob, and inserted an iron rowel in one of these articles: see No. 175, page 621.

In the Book of Rights we read of various highly-caparisoned steeds among the stipends of the chief kings, and the tributes of the chieftains: and with them coats of mail and “rings” (possibly such as those already described at page 576, &c.), together with *Scings*, a term which O’Reilly translates “horse-trapping,” and which was probably part of a bridle, or its pendant. We also read of “bridles of old silver,” and in one entry of “twenty bridles, flowing, gorgeous with cruan and carbuncle.”*

CHARIOT FURNITURE.—Among the collection of articles found at Navan, and enumerated at page 573, was a boss of iron, $3\frac{3}{4}$ inches in diameter, covered on its external face with

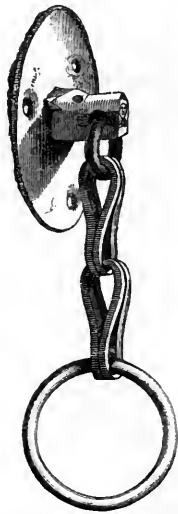


Fig. 520. No. 139.

a plate of white metal, from the centre of which projects a massive bronze stud, in the shape of a dog’s head (like that of a blood-hound), $1\frac{1}{2}$ inch long, having a human face engraved on its extremity. From a large aperture in this projection depends a piece of bronze chain, composed of two rings and two double loops, the latter resembling those of iron found in crannoges. There are but two purposes to which this article, represented by Fig. 520, could be assigned,—that of the attachment of a trace, or a straddle-terrett, for suspending the back-band or the shafts of a chariot (*Carbat*); but the size of the nail-holes in the boss, and an examination of the wearing

in the stud-hole, inclines us to adopt the former hypothesis.

HARNESS STUDS, BOSSES, ROSETTES, and other Horse-Trappings, many of undoubted antiquity, and amounting to sixty-one specimens, have been arranged on Trays **SSS** and **TTT**, in

* Cruan, says Dr. O’Donovan, in his translation of the Book of Rights, was “some precious stone of a red and yellow colour,”—orange; probably it was amber.

the Northern Compartment of the ground-floor. They consist chiefly of decorated rings, or triangular loops: with three star-like staples attached, in several of which, as well as in those belonging to bridles, portions of thick buff leather remain. The accompanying illustration, drawn one-half the true size, from No. 194, found in the river Nore, affords a good example of this description of article, which was evidently a portion of the *Tiarach*, or breeching. Some of these specimens of ancient harness are elaborately decorated, first in casting, and afterwards, by the punch and graver.*



Fig. 521. No. 194.

CATTLE-BELLS and CROTALS.—Under the head of horse-trappings may be placed small globular bells, and pear-shaped articles called crotals, of the same nature, and of which the subjoined cuts are good illustrations. Fig. 522, No. 279, represents a globular sheep-bell, $2\frac{1}{2}$ inches in diameter, having at top a staple for its attachment to a strap or cord, and formed of two hemispheres of thin metal, joined in the centre, with apertures in both; those in the lower being connected by a wide split. The lower segment is decorated; and within the bell is a piece of metal, which acts as a clapper. A very musical sound is emitted by this and other bells of the same shape. On the bottom of several are the

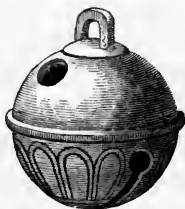


Fig. 522, No. 279.



Fig. 523, No. 282.

* Simple and distinct as those articles now appear to the eye of common sense, they played their part in the theoretical archæology of the past; for one of these has been figured by Vallancey as a "triangular talisman," see *Collectanea*, vol. iv. pl. xiv., fig. vi.

owners' initials. Of this variety of article there are thirteen specimens in the Collection, arranged on Tray **UUU**, and ranging in size from $1\frac{1}{4}$ to $2\frac{3}{4}$ inches, as in that figured on p. 612. The Irish antiquaries of the last century described and figured these small globular cattle-bells as crotals, confounding them with the ecclesiastical bells of a totally different shape and use; thus, Ledwich, and others following him, called such an article a "Bell Cymbal used by the clergy, and denominated a crotalum by the Latins; consisting of two metallic spheres, hollow, and containing some grains of metal to make them sound, being connected by a flexible shank." And, in order to make good the latter assertion, he represented two sheep-bells joined together. See "The Antiquities of Ireland," second edition, fig. v., p. 228. Walker, and later writers, followed in the same track. In connexion with articles of this description, may be seen a number of small, tinkling, globular bells, fixed on flexible wires, and evidently used for attaching to dogs or horses.

About thirty years ago, a great number of antique articles of a peculiar-coloured bronze were discovered at a place called Dowris, near Parsonstown, in the King's County, to which we have already referred at page 360 (see also trumpets, p. 626). Among these were discovered several hollow, pear-shaped bells, with rings at top, and pieces of metal internally; they, however, emit a very dull, feeble sound, but are evidently of the same class of articles as the foregoing, although, when found, they were believed to be the crotals of the ancient Druid priests, used in augury, and when pronouncing their oracles. That they are of great antiquity, may be inferred from the character of the metal of which they are composed, as well as the circumstance under which they were found. Figure 523, drawn from No. 282, on Tray **UUU**, $6\frac{1}{2}$ inches long, including the ring, and 8 in girth, is a good example of this article. In casting, the metal appears to have been poured into the mould by an aperture at the side, through which the

core of clay that contained the metal-clapper was broken up. In some instances the article is closed; in others, there is a narrow side aperture. The line of junction between the two sides of the mould is very ostensible in all, so that one of these would appear to have been cast in two portions, and joined afterwards. The rings and staples were cast together, possibly in the same manner as the bridle-bits described at page 604. That figured on page 612, and the two other similar articles in the Museum, were presented by Lord Oxmantown to the late Dean Dawson, with whose collection they came into the possession of the Academy. See Proceedings, Vol. iv., pages 237 and 423; and also Dublin Penny Journal, Vol. i., p. 376.

The following list enumerates all the horse-trappings, and articles appertaining thereto, in the Collection.

BRONZE, VI.—NORTHERN GROUND-FLOOR, CENTRAL COMPARTMENT.

SHELF II., *Tray HHH*, contains twenty-one spurs, numbered from 1 to 21. No. 1 is figured at p. 600—see, also, Proc., vol. vi., p. 203. Nos. 2 to 8, on first and second rows, are antique bronze spurs, with cleft stems for rowels, and chiefly remarkable for the apertures at the end of the prongs, for attaching buckles or straps to. These are double in all, except No. 7, which has an open-worked bow. No. 5 was—*Presented by W. R. Wilde, Esq.* Nos. 9 to 12 are probably heel-spurs, with large rowels, mostly blunt; very narrow in the bow. No. 9 is figured on p. 601. No. 10 is the fellow of No. 9, and, with No. 11, has bronze straps and buckles attached to the bow-loops. In the latter, one prong is much longer than the other (Dawson). No. 12, a very narrow heel-spur, $5\frac{1}{2}$ inches long, and only $1\frac{1}{2}$ between prongs, which are sharp, and possibly passed into the leather; the rowel is $2\frac{1}{4}$ in diameter. The next row consists of five curved spurs, with loops on their lower edges, of which No. 17, figured on p. 601, is the type. No. 13 was—*Presented by the Rev. T. Porter.* In the fifth row are four spurs, with large sharp rowels, in which the rowel-stem is bent at an angle. No. 18 is highly gilt. No. 20 is figured and described at

p. 601, as the type of this sub-variety. No. 21 is $6\frac{1}{2}$ long, and only $2\frac{1}{2}$ between extremities of bow. The three last are ornamented.

Tray III contains seventeen spurs, and two rowels, numbered from 22 to 40. No. 22, ornamented on rowel and sides, is of the same description as No. 20, and only $2\frac{3}{4}$ wide. Nos. 23 and 24 have the rowel-stems bent at right angles with the bow. No. 27 (Sirr). No. 28, decorated with metal straps and buckles. In No. 32 the prongs of the bow are enlarged, and the rowel-stem decreased. No. 33, imperfect on one side, has a loop at junction of stem with bow, as if to support it by a strap attached to the boot. No 34 was—*Presented by Maurice O'Connell, Esq.* Nos. 37 and 38, large bronze rowels, remainder of spurs wanting. No. 39, antique spur, with loops on lower edge of bow; found at Athlone.—*Presented by P. Brophy, Esq.* No. 40, a brass spur, with twisted stem, and brass rowel; not antique.

