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CALEDONIAN CANAL AT FORT AUGUSTUS.

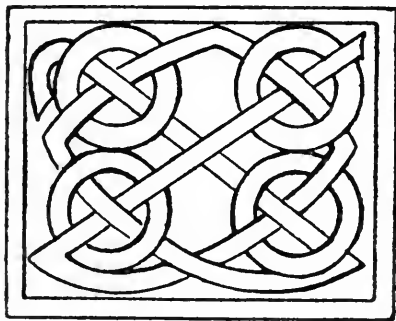
THE
SOCIAL AND ECONOMIC CONDITION
OF THE
HIGHLANDS OF SCOTLAND
SINCE 1800.

BY

A. J. BEATON,

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THIS LITTLE VOLUME IS DEDICATED

TO

SIR ARTHUR BIGNOLD, LL.B., J.P., M.P., &c.,
OF LOCHROSQUE, ROSS-SHIRE,

IN RECOGNITION OF

THE INVALUABLE SERVICES HE HAS RENDERED
IN CONNECTION WITH PUBLIC WORKS
FOR THE
DEVELOPMENT OF THE HIGHLANDS OF SCOTLAND,
MORE ESPECIALLY IN CONNECTION
WITH RAILWAYS, HARBOURS, AND FISHERIES,

AND IN REMEMBRANCE OF

HIS ACTS OF KINDNESS AND LIBERAL ASSISTANCE
TO THE
SOCIAL AND CHARITABLE INSTITUTIONS
OF THE
NORTHERN HIGHLANDS.

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FOREWORD.

IN issuing from the press, at this time, in book form, his excellent essay on the Highlands and Western Islands of Scotland, I am of opinion that Mr. Beaton is conferring a distinct benefit on his countrymen. His little treatise is undoubtedly one of the wisest and best ever written on the subject. The author of the essay now lives in South Africa, where he discharges the duties of an important and responsible situation; and it says a good deal for him that, in the midst of all his toils and anxieties in that part of the world, he can still find time to plan out schemes for the improvement of his dear old native land, and for the amelioration of the material and social condition of its inhabitants. Mr. Beaton is no mere theorist or day-dreamer. On the contrary, as a successful engineer, with an extensive and varied experience, he knows thoroughly what he is writing about; and he clearly demonstrates that the suggestions he makes, if carried into effect, would not only be of present benefit to the Highland people, but would actually pay, and in most cases be a source of future enrichment to the nation at large. I am fully persuaded that in his book Mr. Beaton

gives voice to the demands of all reasonable and common-sense people in our Highlands and Islands; and I trust that our legislators will "read, mark, learn, and inwardly digest" his modest and moderate proposals, which, I feel perfectly sure, will be helpful to them in their deliberations on the subject.

On account of the great distance between Johannesburg and Stirling, Mr. Beaton requested me to revise the proofs of his volume, a task which I readily agreed to undertake; and I accordingly endeavoured, so far as possible, to correct those small errors in spelling which have such a tendency to creep into a printed book. Of course, Mr. Beaton himself is to be held responsible for the final revision of his work.

JOHN SINCLAIR, B.D.,
Parish Minister of Kinloch-Rannoch.

THE MANSE, KINLOCH-RANNOCH,
PERTSHIRE, 20th March, 1906.

P R E F A C E .

THE genesis of this little book was a Prize Essay written for the Gaelic Society of Inverness in 1888: it afterwards appeared as a serial in the "Celtic Monthly Magazine." Since then I have revised and extended the matter to its present form, which I now publish, partly through representations made to me that its value as a work of reference would be enhanced in book form, but chiefly from a long and ardent desire I have had of placing before the public a scheme evolved by me fifteen years ago for developing the many natural resources of the Highlands of Scotland, which from common-place familiarity have been overlooked by keen business men and speculators alike.

The glamour of gold and diamonds blind most men, and the common-place resources of their native country are too often neglected for doubtful ventures in foreign lands. Thus in the Highlands of Scotland, where millions of tons of water, capable of generating

incalculable energy, have been running to waste for ages, only recently one industry has taken advantage of this economical form of power.

In a country where thousands of acres of land are practically lying waste, few have deemed it a good investment to plant trees or sub-divide tillable land into small townships except in a half-hearted fashion, and without any specific general scheme for future developments. In a country surrounded by a sea-board, whose waters are teeming with fish, no adequate harbours exist; and fishing generally is now prosecuted in practically the same primitive manner as it was two centuries ago.

True, the Fishery Board of Scotland has done something towards scientific investigation; and it and the Congested District Boards have helped in a feeble manner in the direction of providing harbours and piers; but a very great deal remains yet to be done.

The Government should issue much larger grants both for harbours and fishing equipments. Since the passing of the Congested Districts Board, in 1897, up to the end of March, 1905, the amount spent on works and land migration, but excluding the purchase of lands, roughly represented £130,000, of which amount nearly £12,000 were expended in

administrative charges. It is, therefore, apparent that the present system of making grants in dribbling doles is anything but an economical policy.

The half-hearted modes of procedure hitherto adopted must be changed into vigorous action. The waste uplands must be re-afforested; the straths and glens must be cultivated. Harbours, piers, and creeks must be constructed. The fishing industry must be conducted, extended, and worked on more scientific and economic principles. Light railways should intersect districts now devoid of reasonable means of access. The existing principal harbours should have railway connections to admit of the rapid transit of fresh fish to the large consuming centres, and curing stations, constructed on the latest scientific lines, should be established at all important fishing stations. Then there would be an outlet for overcrowded labour, and a remedy for our congested cities.

Who has yet given any real, practical, or scientific consideration to the utilisation of the great peat deposits of the Highlands? Here is a fuel containing a large percentage of combustible material, dug out in the crude manner of almost pre-historic days, in a climate sodden with damp, in which

desperate efforts are made to dry a still more sodden peat in an atmosphere already overburdened with moisture, when a simple mechanical process of compression and artificial evaporation would produce 66 per cent. of combustible material little inferior to the best coal, and apart from many valuable by-products.