Tray JJJ contains eight bronze stirrups, numbered in continuation of the foregoing, from 41 to 48, and presenting very great diversity, both in form and ornamentation. No. 41, large, 6 inches high, and 5 wide; three bars in foot-piece, bow wide, stud in front of strap-aperture (Dawson). No. 42, small, plain bow and square swivel-staple, cross-bar in foot-piece; $4\frac{5}{8}$ high, $3\frac{1}{4}$ broad. No. 43, elliptical both in bow and open-worked foot-plate; decorated; has a shell-shaped ornament in front of strap-hole; 6. No. 44, massive, highly decorated on the surface, and originally gilt; open-work foot-plate, $2\frac{1}{2}$ wide; strap-bar stands in centre of top of bow; has a highly decorated cast ornament in front; $6\frac{1}{2}$ high, $4\frac{1}{4}$ broad. No. 45, plain, modern shape, solid foot-plate, 5. No. 46, narrow and triangular, figured at p. 603. No. 47, figured at p. 603 (Dawson). No. 48, imperfect, large, massive, open-worked foot-plate; 5 wide, and $2\frac{1}{2}$ broad.

SHELF III, Tray KKK, contains ten snaffle bridle-bits; several ornamented; numbered from 49 to 58. No. 49, the massive mouth-piece of a bronze bridle-bit, with small iron rings, probably not the originals; 9. No. 50, perfect; 10; ring $2\frac{7}{8}$, with decorated studs; found at Ballynaminton, King's County, and—*Presented by G. Marsh, Esq.*—See Proc., vol. iii., p. 185. No. 51, perfect, slightly corroded; $10\frac{1}{2}$; rings, much worn, each $2\frac{3}{4}$; bit and knobs deco-

rated. No. 52, in fine preservation, resembles No. 55; decorated at end of bit; $9\frac{1}{2}$; rings, $2\frac{3}{4}$.—See Fig. 508, p. 606. No. 53, a mouth-piece, without rings, highly decorated on broad flanged extremities, narrow in hinge; part of ancient patina remaining; $7\frac{5}{8}$. No. 54, perfect, plain; $10\frac{1}{4}$; ring much worn between studs; $2\frac{7}{8}$; found at Loughran's Island, on the Bann.—*Presented by the Board of Works.* No. 55, perfect; figured at p. 605. No. 56, in high preservation; wants one ring, the other slender; $3\frac{7}{8}$; remarkable for its lightness; $12\frac{1}{4}$; stud decorated, with double spiral scroll (Dawson). Nos. 57 and 58 are of a different pattern from any of the foregoing; long, slender bits, terminating in duck-billed projections; rings flat, knobs small; the former is $11\frac{7}{8}$ long, and the rings $5\frac{1}{8}$ wide; the latter is $12\frac{1}{8}$, of which the bit is $9\frac{1}{4}$; ring-knobs decorated; space between knobs very narrow; found at Tulsk, county Roscommon.

Tray LLL contains nine bridle-bits—seven snaffles, and two driving bits,—numbered from 59 to 67. No. 59, the mouth-piece of a bit, wanting rings, joined by double hinge; $6\frac{3}{8}$ long (Sirr). No. 60, perfect, mouth-piece small, and made up of three pieces, of nearly equal size; rings slender, 3; riveted at flat ends; one stud remains; 11 (Dawson). No. 61, perfect, one large ring spliced but wanting rivets; $10\frac{3}{8}$; ring $2\frac{7}{8}$; found in the Boyne, at Kinnefad Bridge, barony of Warrenstown.—*Presented by the Board of Works.* No. 62, perfect, large, hinge short; 12; rings $3\frac{1}{2}$; large stud-knobs. No. 63, perfect, large, bit massive; 13; rings, $4\frac{1}{8}$; decorated on one side. No. 64, slender; $12\frac{1}{4}$; rings unsymmetrical, decorated, and provided with jewel-holes; $3\frac{5}{8}$. No. 65, ditto, plain; 13; ring, $3\frac{7}{8}$. No. 66, a driving bit, without intermediate portion in hinge; perfect, large, decorated; a circular knob projects beyond edge of ring, furnished with rod-like rein-staples on each side; $12\frac{1}{2}$; ring, $3\frac{5}{8}$ (Dawson). No. 67, ditto; figured and described on p. 605.

Tray MMM contains four perfect, and fourteen imperfect snaffle and driving bits; numbered from 68 to 85. No. 68, a very perfect and elegantly formed bridle-bit of bright yellow metal, in fine preservation, but partially cleaned before it came into the Collection; $11\frac{1}{4}$; rings flat, $3\frac{1}{4}$; resembles Nos. 57 and 58.—*Presented*

by *Dr. Kelly, of Mullingar*. No. 69, perfect, but slightly corroded on surface; $11\frac{1}{2}$; rings large, knobs plain; $3\frac{1}{2}$. No. 70, ditto, in imperfect preservation; plain; $12\frac{1}{2}$; rings imperfect; $5\frac{3}{4}$.—*Deposited by Royal Dublin Society*. No. 71, the driving-bit found at Navan; figured at p. 605. No. 72, an unused bridle-ring, with mould-marks apparent all round, and showing that the ornate studs were cast as part of the original article; 4. No. 73, a flat bridle-ring, with a portion of the duck-bill bit. No. 74, part of a mouth-piece, and ring, corroded. No. 75, a very remarkable specimen; half of a mouth-piece, and a flat ring, like No. 73. This article is at present as it came from the hands of the moulder, and has never been fitted to the other half of the bit. The hole has not been drilled or punched through the flat hinge-wing, although there is a slight indication of where it was commenced in the centre of that part. The portion of the ring which plays in the hole of the bit is much smaller than the remainder, and fits the aperture so accurately, that it barely revolves in it; so that, so far as this article is concerned, the mode of casting is unknown. Upon the hinge-plate may be seen some file-markings beneath the dark-brown patina with which the entire article is covered. This very beautiful specimen was evidently in process of manufacture. No. 76, a bridle-bit, wanting one ring; in fine preservation; apparently little used; $6\frac{1}{4}$; ring-knobs, decorated; $3\frac{3}{4}$. No. 77, a curious penannular bridle-ring; 3; illustrating the mode in which such articles were formed, and attached to the bit. A circular iron bar passed into holes in the enlarged sockets of the extremities, and was fastened by cross-rivets behind the wide sockets. The fluid iron was evidently poured in through one of the side rivet-holes, and formed slags, which were never cleared off; so that this article, like the former, was evidently in process of completion, and is one of the most curious instances of the combination of bronze and iron which has yet been disclosed in the examination of those antiquities. No. 78, a penannular bridle-ring, similar to the foregoing, with a connecting bar of bronze placed within the sockets, probably by forcibly springing back the ring; decorated; the knobs form shoulders to the superadded pivot. No. 80, both sides of the mouth-piece of a bit, wanting rings and hinge portion; decorated; apparently never used. No. 81, side pieces of bit, wanting hinge and rings, much worn in apertures.

No. 82, one side of mouth-piece, decorated, much worn. No. 83, ditto; part of central member of hinge remains. No. 84, the much-worn fragment of a mouth-piece, hinge repaired by an iron rivet. No. 85, fragment of mouth-piece, much worn.

BRONZE, VII.—THIRD COMPARTMENT, NORTHERN GROUND-FLOOR.

Tray NNN contains portions of thirty-seven bridle-bits, of the third variety, averaging 5 inches wide; numbered from 86 to 122. No. 86, a rudely cast cheek-piece, as if the metal had spilled from the mould; 4 inches wide. No. 87, a cheek-piece, with decorated arm. No. 88, ditto, plain. No. 89, ditto, with two bridle-staples, one containing part of buff leather. No. 90, ditto, small; imperfect. No. 91, figured at p. 608, has portion of iron-bit remaining. No. 92, imperfect. No. 93, a cheek-piece, with long decorated extremities; $5\frac{1}{8}$; two rein-staples, with leather in one; iron rivets. No. 94, ditto; $5\frac{3}{4}$; extremities curved forwards; one rein-staple. Nos. 95 and 96, almost identical, but not from same mould; thin, narrow, plain; the latter, which is figured at p. 607, has two rein-loops; both were found at Loughran's Island, on the Bann, and—*Presented by the Board of Works*. No. 97, rude, plain; imperfect; large flat flanges. No. 98, plain, broad; ornamented. No. 99, imperfect; figured at p. 607. Nos. 100 and 101, two broad, flat, flanged cheek-pieces, almost duplicates; the latter figured at p. 607. No. 102, one side of ornamented cheek-piece, narrow and recurved. No. 103, figured and described at p. 608. No. 104, a well-preserved cheek-piece, decorated bars, apparently but one rein-staple, which still remains. No. 105 commences a series of decorated cheek-pieces, with dragon-ornament, in which the animal is represented turning back towards the loop, and holds in its mouth the decorated stays which pass into the concavity of the article.—See p. 608. No. 106, a dragon cheek-plate; has three conical studs standing out from rein-bars, and is only $3\frac{7}{8}$ wide. No. 107, of dragon-pattern, very light and elegant; beautifully cast; $4\frac{1}{2}$. No. 108, rude; cast-marks remaining but bit-bar much worn; one rein-staple. No. 109, well preserved; decorated with circular ornament. No. 110, dragon-pattern, badly cast. No. 111, ditto, slender, well cast. With No. 112 commences the horse-pattern, of which there

is a typical specimen at p. 608; rudely cast; much worn in cross-bar; imperfect. No. 113, ditto; decorated on surface, like 109. No. 114, perfect; slender; dragon-pattern. No. 115, ditto, but more massive, and decorated on surface. No. 116, very perfect; same pattern as No. 109; two rein-staples, leather in one. No. 117, complete; dragon-pattern; decorated; two rein-loops. No. 118, ditto; one rein-loop; found in Ardakillen crannoge. No. 119, ditto, finely cast; two rein-staples, leather in one. No. 120, a new pattern, in which the dragon-ornament has been preserved, but a second bar occupies the space between the wings in front of the bit-bar; $4\frac{7}{8}$. No. 121, ditto, flat, horse-pattern. No. 122, ditto, in fine preservation; has one large decorated rein-staple, with leather remaining.

SHELF II., *Tray 000*, contains twenty-five articles, consisting of bridle-bits, saddle-pommels, horse-trappings, and harness-decorations; numbered from 123 to 151. No. 123, a peculiar form of bridle-bit, with large conical projections, short cheek-piece, one long staple remaining. No. 124, imperfect; dragon-pattern, one staple. No. 125, perfect; same pattern as 109 and 116; two staples. No. 126, a new form of dragon-pattern; highly decorated, gilt; narrow between cheek-pieces; one staple. Nos. 127 and 128, fragments of dragon cheek-pieces. No. 129, complete; much corroded; two staples. No. 130, imperfect; horse-pattern. No. 131, perfect; dragon; one staple; $4\frac{3}{4}$. No. 132, horse-pattern; figured and described at p. 608. No. 133, a three-pronged article, apparently part of a bridle-bit. No. 134, a straight decorated side-piece, comparatively modern; two staples; $5\frac{7}{8}$. No. 135, ditto, smaller. No. 136, fragment of bit. No. 137, of peculiarly bright-yellow bronze, like that used in some of the culinary vessels, consists of a circle, with two curved arms, and two slight staples; it was probably part of a bridle-bit, or a fragment of harness; found in the river near Robe Abbey, Ballinrobe, county of Mayo, and—*Presented by the Board of Works*. No. 138, one side of a cheek-piece. No. 139, half of a peculiarly shaped bit, with double saw-edge; probably used in training. No. 140, ditto, but not the corresponding half; edges smaller and wider, with stay between. No. 141, a decorated piece of antique harness, imperfect; looks like portion of bridle-bit. No. 142, a portion of harness, consisting of a ring, and two decorated staples. Found with No. 143, the chariot boss and trace figured and

described at p. 611. Nos. 144 to 147 are four iron rings, covered with plates of bronze, each $2\frac{1}{2}$ wide across, with tangs on one side, in the figure of a jew's-harp; evidently chariot-staples; No. 146 was gilt; all were found with No. 143, described at p. 573. Nos. 148 to 151 are four bronze saddle-pommels, the largest of which, No. 149, is figured and described at p. 602; in length they vary from $1\frac{7}{8}$ to $2\frac{1}{8}$ inches.

SHELF I., Tray PPP, contains eleven bridle-pendants; numbered from 152 to 162. No. 152, perfect; much worn; loops at end; slight remains of ribbed ornament on surface; $11\frac{1}{2}$ inches long, by 2 in the clear, across the boss.—*Presented by Dr. Kelly.*—See Proc., vol. vi., p. 528. No. 153, ditto; loops much worn, and decorated externally with embossed circles, terminal enlargement plain; $11\frac{1}{2}$ by $5\frac{3}{4}$; found near Castlerea, and, with No. 169—*Presented by T. G. Wills Sandford, Esq.*—See Proc., vol. vii., p. 161. No. 154, very slender; imperfect on one side; ribbed extremities; loop at right angle with arm of bow, which rises high above it; 11 by 4. No. 155, slender, wide, loops worn through, and decorated with sunken ornament on outside, stem beautifully ornamented, and socketed, possibly to hold a plume; 11 by 6; found in the old abbey ground of Emly (Imleach Brocadha, so called from St. Brocadius, a disciple of St. Patrick), near Castlerea, county Roscommon.—*Presented by W. R. Wilde, Esq.*—See Proc., vol. vii., p. 19. No. 156, slender, short, imperfect; spoon-shaped termination to prong; $11\frac{1}{2}$. No. 157, a twisted fragment. No. 158, a fine specimen, but wants one arm; decorated on prong and stem; $13\frac{1}{4}$.—See Fig. 520, p. 610. Nos. 159, 160, and 161, are fragments; the first and last were—*Presented by the Shannon Commissioners.* No. 162, long, narrow, wants one prong, knob large, loop angular.

Tray QQQ contains seven perfect pendants, broad in the bow; numbered from 163 to 169. No. 163, large, broad, not much worn; 13 by $5\frac{3}{4}$; found, with sword, No. 104, and spear-heads, Nos. 64 and 235, in the River Boyne, and—*Presented by the Board of Works.*—See p. 477. No. 164, slender, narrow, almond-shaped extremities; loops angular; 13 by $4\frac{1}{2}$. No. 165, slender, globular knobs, with angular loops; 12 by $5\frac{1}{4}$. No. 166, one of the largest and most perfect specimens in the Collection; loops at end, highly decorated, with Celtic ornament on knob and ends of bow; $14\frac{3}{8}$ by $6\frac{7}{8}$.—*Deposited, with No. 167, by Royal Dublin Society.* No. 167, ditto,

but differs in ornamentation at end of knobs and bow, where it is sunken for insertion of enamel; loops angular; 14 by 6. No. 168, ditto, terminations larger; 11 by $4\frac{3}{4}$. No. 169, with angular loops, has a plain oval knob, and spoon-shaped terminations; $10\frac{1}{2}$ by $5\frac{3}{4}$.

Tray RRR contains eight pendants, numbered from 170 to 177. No. 170, unfinished, possibly never used; a portion of metal slag remains at end of knob; loops angular; $12\frac{1}{8}$ by $3\frac{3}{4}$. No. 171, a very perfect massive specimen, figured on p. 609. No. 172, imperfect, slender; modern mending on bow; loops angular; $11\frac{5}{8}$ by $3\frac{1}{2}$. No. 173, long, narrow, unfinished; large rough decoration on top; mended in two places; differs from all others, in having loops placed at right angles with the sides, and not the inner margin of the hollow knob; $12\frac{1}{4}$ by $5\frac{1}{4}$; legs unsymmetrical. No. 174, perfect, except hole in prong; loops angular; $13\frac{1}{2}$ by $3\frac{1}{4}$ (Dawson). No. 175, perfect; large, slender; loops angular; almond-shaped terminations; that on stem split by a modern dealer for the insertion of an iron spur-rowel, which is now placed above it (see p. 611); $12\frac{1}{2}$ by $6\frac{1}{4}$. No. 176, short, broad, with open-work ornament at extremities; loops angular; one leg $\frac{3}{4}$ inch longer than the other; $11\frac{1}{2}$ by 7. No. 177, with quatrefoil ornaments, like pin 279, *Tray YY*. It is figured at p. 609.