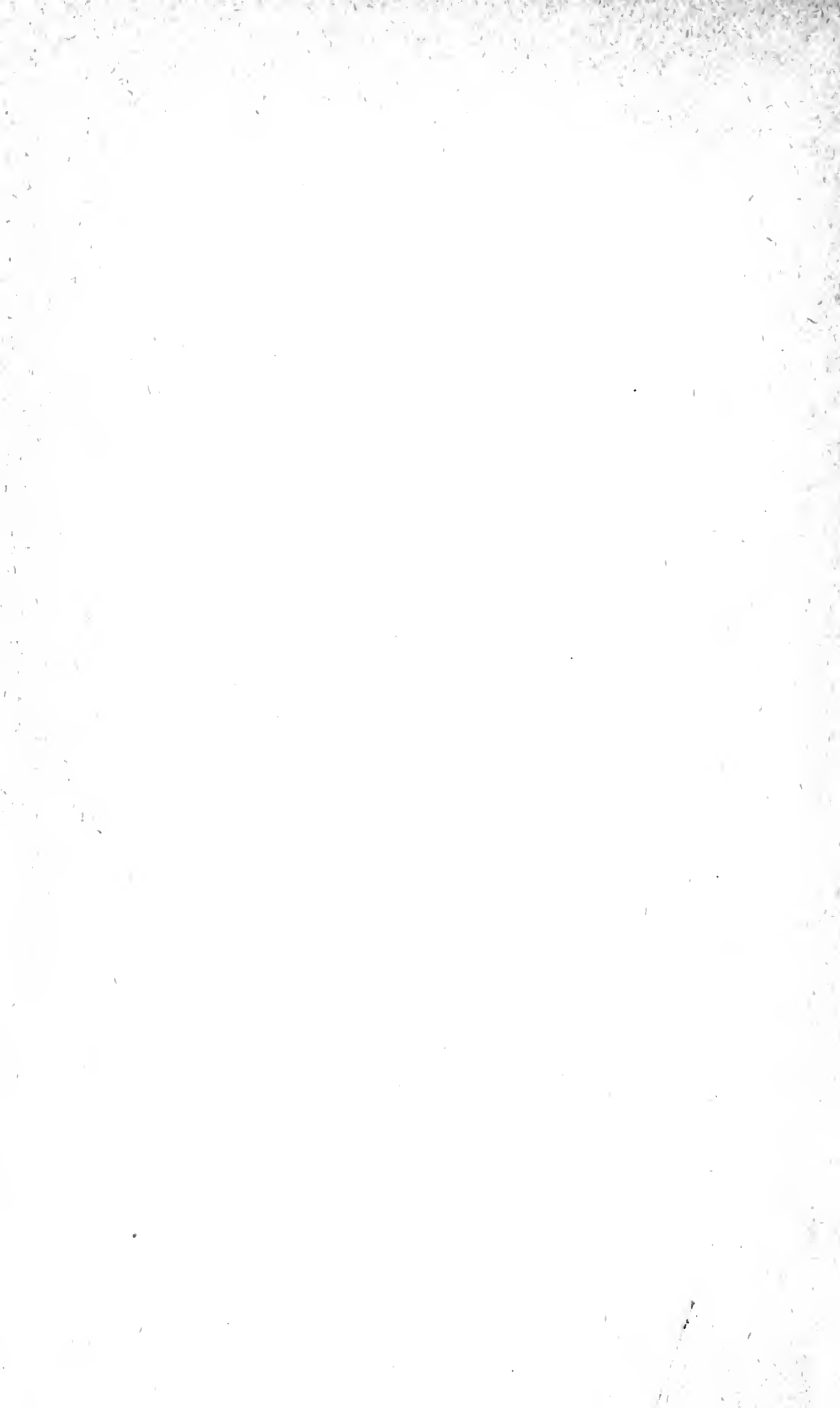
These, briefly, are a few of the many points which I am anxious to bring before the reader's notice in this book, and, although in several cases I have only hovered around the outskirts of the subject, I hope to arouse sufficient interest in the problems, and to awaken the public from their apathy towards the starving masses of our large cities, and by co-operation obtain for them honourable employment and comfortable homes in the Highlands they so fondly cherish, instead of allowing them to be expatriated to foreign lands and climes unsuited to their temperament.

Were these schemes, which I have so imperfectly outlined, carried into effect, they would go a long way—a very long way—towards the amelioration of our compatriots, whose ancestors or themselves have been driven from their native soil, and the land they love so well.

I cannot close this Preface without expressing my

gratitude to the Rev. John Sinclair, Parish Minister of Kinloch-Rannoch, for the many valuable hints given to me during the final getting-up of this book, and for his kindness in revising the proofs during my absence in South Africa.

A. J. BEATON.







A HIGHLAND OFFICER IN THE EARLY 18TH CENTURY.

THE
SOCIAL AND ECONOMIC CONDITION
OF THE
HIGHLANDS OF SCOTLAND
SINCE 1800.

—:—
DEFINITION—AREA.

“**A**N approximately straight, or gently undulating line taken from Stonehaven, in a south-west direction, along the northern outskirts of Strathmore to Glen Artney, and thence through the lower reaches of Loch Lomond to the Firth of Clyde at Kilcreggan, marks out with precision the southern limits of the Highland area.” Such is the definition of the Northern Highlands by Professor Geikie; and although this boundary does not define the usually accepted limits, it is, nevertheless, the true physical frontier of the Scottish Highlands. The division of Scotland recognised to-day as “The Highlands” may

be strictly confined to the area occupied by the Gaelic-speaking portion of the population.

It is not, however, within the province of this book to discuss the precise demarcation of the Highlands; and it will therefore be understood that the area herein referred to embraces the district popularly known as strictly Highland ground.

The region is wild and mountainous, intersected with many large and picturesque lochs traversing the country generally in a north-easterly and south-westerly direction; and although the country is of a wild savage nature, yet many rich, fertile straths and glens are interspersed among the mountains, and wide stretches of fruitful alluvial plains are scattered along the seaboard and along the river valleys. Except at a considerable altitude, the mountains offer rich grazing for cattle and sheep, while the higher grounds afford sustenance for deer, and a quiet retreat for the various kinds of game so plentiful in the Highlands. The coast line is wild, rugged, and indented with long arms of the sea or lochs, running far up into the interior, and these lochs are at seasons of the year visited by shoals of herrings, which are caught by the fishing population along the shores. The herring and other fish are a source of considerable income

to the country, but as this subject is referred to in another chapter I shall dismiss it at present. Scattered along the western seaboard are numerous islands, which are divided into two groups—called the Inner and Outer Hebrides. These islands form detached portions of the Highlands, and they have a still more rugged coast than the mainland, being scattered and battered by the incessant roll of the wild Atlantic waves.

POPULATION.

THE Highlands are now very sparsely populated, even when compared with the most impoverished agricultural county of Ireland.

Take for illustration the extensive and by no means barren county of Inverness, with an area of 4088 square miles and a population of 90,454, being only a density of 22·10 inhabitants to a square mile; whereas county Galway in Ireland has 103·11 inhabitants to the square mile. Again Sutherlandshire will compare still more unfavourably with county Mayo in Ireland—the latter one of the poorest counties in Great Britain or Ireland—being situated on the bleak and barren western seaboard, which yet has 120 inhabitants to the square mile, while in Sutherlandshire there are barely 11½. Whether or not there are means of subsistence for a larger population the reader is allowed to draw his own inference, from the above and the following facts.

The appended table will show at a glance the amount of depopulation that has taken place in the following counties since 1841:—

Population.

21

Name of County.	Population in		Decrease.	Increase.
	1841.	1881.		
Argyll, - - -	97,371	76,468	20,903	—
Caithness, - - -	36,343	38,865	—	2,522
Inverness, - - -	97,799	90,454	7,345	—
Nairn, - - -	9,217	10,455	—	1,238
Perth, - - -	137,457	129,007	8,450	—
Ross and Cromarty, -	78,685	78,547	138	—
Sutherland, - - -	24,782	23,370	1,412	—

According to this table it will be seen that in five of the above counties there is a total decrease of 38,248, and were we to take into consideration the increase of population in towns, the percentage of rural depopulation would show a corresponding decrease. Inverness, for instance, had a population of only 12,575 in 1841. The actual population within the Old Burgh boundary in 1841 was 11,575, but I have added 1,000 to include portions now embraced within the Parliamentary Boundary extension of 1847; while the burgh census of 1881 records 17,385, being an increase of 4,810, which number should be added to the rural depopulation column for the entire county, and therefore we may assume that the actual decrease in the county of Inverness, during the forty years above referred to, is something like 10,000, allowing 2,158 as a fair increase for the burgh. It will also be seen that

two counties—Caithness and Nairn—show a slight increase, but these may be accounted for by the great development, in recent years, of the herring industry at Wick, and by the popularity of the town of Nairn as a watering-place and health resort. The combined counties of Ross and Cromarty show but a small decrease between the periods quoted in table; but were the census of 1851 taken when the population reached 32,707, we should have a decrease of 4,160 in thirty years.*

* The total increase of population of the Highlands and Islands (including Orkney and Zetland) from 1755 to 1821 has been 118,213. Three-fourths of the population speak the Gaelic language, the number of persons understanding English better than Gaelic being 133,699, that of persons more proficient in Gaelic 303,153.—*Vide* Prize Essay by John Anderson, F.S.A.Scot., Highland Society Transactions, 1831.

CHARACTER AND CONDITION OF THE
INHABITANTS.

THERE are as distinctive characteristic features of difference between the Highland and Lowland population of Scotland as there are in the physical demarcation line of the two divisions of the country. The Highlanders, socially and physically, are an entirely distinct people from the inhabitants of the Lowlands. Their language, dress, pursuits and customs are totally unlike those of the Southerner. The Highlanders or Celtic Scoti at the same time have always been sub-divided into two groups—the Hebridean and the Mainland Celts. When the Irish Scoti race moved northwards from the coast of Antrim they diverged into two streams, one branching north-eastward and on the mainland, and the other streaming away north and north-west among the Hebridean Islands. The Hebridean race on their northward course encountered the Scandinavians moving southward, while the Mainland Celts came in contact with the Picts, and later on with the Saxons, this contact and intermingling of the different races causing a cer-

tain amount of amalgamation and fusing, as it were, of the various tribes into a distinct race, essentially different from the Irish Celts—their original progenitors—and also different from each other; and hence we find in the Western Highlands what we may call the Scandinavian Celt, and the Picto-Celt in the eastern and midland districts. Undoubtedly in the portions of the country originally peopled by the Celtic race lying south of the Highland boundary, and which had originally been peopled by the Celtic race, there was effected a gradual alienation from the old and rude Celtic customs, and an adoption of the more civilized institutions of the Saxons.

It took many years after the rebellion of 1745 before the hitherto turbulent spirit in the Highlands subsided; but with the dawn of the new century, the peaceful influences of civilizing enterprise seemed to renovate the war-worn and jaded Highlander with an amount of vigour and energy which I fear has not since then been manifesting itself in the same forcible manner; for we find that industry, education, and the general development of the natural resources of the country received at that time such an impulse that, in the few years embraced in the first quarter of that century, the



A HIGHLAND OFFICER OF THE PRESENT CENTURY.



country assumed a comparative position in the commercial world that perhaps no other country under the sun can lay claim to as having achieved at a single stride within the same period. The powerful natural energies of the Highland people, which, previous to the pacification of the country, were wasted on petty feuds and contentious rebellions against the crown—a misconceived Celtic idea of genuine loyalty to their chiefs—we find developing and progressing to that exalted position which ranks the Scottish Highlander so high among the peoples of the world. The martial spirit of their ancestors still holds sway in the dispositions of true Highlanders; and multitudes of the sturdy sons of the “land of brown heath and shaggy wood” have displayed their warlike and chivalrous spirit on many a bloody battlefield during the last century; and should Britain’s cause require his assistance to-day, the Highland warrior’s arm is as vigorous to wield his broad claymore or handle the rifle, and his courage is as undaunted to face the foe, “as when heretofore he marshalled for the lawless foray, or shed his blood in the shock of conflicting clans.”

A writer in “Blackwood’s Magazine” in 1836, speaking of the character of the Highlander, says



—“ We love the people too well to praise them—we have had heartfelt experience in their virtues. In castle, hall, house, manse, hut, hovel, and shieling—on mountain and moor, we have known without having to study their character. It manifests itself in their manner, in their whole frame of life. They are now as they were, affectionate, faithful, and fearless; and far more delightful surely it is to see such qualities in all their pristine strength—for civilization has not weakened nor ever will weaken them—without the alloy of fierceness and ferocity which was inseparable from them in the turbulence of feudal times. They are now a peaceful people; severe as are the hardships of their condition, they are in the main contented with it; and nothing short of necessity can drive them from their dear mountains.”

Although more than half a century has elapsed since the above was written, it may still be applied to the average Highlander. The Saxon reckons the Celt a lazy animal; and not only do the Irish lie under this stigma, but the Scoto-Celt is classed as equally indolent, and perhaps, in a sense, John Bull, with his advanced notions of social and political economy, is partly justified in asserting this. But when we consider the circumstances and the isolated

position of the inhabitants of the west of Ireland and Scotland, we should not judge too harshly. Removed far from the centres of industry, with no opportunity of obtaining regular employment, ill fed and poorly clad, need we wonder at their lapsing into a state of what some people imagine to be indolence?

The Scottish Highlander of the littoral districts is engaged during part of the year at the fishing, or training in the Militia or Royal Naval Reserve Corps; and when these occupations are over, he wanders home to his bleak moorland holding to secure his scanty crops of corn and potatoes. What can he now do during the long dreary winter but mope about in idleness; for were he even disposed to improve his land the severe Highland winter prevents him; and, were he anxious to do a day's fishing, the tempestuous sea and a dangerous coast will prohibit him. These surroundings, therefore, tend to unnerve and suck the very ambition from their souls, so that they never seek to rise from the prison house of their mean estate. Were this people taught home arts and industries, these would not only help them to pass the dreary winter, but would form a source of income, and would ultimately be the means of elevating their social



position and stimulating them to uproot themselves from the "bogs of immemorial routine."*

I must not, however, overlook the record made by General Stewart of Garth in his excellent work, "Sketches of the Highlanders." Speaking of the charge of indolence made against them, he mentions the fact that during the construction of the Caledonian Canal very few Highlanders availed themselves of this constant and well-paid labour offered them in the very heart of their own country. This at the time was attributed to their natural lazy disposition; while, as a matter of fact, at the very time they refused work at their doors, thousands flocked southward in search of employment. General Stewart refutes the charge of laziness by ascribing it to Highland ambition; and, undoubtedly, the recollection of their former independence under the feudal or clan system prevented them from accepting a labourer's hire in

* Since these lines were written the Home Industries Associations, in whose useful work the Duchess of Sutherland takes such a noble part, and other similar organizations, have worked a social revolution in Highland homes. In many parts of the Highlands and Islands the people are actively employed in weaving, knitting, carving, and other suitable home occupations, the remuneration for which adds considerably to their limited income.