SHELF III., *Tray SSS*, contains nineteen harness-studs, numbered in continuation of the pendants, from 178 to 196. No. 178, a ring, with two decorated staples. No. 179, a decorated ring, worn into a triangular form internally. No. 180, a britching-ring, with three staples. No. 181, ditto, decorated. No. 182, a different form, quadrangular; three staples holding portions of leather. No. 183, a very light and elegant harness-stud, consisting of four rings joined together with slender staples; looks like a toy. No. 184, a ring, with two star-like staples, highly decorated; leather remaining; measures $4\frac{1}{4}$. No. 185, a harness-ring, decorated upon both sides and top. No. 186, a ring, with three conical projections on upper surface, to limit play of staples, which remain. No. 187, a ring with four staples, plain. No. 188, a peculiarly-formed britching-plate, like three rings joined together; staples broad and quadrangular. No. 189, a britching-ring with three decorated star-like staples. No. 190, a triangular article, like centre-piece of No. 188. No. 191, plain ring, with one staple. No.

192, a decorated ring, triangular internally. No. 193, a toy-like ring, with three staples. No. 194, figured at p. 612. No. 195, ditto, plain; comparatively modern. No. 196, a britching-ring, with three staples, differing from all others in breadth, and still retaining pieces of buff leather.

Tray **TTT** contains a collection of forty-two bronze bosses, rosettes, &c., either personal, or for horse-trapping; many of them comparatively modern; numbered from No. 197 to 238. The first seventeen are circular. Nos. 197 and 198 would appear to have been saddle-terrets; all those after No. 213 are highly ornamented; many with open-work, and are good specimens of casting. A few may have been personal ornaments (see Nos. 237 to end). No. 203 was procured from Lisnafunshin, barony of Fassadinin, county of Kilkenny. Nos. 206 and 213 were—*Presented by Lord Farnham*, and No. 236—*by Mr. G. Boulger*.

Tray **UUU** contains forty-four globular or pear-shaped cattle-bells and crotals, numbered from 239 to 282. The first article is a collection of thirteen small, tinkling, globular, perforated bells, attached to a zigzag wire-hoop, each bell about $\frac{3}{4}$ inch in diameter, of very thin metal, and having shot inside; they resemble those now attached to toys, or to the fools'-bauble in ancient times; found in sinking a foundation at St. Patrick's Cathedral, Dublin, and—*Presented by His Grace the Duke of Northumberland*. Adjoining these is a string of fifteen globular bells of the same size; they emit a much duller sound; apertures, placed near the staples, which differ from those in the former set by being cast. After these follow 5 globular bells of a larger size, and decorated. The eight on the second row, numbered from 272 to 279, are larger than either of the foregoing, and vary in diameter from $2\frac{1}{2}$ to $2\frac{3}{4}$ inch. Each has a slit connecting the lower apertures, and also holes in the upper segment beside the staple, and they emit very musical sounds. In No 277, part of the clay-core still remains. Several of these globular cattle-bells are pleasingly decorated on the lower hemispheres; six have the initials "R. W.," and one "C. O.," embossed below. This latter, No. 279, is figured on p. 612. The three last articles are pear-shaped crotals, obtained from the "Dowris Find," and of which No. 282 is figured on p. 612. They were presented by Lord Oxmantown to the late Dean Dawson, with whose collection they came into the

Academy's Museum. In size they average $6\frac{1}{2}$ inches long, by about $2\frac{3}{4}$ in the widest portion. At page 519, for Tray **UUU**, see Tray **VVV**, page 638.

SPECIES VII.—MUSIC AND MUSICAL INSTRUMENTS.

The principal ancient Irish musical instruments whereof we have any historic record, or of which the remains have come down to the present time were, the harp—already described and figured at page 286; the trumpet, mentioned below; and the bag-pipe, inflated by the mouth, like that still common in Scotland, and of which there are figures in Derricke's book of 1578, already referred to at page 322, but the materials of which were of too perishable a nature for preservation. There are sixteen specimens of trumpets in the Academy's Collection, arranged in the third compartment on the northern side of the ground-floor of the Museum.

TRUMPETS (in Irish, *corn*, *stoc*, or *stuic*).—The earliest Anglo-Irish notice of this instrument is that by Sir Thomas Molyneux, in his "Discourse concerning the Danish Mounds, Forts, and Towers of Ireland," 1725; but in his day it was the fashion to attribute everything valuable or curious in Ireland to the Ostmen. This opinion appears in a great measure to have arisen from the study of Olaus Wormius' treatise on the antiquities of Denmark, published in 1655; in which work may be found notices of many primeval monuments, analogous to those in Ireland; but which were as much antiquities, and as little understood by the Northmen who invaded Ireland in the ninth century, as similar structures here were to the Irish of that period; both were the works of many centuries previous, and possibly of a people identical in origin,—the first wave of population which overspread north-western Europe. Since the time of Molyneux, the term "Danish Forts" has been popularly applied to all our military raths, and many of the sepulchral mounds. The short side-mouthed trumpet, figured and described by that author, having been, with several others, "found buried in the earth,"

in a mound near Carrickfergus, was henceforth called Danish, although such articles are peculiar to Ireland, and unknown in any part of Scandinavia.

In 1750, thirteen or fourteen curved bronze horns were discovered between Cork and Mallow, and three of them were figured by Charles Smith, in his History of the County of Cork. Three of these trumpets passed into the possession of Bishop Pococke, the distinguished traveller, and Irish antiquary, with whose collection they were subsequently sold in London, and were figured in the *Vetusta Monumenta*, by the Society of Antiquaries. There is every reason to believe that they were the identical articles described by Smith; and they were afterwards copied by J. C. Walker, in the Appendix to his "Historical Memoirs of the Irish Bards," 1786. One of these resembles No. 12 in our Museum (see Figs. 526 and 529), with a lateral aperture or mouth-hole; the other two were simple curved horns, like Fig. 524; but with these were found pieces of straight tubing, like that represented by Ousley, and which were then believed to have formed parts of these trumpets. It does not, however, follow that they were portions of, or in any way attached to, the horns with which they were discovered; and if (as we believe) they were portions of a "Commander's Staff," as stated at page 492 (see Fig. 360), it was not an unlikely place for such articles to be found, where the commander of a battalion had also his speaking-trumpet, as well as his trumpeters beside him, when he fell in battle. That a curved trumpet, attached to each end of a straight tube, four feet long, could not be of any use known or conjectured in the present day, is manifest. The subject, however, requires further illustration. It is worthy of note, that, in nearly every instance, several trumpets, and generally including two varieties, have been found together.

In 1783, Vallancey figured a side-aperture trumpet, from a specimen in the Museum of Trinity College; and to his description appended some conjectures as to its use in sounding

from the tops of round towers, &c.* Vallancey's plate of the horn referred to was inserted in Gough's Camden, in 1789.

Three trumpets, and a portion of straight tube (possibly that figured at page 492), precisely similar to those described by Smith, were discovered in the county of Limerick in 1787, and were figured by Ralph Ousley, in Vol. II. of the Transactions. In 1794 four brazen trumpets were found in a bog on the borders of Lough-na-shade, near Armagh. One of these, figured by Stuart, in his History of Armagh, is the large riveted trumpet with a decorated disk, and central globular connecting portion, now No. 8, Fig. 527, in the Academy's Collection, and which is joined with rivets; whereas all those previously noticed were cast. In 1809 both joints of a very large and perfect curved bronze trumpet, or bugle-horn, were found in peat at Ardrin, parish of Anaghclone, county of Down, and were minutely described by Mr. Bell, in the Newry Magazine, for 1815.† This fine specimen is also in the Museum: see No. 9 Fig. 528.

* "The Irish," said Vallancey, "had various kinds of trumpets, viz., the *stoc*, *buabhall*, *beann*, *adharc*, *dudag*, *corna*, *gall-trumpa*." The same terms were adopted by his followers, Ledwich and Walker, the former of whom adds six other names to the list of Irish wind instruments; but none of these writers give any authority for such words.

I am indebted to Mr. Curry, who has already furnished all the Irish names used in this Catalogue, for the following note on ancient musical instruments:—" *Cruit*, a harp; *Timpan*, a drum or tambourine; *Corn*, a trumpet; *Stoc*, a clarion; *Pipai*, the pipes; *Fidil*, a fiddle. All these are mentioned in an ancient poem in the Book of Leinster, a MS. of about the year 1150, now in the Library of Trinity College; and the first four are found in various old tales and descriptions of battles. I have not found any reference as to the particular form of these instruments, and never met any allusion to a speaking-trumpet."