GLENCOE SCENE OF THE MASSACRE

SCENE OF THE MASSACRE OF GLENCOE.

sight of the scenes which once witnessed them in better circumstances. The semi-military life they also led, together with their constant contemplation of the renown of their noble ancestors, imbued them with the notion that they were "gentlemen" in comparison with their Lowland brethren, and their supreme contempt for any commercial or servile pursuit served to make them look upon manual work as degrading and dishonourable. Perhaps if I quote from the late Professor Walker it will illustrate more clearly what I wish to show. He says:—"Wherever the Highlanders are defective in industry, it will be found, upon fair enquiry, to be rather their misfortune than their fault, and owing to their want of knowledge and opportunity, rather than to any want of spirit for labour. Their disposition to industry is greater than is usually imagined, and if judiciously directed is capable of being highly advantageous both to themselves and to their country." This forecast has proved true; for to-day Highlanders may be found all over the world occupying positions of honour and trust.

The hospitality of the Highlanders once upon a time was unbounded; but since the Saxon has invaded their land, they have become more or less



contaminated, and the greed for gold has developed. Donald's erroneous idea that English tourists are actually rolling in money leads him to overreach his conscience in matters of pecuniary detail; and hence the defamatory reports of the avaricious disposition of the Highlander. A Highland Chieftain's house was always open; and the law of hospitality and politeness forbade him, until a year had passed, to enquire of his guest what business he had called upon. Perhaps nothing can more beautifully and graphically illustrate pure Highland hospitality and confidence than the circumstances attending "The Massacre of Glencoe:—

“And tho' in them Glencoe's devoted men
Beheld the foes of all who held their name,
Yet simple faith allowed the stranger's claim
To hospitable cheer and welcome kind;
Undreaming that a Highland hand could shame
The ancient faith—the sacred ties that bind
The guest to him beside whose hearth he hath reclined.”

I may be pardoned for here quoting Pennant's description of the character of the Highlanders; and although the date of "Pennant's Tour" is somewhat earlier than the period embraced in this work, the description would, nevertheless, be as applicable at any stage of the present century as

it was in 1769. "The manner of the native Highlander," says Pennant, "may justly be described in these words: indolent to a high degree unless roused to war, or to any animated amusements; or, I may say, from experience, to lend any disinterested assistance to the distressed traveller, either in directing him on his way or affording their aid in passing the dangerous torrents of the Highlands; hospitable to the highest degree, and full of generosity; are much affected with the civility of strangers, and have in themselves a natural politeness and address which often flows from the meanest when least expected. Through my whole tour I never met with a single instance of national reflection, their forbearance proves them to be superior to the meanness of retaliation. I fear they pity us, but I hope not indiscriminately. Are excessively inquisitive after your business, your name, and other particulars of little consequence to them, most curious after the politics of the world, and when they procure an old newspaper will listen to it with the avidity of Shakespeare's blacksmith. Have much pride and consequently are impatient of affronts and revengeful of injuries." In the main Pennant's description still holds good when applied to the average Highlander, yet much of

the original character of the genuine son of the mountain has been destroyed. The rough and ragged edges of honest simplicity have been rubbed off by the so-called polishing influences of society, and the sturdy independence and self reliance of their ancestors are now being supplanted by, I fear, less commendable qualities, and they are gradually having transfused into them the Saxon and Southern elements. This is one of the unavoidable results of the development of civilization, and although, in a sense, it may be a source of regret to the enthusiastic patriot that the good old Highland character is being gradually obliterated, still the Highlands and Highlanders have benefited in no small degree from their intercourse with the English nation, and they still retain the inestimable virtues of integrity and charity.

Sir John Dalrymple has observed of the Highlanders:—"That to be modest as well as brave, to be contented with a few things which nature requires, to act and to suffer without complaining, to be as much ashamed of doing anything insolent or ungenerous to others as of bearing it when done to ourselves, and to die with pleasure to revenge affronts offered to their clan or their country, these are accounted their highest accomplishments."



“DONALD DOUL - DONALD DOUL - DONALD DOUL -
HEAR ME, AND TREMBLE.”

GHOST IN BACKGROUND, WITH HIGHLANDER.



SUPERSTITIONS, Etc.

“The gleaming path of the steel winds through the gloomy ghost. The form fell shapeless into air, like a column of smoke which the staff of the boy disturbs as it rises from the half extinguished furnace.”—OSSIAN.

THE Highlanders are a superstitious people. Anyone acquainted with their finely strung imagination, and the weird, wild regions they inhabit, can well imagine—

“As when a shepherd of the Hebrid’s Isles,
Placed far amid the melancholy main,
Whether it be lone fancy him beguiles,
Or that aerial spirits sometimes deign
To stand embodied to our senses plain,
Sees on the naked hill, or valley low,
The while in ocean Phœbus dips his wane,
A vast assembly moving to and fro,
Then all at once in air dissolves the wondrous show.”

—THOMPSON.

Often have I myself, while crossing some bleak moor, or traversing a lonely deserted glen, experienced a weird awe-stricken feeling; and it would require but very little imaginative power to con-

vert a grey rock or a waving tuft of heather into a filmy ghost, a kelpie, or a brownie. Educational enlightenment has done much to dispel the darkness of superstitious beliefs which enveloped Highlanders up to near the middle of the nineteenth century; and in many parts of the Highlands, at this very hour, scores of apparently very sensible people cling to the creed of their forefathers, and are firm believers in the existence of ghosts, fairies, and witches.

Witchcraft was the most prevalent superstition; and many a poor decrepit or eccentric individual suffered—under the very eye of the church—the extreme penalty of the law, branded with the appellation of wizard or witch. Although it takes a long time to eradicate a belief, when once rooted in so tenacious and conservative a mind as that possessed by the Celt, the belief in witchcraft, to the extent of persecuting the supposed subjects of it, is well-nigh extinct. Yet fairies, ghosts, and brownies are still often seen hovering about some lonely and haunted locality—if reliance may be placed on the statements of belated travellers. Another common belief, prevalent all over the Highlands fifty years ago, and in some degree believed in at the present time—particularly in the

western isles—is second sight, supposed to be a supernatural gift whereby the seer can see the distant future, and

. “Framed hideous spells,
In Skye’s lone isle the gifted wizard seer
Lodged in the wintry cave, with fate’s fell spear,
Or in the depths of Uist’s dark forest dwells.