Giraldus Cambrensis, in his Itinerary of Wales, describes the brazen horn of St. Patrick, to which miraculous powers were attributed.

† In the four volumes of that well-conducted publication will be found many valuable articles on Irish antiquities, from the pen of Mr. Bell, now of Dungannon, one of the earliest pioneers of that subject in the present century. The bog where the trumpet referred to above was discovered had been a lake about the middle of the last century. In 1815, a stratum of burned oak was found in it, and a boat scooped out of a single tree, together with four short paddles;—so that possibly it was the site of a crannoge.

In 1833, Dr. Petrie, in an article on Irish trumpets, published in the Dublin Penny Journal, Vol. II., figured a cast bronze horn, one of several found at Dowris, and which was then in the possession of the Dean of St. Patrick's; it is now No. 11 in the Academy's Collection.

In 1835, several trumpets were discovered in a bog near Killarney, some of which were subsequently in the possession of Lord Londesborough and the late Crofton Croker; and some are still in the collections of Mr. Windele, and other persons at Cork.

In 1847, three trumpets were discovered near Cloghoughter Castle, county of Cavan, and were—*Presented to the Museum by Lord Farnham.*—See Nos. 6, 14, and 15. Several others, the particulars of which are not known, came into the possession of Dean Dawson, with whose collection they were purchased by the Academy.

In 1840, four trumpets were discovered in the bog of Drumabest, parish of Kilraughts, county of Antrim, two of which were sold to the British Museum, by the late Mr. Carruthers, of Belfast. The two others remain in Ballymoney, and have been figured by Mr. M'Adam, the last writer on the subject, in his learned article in the Ulster Journal of Archæology for January, 1860. Of these four, two belong to the variety with lateral apertures; and the others were of a rare description, of which we have no example in the Museum of the Academy. That figured by Mr. M'Adam is 35 inches long, and has a double curve, the small upper portion turning backwards; it was blown from the end, and is provided with a staple and suspending ring.

These notices, together with the details given in the Catalogue of trumpets at page 633, include nearly all that is known on the subject of such articles found in Ireland, of which there are some fine examples in the British Museum. From the foregoing and following remarks, it would appear that five distinct varieties of trumpets have been found at different times in this country.

The bronze horns and trumpets now in the Collection are of two kinds—those blown from the ends, but the mouth-pieces of which (if such there were), are not forthcoming, and of these there are three varieties—two cast, and one riveted; and the cast trumpets with lateral embasures, and closed at the small extremities. The most remarkable specimens of all these are represented in the following illustration. The first cut, to the right of the central top specimen, is a short, cast, curved horn, No. 2, which measures 24 inches along the convex margin; it is $3\frac{1}{4}$ wide in the great, and $1\frac{1}{2}$ in the small end, and has a set of large conical projections standing out from either end, and decorated round their bases. There are also four holes in each end, and the small aperture is slightly everted, as if for holding the lips; but it requires a great exertion to produce even a dull sound with this instrument. There are four perfect specimens of this variety in the Collection, all of which are cast. One of these, No. 1, is a beautiful example of brilliant, golden-red bronze, and was found at Dowris. The largest perfect specimen is 15, and the smallest $10\frac{1}{2}$ inches, measured from point to point. Another variety of this trumpet is figured on page 629.

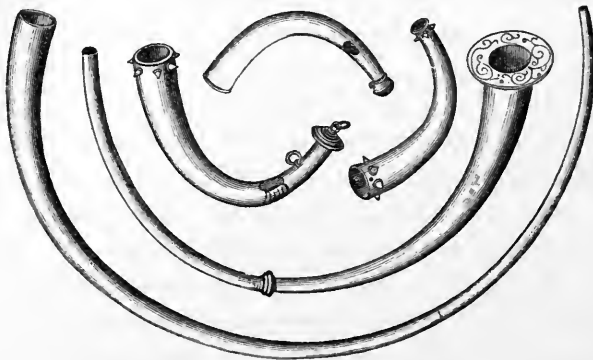


Fig. 524. No. 2. Fig. 525. No. 11. Fig. 526. No. 12. Fig. 527. No. 8. Fig. 528. No. 9.

The top central figure, and that immediately beneath it, to the left, Nos. 11 and 12, are specimens of the third variety,

all of which have been arranged in the end case adjoining the door of the Library, and are numbered from 10 to 16. Like the former, each was cast in one piece, but closed, generally by a knob at the small end, and furnished with one or two loops and rings at or near that point. Some have conical spikes round the larger ends, like those of the first variety, and evidently belonging to the same class of decoration seen in some of the brazen cauldrons figured on page 530. About the junction of the middle and upper thirds, and towards the inner side, when the instrument is held with its large end turned to the left shoulder, each has a smooth oval aperture, averaging 2 inches long, and $1\frac{1}{4}$ wide. It is not possible, by any yet discovered method of applying the lips to this mouth-hole, to produce a musical sound; but, as conjectured by Walker in 1786, these instruments might have been used as speaking-trumpets, to convey the voice to a great distance, as well as render it much louder. Mr. M'Adam, in his recently published paper on Irish trumpets, adopts this opinion, but applies it too generally to all our native instruments.

Trumpets of this description might have been useful to commanders in the warfare of former days, when the chief battle-sounds were the shouts of the combatants, the clash of arms, or the groans of the wounded. Of the foregoing illustrations, No. 11 is perfectly plain, and measures 24 inches along the convex margin, and $2\frac{1}{2}$ in its greatest width, with a circular termination at the small end, and a narrow ring-loop at top. Ridges, like those left from the imperfect adjustment of the moulds—but probably part of the original design of the founder—pass along both the concave and convex edges. It appears to have been broken across near the centre, and afterwards repaired, probably by the process called burning in, or—“pouring melting metal at a glowing temperature upon the junction of two [heated] pieces, and by that means fusing the entire into one mass.”—See Proceedings, vol. iv., p. 428; see also the method of mending bronze

swords, described at page 456 of this work. This trumpet, which formed a portion of the “Dowris Find,” and was procured with the Dawson collection, has been figured in the Dublin Penny Journal. No. 12 is one of the finest specimens which as yet has been discovered; of bright yellow metal, measuring $34\frac{1}{2}$ inches round the convex side, and $3\frac{1}{2}$ in width at the large opening; above, it terminates in a decorated head, $2\frac{5}{8}$ inches in diameter and furnished with a large ring. There is another ring near the upper end of the concave side. It was broken across at the mouth-hole, and most ingeniously mended by pouring melted metal round the fracture, when probably the ends were heated by the method already explained. The



Fig. 529, No. 12.

additional metal has also been fused round the inner surface. Its lower edge is decorated with conical spikes. Figure 529 shows the details, already described, of the upper portion of this trumpet. It was found near Derrynane, county Kerry, and obtained through the instrumentality of Mr. Du Noyer.

Of the first variety, like Fig. 524, described at page 629, and in which the aperture is at the end, there are two remarkably shaped instruments in the Collection, Nos. 5 and 6, in which the curves are different, and the small extremities appear to have been fitted either to mouth-pieces or to other joints. Each



Fig. 530. No. 6.

is cast in one piece, of dark metal, and strengthened on both edges by lateral projections still larger than those on No. 10. No. 6, Fig. 530, is decorated at both extremities, and in the centre of the straight portion, near the top of which there is a small ring-loop; the jointing part, be-

neath the decorated shoulder, is $1\frac{1}{2}$ inch long. It measures $22\frac{1}{2}$ inches on the convex edge, is $2\frac{1}{2}$ wide at the mouth, and $\frac{7}{8}$ at the small end. It was found with Nos. 15 and 16, at Cornaconway, near Cloghoughter Castle, county Cavan, and—*Presented by Lord Farnham*. No. 7, perfect, heavy, and a little larger, is of precisely the same shape, and was found at Roscrea.

The third variety is represented by the two large trumpets of the bugle-horn shape, Figures 527 and 528, in the illustration at page 627. Each of these consists of two portions, but no mouth-pieces were discovered with them. The first would appear to be that found in the county Armagh, in 1794, and figured by Stewart; and the second, now the lowest specimen in the illustration is that discovered in the county Down, and described by Mr. Bell. The peculiarity of these trumpets is their great length, and the ingenious mode by which each is joined along the concave side by a series of minute rivets fastened to a strap of metal, which runs the entire length of the inside in No. 9, and partially on both sides in Nos. 7 and 8.

The trumpet No. 8 is composed of two portions—the large lower conical part, with a decorated disk below, and a circular boss at top, to connect it with the slender upper part, the sides of which are nearly parallel; both together measuring, on the convex margin, about six feet—not cast, but formed of very thin, sheet bronze, closed by seams along the concave edge, in the following ingenious manner:—A strip of thin metal, half an inch wide, extends along the seam internally, and is united to each side by a series of nail-headed studs, in alternate spaces, with $\frac{7}{8}$ inch between; externally another strap, doubled on itself in the centre, evidently to strengthen it, runs over the seam, and is fastened by a series of small well-formed rivets, placed at regular distances, and passing through the three plates of metal. By this contrivance, which must have preceded the knowledge of junction by soldering, the

instrument was rendered perfectly air-tight. The cast boss at top is about 3 inches wide, and was fastened by interlapping with the tube. This lower part of No. 8 was evidently long in use, and has been most ingeniously patched and mended in several places by riveted plates and collars. The narrow upper tube is in two portions, passing, at the junction, into each other, but manifestly part of the same instrument; their seams are joined by the same plan of riveting as that described above, but in a ruder way.* The decorated disk below, the details of the punched or hammered-up ornament on which are shown in the accompanying illustration, measures $7\frac{1}{2}$ inches across. Its style of decoration much resembles that of the large shield-like plates on Tray **vvv**, and represented by Fig. 533, page 637. Its present mode of attachment to the trumpet-mouth is evidently modern.



Fig. 531. No. 8.

The great trumpet in this Collection is No. 9, represented by Fig. 528, in the illustration on page 627, certainly the finest article of the kind which has yet been discovered in Europe; it was found in the Co. Down, in 1809. It measures 8 feet 5 inches along the convex margin, and consists of two portions, each formed of very strong sheet bronze, of a yellowish-red colour, and joined along the seam by means of a riveted plate; but far surpassing, in ingenuity and handicraft, any of the foregoing articles of this description. It is $3\frac{1}{2}$ inches

* The Scandinavian trumpets, of which there are six perfect specimens in the Museum at Copenhagen, were all *cast* in separate lengths, and resemble in size No. 8 in R. I. A. By means of a "wind" in each of the two perfect articles in that collection, the lower portion presented in front of the performer, while the small end passed round his neck.

wide at the open of the large end, and $\frac{5}{8}$ at the upper; the smaller tube has parallel sides, and is about the size of the small extremity of the larger; but by what means the two were joined, or whether a mouth-piece was attached to the small extremity, is unknown. The riveting of the edges in this instrument is the most perfect thing of its kind yet discovered, and is well exhibited in the accompanying cut, drawn, the natural size, from portions of its external and internal surfaces. The bronze strap which covers the joining on the inside is studded with small, circular-headed studs, riveted on the outside, as shown in the lower section of this cut. There is no strap externally; and the perfection of the riveting has long been a subject of admiration to the curious, there being as many as 638 rivets in this lower portion. By what means they were introduced throughout, or what description of mandril was employed for riveting them upon, is still a subject of speculation. A great variety of loud, martial tones, can be produced by the lower fragment of this trumpet; but the want of a mouth-piece renders it difficult to play upon. This is the instrument discovered in the County Down, and described by Mr. Bell, see page 625.

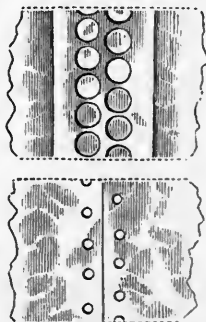


Fig. 532. No. 9.

Diodorus Siculus, writing of the Celtic Gauls, states—
 “they have amongst them trumpets peculiar as well to themselves as to other nations; these, by inflation, emit an hoarse sound, well suited to the din of battle.” And Polybius says that
 “the parade and tumult of the army of the Celts terrified the Romans; for there was amongst them an infinite number of horns and trumpets, which, with the shouts of the whole army in concert, made a clamour so terrible and loud, that every surrounding echo was awakened, and all the adjacent country seemed to join in the horrible din.”

BRONZE VII.—THIRD COMPARTMENT; NORTHERN, GROUND-FLOOR.

The sixteen bronze trumpets have been arranged in the top space of the third Compartment, and are numbered from 1 to 16. No. 1, a very perfect horn, of bright gold-coloured bronze, referred to at p. 627, decorated at both extremities, with conical projections, four above, and six below; measures 21 inches round the convex margin; is $3\frac{1}{2}$ across the open of the large extremity, and $1\frac{3}{4}$ wide in the slightly-everted small end; found at Dowris, near Parsonstown, King's County, and presented, together with No. 11, by Lord Oxmantown, to the late Dean Dawson, with whose collection they came into the Academy.—See Proc., vol. iv., p. 423. No. 2, ditto, fractured in centre; figured and described at p. 627. No. 3, a short trumpet, perfect; open at the small end; thin, cast; 24 inches round convex margin; $3\frac{3}{4}$ across large, and $1\frac{3}{4}$ wide at small extremity; with six conical projections below, and four at top, together with four rivet-holes at that end. There are a number of small holes throughout the instrument, either from corrosion, or through defect in casting; and it has been mended by pouring in fresh metal, in three places, on the greater curvature towards the large end. No. 4, ditto, imperfect, of very thin bronze, much worn and battered; conical studs at large end, similar to those in foregoing. Nos. 5 and 6 are of a different variety, elongated in small extremity, and almost identical in shape. No. 5 is cast; heavy; very slightly decorated; without rivet holes at either extremity. It measures $23\frac{7}{8}$ inches round convex edge; $2\frac{1}{4}$ across; large; and $\frac{7}{8}$ at the small extremity, which is $1\frac{7}{8}$ in length, from the raised shoulder; ring-loop on upper portion of concave edge; found at Roscrea (Sirr.). No. 6, ditto, thinner, slightly imperfect on one side; figured and described at p. 629. No. 7, a thin bronze tube; 34 inches long, and $1\frac{1}{8}$ in diameter, with circular ferule; bosses at the extremities; manifestly a portion of a bronze trumpet, in the highest perfection; riveted along the concave margin to a strap of thin metal, one-half inch wide, the rivets about one-half inch asunder, with the head inside, not placed in pairs, but obliquely as regards each other, as in the spear-ferule figured and described at page 504. Although these rivet-heads are flat near the extremities of this tube, they become prominent, and irregular towards the interior. The joining of the sides is most

accurate, and the article is perfectly air-tight, but, owing to its parallel sides, does not produce any musical sound. The ferule-bosses, each about $2\frac{1}{2}$ inches in diameter, were evidently fixed in their present positions by interlapping at the upper margins of the extremities of the tube, as in modern tin-work. This article evidently formed a portion of a trumpet similar to the following. No. 8, the large thin trumpet described as Figs. 527 and 531, at pp. 627 and 631; composed of two portions, the upper and smaller one also consisting of two parts; one inserted within the other. No. 9, the large perfect trumpet, in two portions, delineated by Figs. 528 and 532, and described at p. 631.

The following trumpets have lateral apertures. No. 10, slightly imperfect at small end, including a portion of the mouth-hole, which is 30 inches from the large end. The decorated studs around the lower opening resemble those in No. 2. It was found near Macroom, Co. Cork, and was given by John Lindsay, Esq., to Dean Dawson. No. 11, described at p. 627, see Fig. 525. No. 12, large bronze trumpet, with lateral aperture, described at p. 629, see Figs. 526 and 529. No. 13, upper and lower fragments of a trumpet of the same variety, of very brittle metal; $2\frac{1}{2}$ wide; ridge on concave, and convex edges, like the result of a mis-adjustment of moulds, but evidently intended to add strength to the article; extremity surrounded by twelve small studs, now enveloped in a coating of additional metal, poured around them, when in a fluid state, to repair some deficiency in the margin; this addition passes over both sides of the fractured ends, for about $1\frac{1}{4}$ inch. The new edge is decorated with a raised torque-pattern. This artistic mode of perfecting the open of the instrument, which is $2\frac{3}{8}$ in diameter, shows how necessary the completion of that part was to the perfection of the instrument, and is also a most curious instance of repair in ancient bronze. The upper fragment is of the same description, with flanges on both curvatures; ring-loop; mouth-hole small, and thick round margin. It was found with Nos. 6 and 14, at Corraconway, county Cavan, and—*Presented by Lord Farnham.*—See p. 626; see, also, Proc., vol. iii., p. 530. No. 14, fragment of the large extremity of a trumpet, so like the foregoing, as to appear to have been cast in the same mould. There is, however, a slight difference in the ornamental studs around the opening; found with the foregoing. No.