.
To monarchs dear, some hundred miles away,
Oft have they seen fate give the fatal blow,
The Seer in Skye shriek’d as the blood did flow,
When headless Charles warm on the scaffold lay.”

The Seer was a very reticent and mysterious person, employing enigmatical language when disclosing any of his prophecies so as to be construed to suit the circumstances of the case, and they were regarded “as men to whom strange things had happened.”

ANCIENT CUSTOMS AND FESTIVE
AMUSEMENTS.

MANY of the ancient customs peculiar to the Highlands are being Anglo-Saxonised, or gradually dying out. Hallowe'en is still celebrated with much of its ancient rites and ceremonies, and:—

“The auld guidwife,s weel hoordet nits
Are round and round divided,
And mony lads' and lasses' fates
Are there that night decided ;
Some kindle, couthie, side by side,
And brin thegither trimly ;
Some start awa' wi' saucy pride
And jump out owre the chimlie,
Fu' high that night.”

These lines from Burns's "Hallowe'en" refer to the custom of burning nuts, to decide if some secretly admired one would yet be wooed and won. But within my own recollection Hallowe'en festivities have lost much of the enthusiasm and excitement once associated with them. Many of the ancient games and pastimes of the country are

neglected or abolished. The "Northern Meeting" has done more than any other institution I know of towards promoting and stimulating the continuance of the manly and athletic sports so peculiar to the Highlands. Where can you see a finer gathering of strapping, stalwart fellows, and of noble, commanding, and lovely women, than at the Northern Meetings in Inverness? While the institution has done much towards developing and perpetuating the national music—and in this respect I must not omit the minor kindred societies and associations which I am glad to see springing up in almost every parish—yet I will venture to suggest that the usefulness and, I may assert, the attractiveness of the meeting might be greatly extended were prizes offered for the best web of home spun cloth, tartan plaid, the best knitted pair of hose, or other articles of home manufacture, so as to kindle the desire for industry among the peasantry.

RELIGION.

SCOTLAND is a Presbyterian nation. Roman Catholicism, and Episcopacy have often endeavoured to gain the ascendancy, but the former as a national religion died with James Beaton, Archbishop of Glasgow, and only in very remote regions of the Highlands did popery find space to raise its head. Recently, however, it has apparently been regaining vitality, and the re-establishment by the Pope of the Scots Hierarchy has given a stimulus to a creed which was fast falling into decay in the Highlands. Episcopacy received a very crushing blow at the time of the memorable '45, whose echo rings through Scotland to this hour, and from then till the middle of the present century it struggled to keep itself rooted in Scottish soil; but in recent years it has been asserting its position in the Highlands to such an extent, that the erection of a magnificent Cathedral in Inverness and the creation of a new See indicate that its roots have again dipped into good soil in the North, and that the independence-dreaming Presbyterian creed of the Highlands is succumb-

ing to the once despised and rejected Prelatic form of religion. The Established Church of Scotland is in a minority in the Highlands when compared with the United Free Church and other dissenting Presbyterian bodies. In 1843, what has been called the Disruption took place, whereby 451 ministers* of the Church of Scotland resigned their livings and formed themselves into a religious body called the Free Church of Scotland. The main causes of this secession may be ascribed partly to certain abuses in the patronage system, and partly to the looseness of the Presbyteries in licensing unsuitable persons to be preachers. Patronage had been previously twice abolished and reinstated again by Parliament. This Act empowered the patron of a living to appoint as minister his own nominee without consulting either the congregation or the Presbytery. There is no essential difference between the doctrines of the Established Church and those of the United Free Church, and now that the obstacle of patronage is abolished, it seems a matter of regret that the two bodies do not unite, and thereby instil

* Of these 451, 289 were Parish and 162 *Quoad Sacra* Ministers, or Ministers of Chapels of Ease.

new life and vigour into a Free United Established Church for the advancement of a true and not spurious Christianity in Scotland. It is lamentable to think that petty jealousies and ill-feeling often exist between the adherents of the two churches.* Notwithstanding all this, the Highland peasantry are a religious people, and I venture to affirm that in no country in the world is the observance of the Sabbath day more rigorously enforced or more strictly adhered to than in the Highlands of Scotland.

“How softly, Scotia, falls the Sabbath’s calm
 O’er thy hushed valleys, and thy listening hills ;
 And, oh ! how purifying is the balm
 Of that day’s peace which then the bosom fills !”

To some minds, perhaps, this unduly rigorous observance of the Sabbath day may seem extravagant, and when carried to extremes often appears ludicrous. Professor Blackie illustrates an instance when he ventured to pass a remark on the

* Since the above was written a serious schism has occurred between the United Free Church and the little Body that has vindicated for herself the name of “the Free Church of Scotland.” There is now much bitterness of feeling between these two Churches. This is a great pity.

weather to a Skye elder on the Sabbath day. "A fine day," said the Professor. "Ay," retorted the elder, "a fine day indeed, but is this a day to be speaking about days?" This morose or "gloomy religion" is chiefly confined to the Free Churchmen; the Established Church adherents, or "Moderates," as they are called, are somewhat more lax and advanced. Before closing these remarks on the religion of the Highlands I must touch briefly on the Sacraments or Highland Communion. The "Sacrament" is a great event in a Highland parish, and thousands of people flock from every district to attend. It extends over five days—Thursday, "the little Sabbath or Fast-day;" Friday, when the "Men" address the people and pray; Saturday, a day of preparation; Sabbath, the great day for the celebration of the Lord's Supper; and Monday, a day of solemn farewell. On Sunday the Gaelic services are held in the open air, as no building sufficiently large can be found to contain so vast an assemblage.

EDUCATION.

THE current belief that Scotland is such a well educated nation is erroneous in the extreme, for this supposed universal "diffusion of education," particularly in the Highlands, is anything but true; and although Scotland has long enjoyed the reputation of being the best educated nation in Europe—and as far as University education is concerned that is undoubtedly true—still we find that the Commission appointed to enquire into the educational state of the Highlands in 1818 found that portion of the kingdom sadly destitute of facilities for elementary learning. Notwithstanding the efforts made by the S.P.C.K. and the Church, little progress was made until the "Grants in Aid" system was established in 1839, which gave an impetus to the educational machinery of the poorer districts of the Highlands.