15, ditto, imperfect, ring-loop near small mouth-hole (Dawson). No. 16, ditto, with two loops—one at top, the other on the side, similar to No. 12, the extremity contains a quantity of fine drab-coloured sand, possibly the remains of the casting-core.

For the remains of harps, see Rail-case P, page 599.

SPECIES VIII.—MONEY, COINS, AND OTHER MEANS OF BARTER.

At the period of the Roman invasion of Gaul and Britain, Cæsar informs us that the inhabitants of those countries “used for money gold and iron rings of certain weight;” but says nothing of bronze or silver. Vallancey, writing in 1783, adopts this passage, and applies it to the elucidation of the use of a double bronze ring found in Ireland, like that represented by Fig. 452, page 578, of this work; but which, and all similar articles, of which there are a great many in the Collection, have since been proved to be fragments of ring-chains. Sir W. Betham enlarged upon this idea of the author of the *Collectanea* (but without acknowledgment); and, in two papers, read to the Academy in June, 1836, and January, 1837, and printed in Vol. xvii. of the Transactions, figured, and described as ring-money, a large and miscellaneous collection of articles of various shapes, sizes, and weights; but chiefly penannular rings of bronze, gold, and silver.* The single, double, and triple rings of the former metal, undoubtedly, belonged to chain dress, or armour; and, although some small gold rings (several ancient forgeries of which have been discovered), may have been used as a means of barter, the uses of the other articles figured by that author, are now well established as fibulæ and armillæ. When we reflect on the great number of antique metallic articles to which rings were attached, the

* In Sir W. Betham's second paper, alluded to above, he quotes a letter of Mr. Sainthill, of Cork, stating that metal rings were then manufactured at Birmingham and used for trading with people on the coast of Africa; but, adds Mr. S., they “are a composition of brass and copper; they are called *manillas*, and are worn as ornaments, and pass as the representatives of money.” Some were manufactured of iron.

number of these found in Ireland will not appear surprising. See the further consideration of this subject in the description of the articles of gold and silver.

SPECIES. IX.—*Medicine* is only represented by one bronze surgical instrument, No. 38, in Rail-case Q. All the bronze articles connected with SPECIES X.—*Religion*—will be considered under the head of ecclesiastical antiquities; and there are no representatives of SPECIES XI.—*Sepulture*—among the metallic articles of any description in the Collection.

SPECIES XII.—MISCELLANEOUS.

The true eclectic method of investigating the remains of the past—our increased knowledge of the contents of the museums of other countries, and a rational comparison of the relics of our ancestors with articles in use in the present day, together with a common-sense view of antiquities generally—has left very few articles the use of which may not be fairly assigned, or plausibly conjectured. Still, if the house of a wealthy citizen of the present time were, with all its contents, to be sunk beneath the earth's surface, and dug up one thousand, or five hundred years hence, the antiquary of that day would find some articles, the precise objects of which could not be determined with sufficient certainty to warrant their being grouped with any of the species described in the classification adopted in such a Catalogue as this. The most notable collection of articles, the object of which has as yet puzzled antiquaries, is the set of six bronze disks, arranged on Tray **vvv**, in the third compartment of the northern ground-floor, and of which the accompanying illustration is a good example. It is drawn from two imperfect specimens, Nos. 1 and 5; the line *a, b*, marking the division in the restored drawing. They average 11 inches in diameter, and are slightly dished, or hollowed, with nearly central cups or depressions. As already stated, the general design of the ornament is that of a series of horns or trumpets, with their bases

approaching each other; together with crescentic and spiral decorations. Each of these plates is hammered out of a tolerably thick piece of metal; and, as some of them are in an unfinished state, they afford the means of examining into the process of their manufacture. Although the general characters are the same in all, each differs slightly in detail. The pattern was



Fig. 533. Nos. 1 and 5.

first marked out by a rounded elevation on a concave surface, punched or hammered-up from the reverse side; and in this state two of these bosses still remain. Then, by a continuation of the process in front, and possibly working on a block of pitch, or other yielding substance, these raised portions were rendered as thin as writing paper, and the whole embossment was made to assume externally a polished surface, and a sharpness of outline that is truly marvellous. Finally, the extreme edge was formed into a distinct line of the most exquisite finish, as is well seen in the intersecting curves in the lower section of the foregoing illustration. On the subject of the

spiral form of Irish ornament, the late John Kemble, in his eloquent address to the Academy in 1857, justly said:—

“There is a peculiar development of the double spiral line, totally unknown to the Greeks, the Etruscans, and the nations of the Teutonic North, which is essentially characteristic, not only of the Scoto-Keltic, but the Britanno-Keltic populations of these islands. If the lines are allowed to diverge, instead of following one another closely in their windings, they produce that remarkable pattern which, since a few years, we have been in the habit of calling the trumpet-pattern, and which, from one of its peculiarities, is sometimes called the *thumb* pattern. When this is represented in a plane surface, in the illuminations of MSS., you have that marvelously beautiful result which is familiar to you in the ‘Book of Kells;’ to us in the ‘Book of St. Cuthbert,’ or ‘The Durham Book,’ in the British Museum; and in the equally beautiful records of Scoto-Keltic [Irish] self-devotion and culture in the MSS. of St. Gall, in Switzerland. When, as is often the case in metal, this principle of the diverging spiral line is carried out in *repousseé*—when you have those singularly beautiful curves—more beautiful, perhaps, in the parts that are not seen than in those that meet the eye—whose beauty, revealed in shadow more than in form—you have a peculiar characteristic—a form of beauty which belongs to no nation but our own, and to no portion of our nation but the Keltic portion. The trumpet-pattern is neither Greek, nor Roman, nor Oriental. There is nothing like it in Etruscan art; there is nothing like it in German or Slavonic art; there is little like it in Gallic or Helvetian art: it is indigenous.”—See Proceedings, vol. v., p. 475; see likewise Dr. F. Keller’s illuminations and fac-similes from Irish MS. in Switzerland; translated in the Ulster Journal of Archæology, vol. viii., p. 224.

Respecting the uses of these articles—which have as yet been found only in Ireland—we are still in the dark; the most probable conjecture is, that they were portions of shields.

Among the other miscellaneous articles, illustrative of native art, may be specified the following:—

Figure 534 is drawn one-half the natural size from No. 17, a bronze figure, which serves to illustrate the subject of costume, described at page 259. This article resembles the figures represented on page 320; and probably formed a decoration on some flat metallic surface.



Fig. 534, No. 17.

Figure 535, drawn the true size, from No. 24, in Rail-case P, represents two portions of a thin curved strap of cast bronze, $8\frac{1}{2}$ inches long, and highly decorated all over the external surface. It was found in the Shannon, near Athlone, and—



Fig. 535, No. 24.

The concluding cut, Fig. 536, shows the interlaced strap-work on a hollow bronze sheath or ferule, No. 8 in Rail-case P, shaped somewhat like a crocodile's head. It is 4 inches long, and is partially open underneath: see page 640.



Fig. 536. No. 8.

Tray **vvv** contains six bronze embossed plates, three of which are quite perfect. No. 1, incomplete, but forming, with No. 5, Fig. 533, on p. 637; 11 inches wide; the workmanship very imperfect. No. 2, complete, dished; 11 in diameter; apparently in process of manufacture, the edges of the elevated portions being round, except in one of the decorations towards the lower margin, where it has been worked out into a sharp, well-defined pattern. No. 3, ditto, flat, unfinished, except in one small ornament near the top; small, and probably modern, oval aperture in central depression; stout everted rim; found, with No. 4, at Monasterevan, Co. Kildare (Sirr). No. 4, imperfect in some places, unfinished; $11\frac{1}{2}$ No. 5, imperfect towards lower edge, but the most highly finished specimen in the Collection, forming, with No. 1, the illustration at p. 637; cen-

tral depression deep, with raised curved margin; diameter, 10 inches. No. 6, fragment of the right side of a boss, like No. 1.