Again the Free Church, shortly after the Disruption, in order to vie with the Parish or

Established Church schools, erected, in almost every parish, schools in which the children of their denomination were taught, perhaps not in so efficient a degree as in the Parish school, nevertheless they created a healthy spirit of rivalry, which benefitted in no small degree the educational development of the country. The passing of the Education Act of 1872 was the means of placing all the schools in a parish under the direct management of a Board, elected triennially by the rate-payers. This School Board has full control over the teachers, regulates the course of instruction, and was empowered to levy a rate to meet any deficiency not covered by the Government Grant and school fees.* In the poorer and more thinly populated parishes the education rate was often excessive: in the parish of Lochs it reached 4s. 6d. in the £, while in Barvas it attained to the high figure of 5s. 8d. in the £. In these two parishes the poor rate was fixed at 4s. 8d. and 4s. 6d. in the £ respectively. Whether the new system is an improvement on the old Parochial one remains yet to be seen; but I fear very much that the high pressure under which it is worked does not make

* School fees are now abolished in Board Schools.

the same lasting impression on the young mind as did the slow, steady grinding under the old Parish Dominie. Dr. Norman Macleod, in his "Reminiscences of a Highland Parish," depicts with life-like touches the quiet peaceful life of the parish schoolmaster, passed among the solitudes of some wild Highland glen. "The glory," Dr. Macleod says, "of the old Scots teacher of this stamp was to ground his pupils thoroughly in the elements of Greek and Latin. He hated all shams, and placed little value on what was acquired without labour. To master details, to stamp grammar rules, thoroughly understood, upon the minds of his pupils as with a pen of iron; to move slowly but accurately through a classic, this was his delight; not his work only, but his recreation, the outlet for his tastes and energies." . . . "I like to call those old teachers to remembrance. Take them all in all they were a singular body of men; their humble homes and poor salaries and hard work presented a remarkable contrast to their manners, abilities, and literary culture. Scotland owes to them a debt of gratitude that never can be repaid, and many a successful minister, lawyer, and physician is able to recall some one of those old teachers as his earliest and best friend, who first kindled in him

the love of learning and helped him in the pursuit of knowledge under difficulties." Then there is "Domsie" of Ian M'Laren's creation, whose prototype is still often met with in the Highlands.

DOMESTIC LIFE.

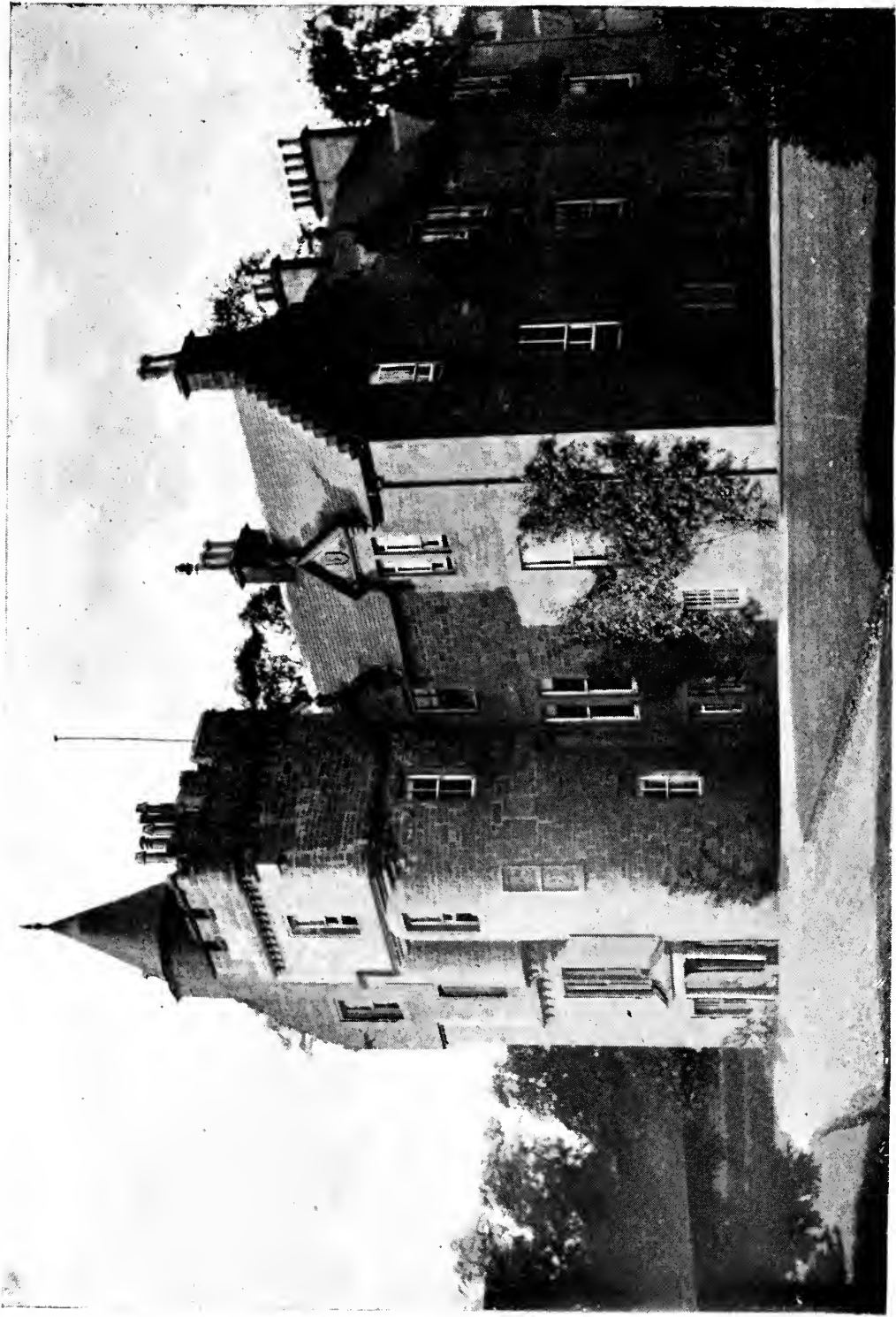
DOMESTIC life in the Highlands may be divided into three classes—the Lairds, large Farmers and Crofters. The Lairds or Land Lords have large and elegant castles or mansions; and the majority of them live in luxury and maintain large and expensive establishments. The extraordinary demand for land, for agricultural and sporting purposes, caused a corresponding increase in the value of this class of property, but recent depression of trade has considerably reduced the rentals of several large estates, resulting in the cutting down of expenditure, and this will be a loss very severely felt by many poor workmen who were wholly dependant on the employment they constantly obtained about the “Big Hoose.” Up to the middle of last century, large and middle class tenantry were ill accommodated; but now few indeed there are who have not handsome and commodious dwelling-houses and offices. The crofters and cottars on the other hand, we may safely assume, are still in some places not one whit better than they were a hundred years ago. Their habita-

tions are but miserable hovels, in many cases the walls being built of turf, with a few cabers, thatched with heather, for a roof; while an opening in the roof serves the two-fold purpose of allowing the peat reek to escape and admitting a dim light—for in many cases there are no windows. The floors are formed of clay beaten down to a hard surface, which in dry weather serves the purpose very efficiently, but in wet weather forms into a slushy puddle. I am now referring more particularly to the dwellings in some parts of the Western Isles—on the mainland considerable improvements have been effected on many estates within the last ten to twenty years—on the dwellings of both crofters and cottars.* Miss Gordon Cumming, in her interesting work "*In the Hebrides*," published in 1883, graphically describes a South Uist crofter's "Home, Sweet Home," as she calls it, in the following words:—"Right across the island the road is built upon a narrow stone causeway, which is carried in a straight line over moor and moss, bog and loch, and which grows worse and worse year by year. Such miserable