Rail-case P, continued from p. 599, Miscellaneous articles.— No. 7, a curious article, like a crocodile's head; hollow, raised cast ornament, triangular projections at end; $4\frac{5}{8}$. No. 8, ditto, figured at p. 639. No. 9, rude hollow model of a sheep; $2\frac{3}{4}$. No. 10, ditto, hollow; a good representation of the ancient Irish pig; $3\frac{1}{4}$. No. 11, ditto, of a boar, fuller, and evidently of an improved breed; $3\frac{1}{4}$. No. 12, figure of a frog; $1\frac{1}{2}$. No. 13, a solid piece of brass, in shape of a boot; $2\frac{1}{4}$. No. 14, ditto; $2\frac{1}{4}$. No. 15, a bronze capsule, with three apertures. No. 16, a curious antique figure on flat plate, rude, and showing commencement of art in figure-making; arms akimbo, head attached; plate not cast, but cut, punched, and chiselled; evidently intended to be placed on a flat surface. No. 17, figured and described at p. 639. No. 18, antique figure, like an idol; with a stem beneath, for fixing it on a pedestal; $3\frac{1}{4}$. No. 19, antique classic female figure, well draped on both sides, with stud below for pedestal; $2\frac{1}{2}$. No. 20, ditto, a complete statuette. No. 21, modern; a draped figure with Phrygian cap; holding an inverted torch; 3. No. 22, antique figure, probably of Minerva, well-cast and draped, possibly Roman; $3\frac{3}{8}$. No. 23, curious grotesque human figure, hollow, of antique bronze; stands on tripod formed of its legs and a projection like a tail—arms crossed in front, as if in the act of nursing; naked, except girdle and close-fitting head-dress; resembles a small lavatory; $4\frac{7}{8}$ high. No. 24, a thin, curved plate of bronze, with grotesque head, figured at p. 639. No. 25, a plate of bronze, shaped like a broad cross, edges supported by narrow additional straps; covered with small circular studs, for holding stones; probably the frame-work of a shrine decoration; $5\frac{1}{4}$. No. 26, a small hat-shaped boss, like the miniature umbo of a shield; $\frac{3}{4}$. No. 27, a circular disk, corroded; $1\frac{1}{4}$. No. 28, a curious almond-shaped instrument, hollow, formed of two elongated hemispheres; a loop at one end, a solid stem at the other; $1\frac{7}{8}$. No. 29, lower portion of a similar article, with tubular stem; $1\frac{1}{2}$. No. 30, possibly top of antique balance; $2\frac{1}{2}$ high, with three square projecting sockets; cock's head on top; cleft projections behind.

Rail-case Q.—No. 31, a brass Beggar's badge, circular; $1\frac{7}{8}$; marked, "St. Mark's Parish, No. 7;" found in excavating for

foundations at King's Inns-street, Dublin; oval, bas-relief in centre, representing apostles healing the lame man; city arms at top. —*Presented by R. Mallett, Esq.* No. 32, ditto, marked, "St. Ann's Parish, No. 7." No. 33, circular, plain; 3 wide; marked, Parish of Tidavnet, 1742. For note on Beggars' Badges, see *Ulster Journal of Archæology*, vol. viii., p. 232. No. 34, a curious badge; 3 wide; bearing a large monogram on surface; originally gilt and enamelled. No. 35, a square messengers' badge, ornamented in relief, with a three-masted ship, and bearing the names "And^w Murray and John Tew;" $3\frac{1}{2}$ by $3\frac{1}{8}$. No. 36, an oblong thin plate, coated with tin, and decorated with intersecting lines on reverse side; $7\frac{1}{2}$ by $2\frac{7}{8}$. Externally it had originally two circular bosses, with intermediate plates; one decorated cast boss, $2\frac{1}{4}$ wide, still remains; trumpet-pattern. It appears to have been part of a belt-ornament; and was found at Clonard, county Meath. No. 37, a thin ornamented plate, probably part of a similar article. No. 38, a conical piece of metal, $1\frac{3}{8}$; with a stem, $12\frac{1}{4}$ long; apparently a cauterizing implement. No. 39, a large purse-clasp, believed to be part of an almoner's money-bag; $5\frac{1}{4}$ wide. No. 40, ditto, semi-circular; $5\frac{7}{8}$. No. 41, bronze bifurcated tube in shape of bird's claw; ornamented; 4; possibly part of a lamp. No. 42, gurgoyleshaped article, with human Egyptian-face decoration, possibly spout of lavatory; $3\frac{1}{4}$. No. 43, capsule of thin yellow metal perforated at sides; $1\frac{1}{2}$. No. 44, a rudely cast piece of bronze, resembling the foot of some household article, possibly a lamp; found in the county Longford (Dawson.) The four next articles resemble tops of fire-irons, hollow, and slightly ornamented below. No. 45, covered with antique green patina; $2\frac{5}{8}$ high. No. 46, ditto, contains a portion of iron in the socket; antique decoration; found at Keelogue Ford, in 1843.—*Presented by Shannon Commissioners.* No. 47, short, pale metal, with lead impacted in socket. No. 48, ditto, small; $1\frac{7}{8}$. No. 49, a decorated hook; massive; formed to fit a screen-pole; hinged at small ends; sides fastened by a screw at large extremity; 9 inches round convex edge. No. 50, an angular piece of metal, decorated; $7\frac{3}{4}$. No. 51, a small screw-like article, beautifully cast, and tastefully decorated; $1\frac{3}{8}$. No. 52, ditto, with revolving pendant; originally gilt. No. 53, corkscrew-like article, with pivot; 5. No. 54, a decorated piece of bronze; 4. No. 55, a long piece of bronze,

shaped like a "hanger," bevelled at back; fractured; $15\frac{1}{4}$. No. 56, a piece of brass tubing; 7. No. 57, ditto, 6 (Sirr.) No. 58, a penannular tubular collar, with wide flange, open at side; unfinished; $7\frac{1}{2}$ in diameter; tube, $\frac{3}{8}$. No. 59, piece of brass tube; $7\frac{1}{2}$; found at Clontarf. No. 60, a set of three small tubes, like cartridge-holders joined together; $3\frac{3}{8}$. No. 61, a cruciform decorated article, probably a latch; $5\frac{3}{8}$. No. 62, a metal strap. No. 63, a well-cast piece of decorated open-work, cruciform; surface covered with small embossed floral patterns; $5\frac{1}{8}$. No. 64, ditto, small; $2\frac{5}{8}$. No. 65, ditto, $2\frac{1}{8}$. No. 66, a curious decoration, with double bird-head; embossed on surface; $2\frac{1}{2}$. No. 67, small piece of bronze; 2. No. 68, cruciform piece of bronze slag; 7. No. 69, a long, slender, T-shaped article, apparently very ancient; $8\frac{1}{2}$; covered with thick brown patina. No. 70, a crescentic piece of bronze; 4 wide; well-cast; marked on edge with a decoration, modern, possibly a tool. No. 71, a pendant, like tongue of bell. No. 72, a small shamrock-shaped article, like three buttons joined together. No. 73, an oblong plate, well-cast, with "VIVAS IN DEO" in raised letters (Dawson). No. 74, small brass pistol, in one piece; $6\frac{1}{2}$. No. 75, crozier-shaped decorated article, inlaid; horse's head in front; 3. No. 76, small bow, with square sockets; $1\frac{1}{8}$. No. 77, spur-strap. Nos. 78, 79, 80, and 81, fragments of metal. No. 82, an ancient book-clasp, beautifully decorated with Irish scroll-work; 3. No. 83, spoon-shaped disk; $2\frac{1}{4}$. Nos. 84 and 85, small bronze rods. No. 86, hinged piece of metal; 3.

The subject of House-bells will be considered in another place.

In the first Cross-case on the ground-floor, top shelf, No. 87, is a massive bronze mortar-shaped article, with side-handles, and decorated with cog-like elevations; $3\frac{1}{8}$ high by $3\frac{1}{4}$ wide; found near Thurles, and—*Presented by Henry Grattan, Esq.* Nos. 103 and 104, two bronze moulds, in fine preservation, omitted in description of tools at p. 597. The first resembles a button-mould, and has four human faces on one of the stamps. No. 104 is $2\frac{3}{8}$, and has eleven stamps.

For the description of the metallic Scandinavian collection, continued from page 153, see conclusion of metallic articles.

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