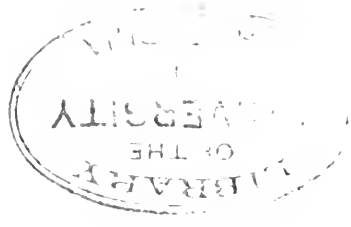
* Since the passing of the Crofter Act, in many townships substantial houses have been erected by the crofters.

human beings as have been compelled to settle in this dreary district, having been evicted from comparatively good crofts, are probably poorer and more wretched—their hovels more squalid, their filth more unavoidable, than any others in the isles—the huts clustering together in the middle of the sodden morass, from which are dug the damp turfs which form both walls and roof, and through these the rain oozes, falling with dull drip upon the earthen floor, where the half-naked children crawl about among the puddles, which form even around the hearth—if such a word may be used to describe a mere hollow in the floor, where the sodden peats smoulder as though they had no energy to burn. Outside of each threshold lie black quagmires crossed by stepping stones—drainage being apparently deemed impossible. Yet with all this abundance of misplaced muddy water, some of the townships have to complain of the difficulty of procuring a supply of pure water, that which has drained through the peat moss being altogether unfit for drinking or cooking.

“Small wonder that the children born and reared in such surroundings should be puny and sickly, and their elders listless and dispirited, with no heart left to battle against such circumstances. Exist-



A HIGHLAND CASTLE.



ence in such hovels must be almost unendurable to the strong and healthy, but what must it be in the times of sickness? The medical officer of this district states officially that much fever prevails here, distinctly due to under feeding. He says, two families often live in the same house, and that he has attended eight persons in one room all ill with fever, and seven or eight other persons were obliged to sleep in the same room."†

The foregoing picture, which, alas! is too true, does not, however, depict the prevailing state of matters in the Hebrides generally; but taking the most advanced townships in any part of the Highlands or Islands of Scotland in this enlightened

† Dr. Ogilvy Grant, Medical Officer for the County of Inverness, has some very interesting statistics in his report for 1897. He finds that the average length of life is seven years shorter in the Islands than on the Mainland. Dr. Grant attributes the recent serious epidemic of typhus fever in Skye to the insanitary state of the townships and contaminated water supply. It is, however, gratifying to learn that the District Councils are steadily forming special water supply districts, and that trained nurses are being stationed all over the districts. But until the existing wretched dwellings are substituted by cottages built on modern sanitary principles, these ever-recurring epidemics can never hope to be stamped out.

D



age, we find the sanitation of those dwellings in a state that should certainly claim the immediate attention of the Board of Supervision, and rather than tolerate a recurrence of so deplorable and so demoralising a thing as to allow sixteen persons to occupy one room—eight of whom were down with fever—the Government should step in and compel the owners to supply adequate accommodation and proper sanitary arrangements, failing which State-aid should be granted, and thus remove from our land one of the foulest stains that ever disgraced the annals of a civilized country.

Before leaving the question of dwellings I will make a short extract from the report of Sir John MacNeill, who specially surveyed the Northern districts of Scotland for the Government in 1850. Sir John says:—“The crofters’ houses, erected by themselves, are of stone and earth or clay. The only materials they purchase are the doors, and in most cases the rafters of the roof, on which are laid thin turf covered with thatch. The crofters’ furniture consists of some rude bedsteads, a table, some stools, chests, and a few cooking utensils. At one end of the house, often entering by the same door, is the byre for his cattle, at the other the barn for his crop. His fuel is the peat he cuts in the

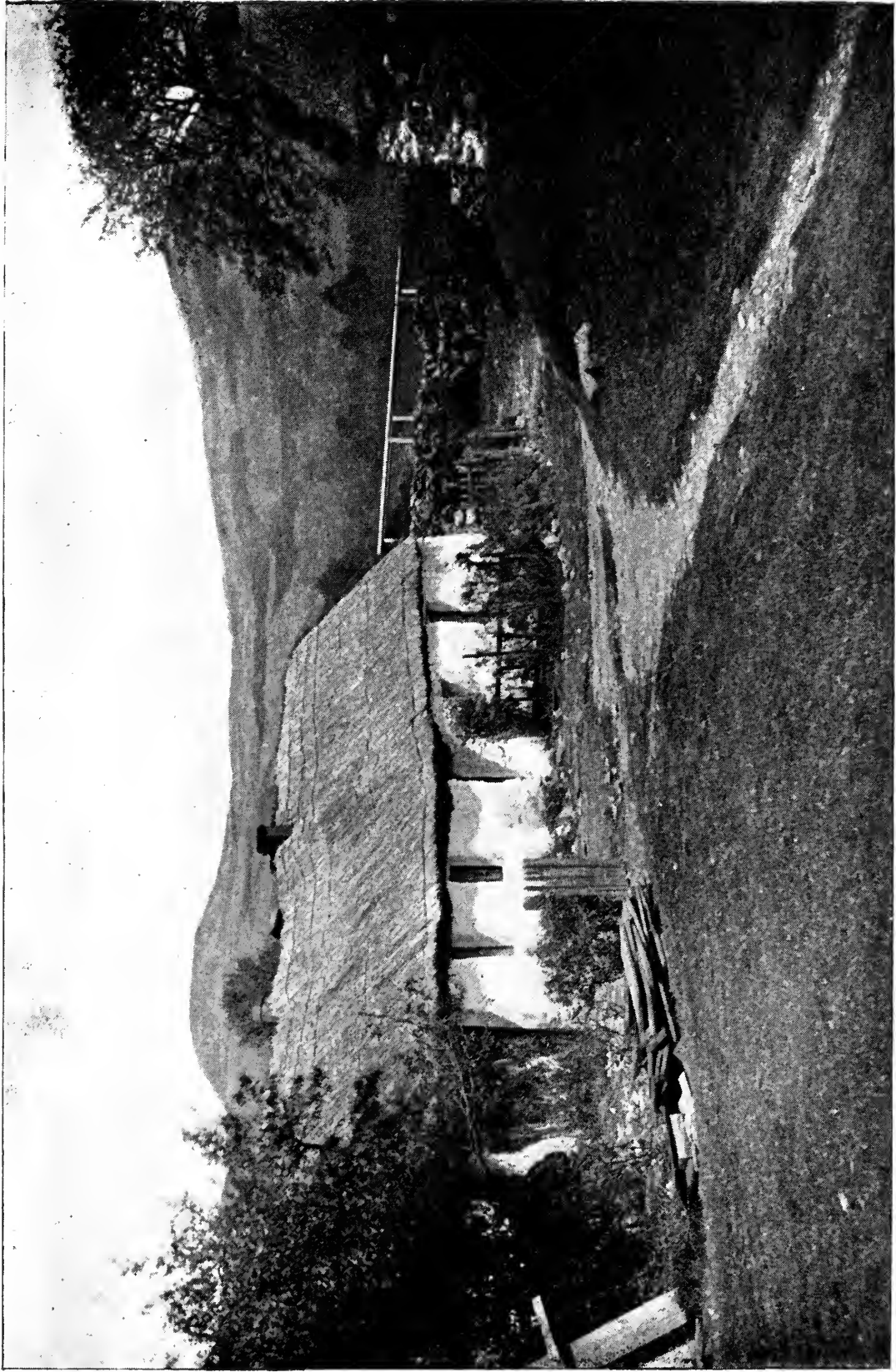
neighbouring moss, of which an allotted portion is often attached to each croft. His capital consists of his cattle, his sheep, and perhaps one or more horses or ponies; of his crop, that is to feed him till next harvest, provide seed and winter provender for his animals; of his furniture, his implements, the rafters of his house, and generally a boat or a share of a boat, nets or other fishing gear, with some barrels of salt herrings, or bundles of dried cod or ling for winter use."

Notwithstanding all this, sanitary improvements in the Highlands have made remarkable progress during the last century, particularly so in towns and villages. But although in many cases rural districts have advanced considerably, still, as I have already shown, much yet requires to be done. I presume the reader is fully acquainted with the lovely town of Inverness with its charming surroundings, its commanding views of miles of characteristic Highland landscape, with the winding silvery Ness and its wooded islands and picturesque bridges; all presenting an air of attractiveness which fills the beholder with ecstasy and delight. Yet what do you think of the report of the Provost of Inverness made to the Home Secretary from the Poor Law Commissioners "On an enquiry into the

sanitary condition of the labouring population of Great Britain, July, 1842? * The worthy Provost says:—"Inverness is a nice town, situated in a most beautiful country and with every facility for cleanliness and comfort. The people are, generally speaking, a nice people, but their sufferance of nastiness is past endurance. Contagious fever is seldom, if ever, absent; but for many years it has seldom been rife in its pestiferous influence. The people owe this more to the kindness of Almighty God than to any means taken for its prevention." . . . He adds, "When cholera prevailed in Inverness, it was more fatal than in almost any other town of similar population in Britain."

The mode of living among the poorer classes is of the commonest description, indeed often bordering on starvation. Their chief fare is oatmeal porridge, or salt herrings and potatoes, while in many of the outer isles a meal has often to be made on a few cockles gathered on the sands or some limpets picked off the rocks. During the most prosperous year, the poor crofter lives but a "hand to mouth" existence; and when a bad season turns

* We need hardly add that the sanitary condition of Inverness has greatly improved since 1842.



A HIGHLAND COTTAGE.

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up, or the fishing proves a failure, starvation stares him in the face—hence the famine which occurred during the years 1846-47 when the potato blight visited the country, and plunged the poorer people into the severest distress. Their chronic state of almost entire poverty, together with the potato failure, landed them in a state of extreme wretchedness. Ireland was suffering in a similar manner; yet notwithstanding the heavy drain made on public generosity, in the case of Ireland, a “Destitution Fund” was raised by voluntary subscription in Scotland, England, and the Colonies, to relieve, if not to check, the prevailing distress in the Highlands. Sir John MacNeill, who, at the time of the potato failure, was chairman of the Poor Law Board of Scotland, in speaking of the demoralising effects of eleemosynary aid, said:—“The inhabitants of Lewis appear to have no feeling of thankfulness for the aid extended to them, but on the contrary regard the exaction of labour in return for wages as oppression. Yet many of these very men, on a coast singularly destitute of safe creeks, prosecute the winter cod-and-ling-fishing in open row boats, at a distance from the land that renders it invisible, unless in clear weather, and in a sea open to the Atlantic and Northern Oceans, with no



land beyond it nearer than Iceland or America. They cheerfully encounter the perils and hardships of such a life, and tug for hours at an oar, or sit drenched in their boat without complaint; but to labour with a pick or a spade to them is most distasteful."

Highlanders are a very sociable race, and perhaps nothing is more enjoyed, by old and young, than a "Ceilidh," when, sitting around the glowing turf fire, they repeat story upon story, each more wonderful than the other, about giants and witches and fairies and midnight adventures, that make the very hairs of the head stand on end. These tales are sometimes varied by songs; and often does Donald blow his chanter and make his bagpipes skirl; and all join in a hearty country dance or in the good old-fashioned "Reel of Tulloch," and thus the long winter nights are passed by those humble people in innocent simplicity. Can we wonder at them thus trying to wile away the long dreary weary time in that desolate country and damp moorland atmosphere, where they are compelled to pass an existence in poverty, hardship, and isolated imprisonment?

The characteristic Highland weddings and funerals, with their peculiar customs, are fast be-

coming extinct, and of one thing I am glad, that considerable reformation has taken place in the matter of Highland funerals; and, although as yet, as a rule, no religious ceremony is conducted at a burial further than, perhaps, the offering up of a prayer by the minister, still many of the scenes of revelry and apparent levity, in olden times, have been abolished. Refreshments are still dispensed; and the practice—unless abused—is commendable, as many of the mourners come from remote places, and perform long and weary journeys to attend the funeral.

Lord Teignmouth, in his “Sketches of the Coasts and Islands of Scotland,” thus relates the description of the funeral of a distinguished officer, as conveyed to him by an enthusiastic Highlander:—“Oh, sir, it was a grand entertainment, there were five thousand Highlanders present; we were so jolly!” continued the guileless native, “some did not quit the spot till next morning, some not till the following day, they lay drinking on the ground; it was like a field of battle.”

To those acquainted with the Highland character, the foregoing may appear uncivilized and barbarous conduct; nor will I attempt to justify it. Yet for all this it cannot be attributed to their levity, as

Highlanders regard death with becoming solemnity; neither is it want of attachment to the memory of the deceased. It is but the perpetuation of a remnant of a rude custom of showing respect to the dead and hospitality to the mourners. In our day, at festive seasons, the customs of "drinking the health" of friends is still indulged in; and, undoubtedly, in those "good old times," long ago, the same method was employed in paying respects to the memory of the dead.

EMIGRATION.

“ From the lone sheiling on the misty island,
Mountains divide us, and a waste of seas,
But still the blood is strong, the heart is Highland,
And we in dreams behold the Hebrides.”

THE emigration question is one which requires very careful consideration before any definite conclusion is arrived at, for it is nothing less than a great national problem, a problem which, up till now, has had no satisfactory solution.

That our surplus population must be got rid of is an undisputed fact, but whether it is the wisest course to drain off the congested districts by emigration I am not prepared to say. I, however, think that voluntary emigration, whether of communities or individuals, should be encouraged, so long as it can be satisfactorily shown that those persons are qualified and adapted to undergo the life of an emigrant; but wholesale compulsory emigration cannot be too strongly condemned, as a system rotten at its very core, for while it hurls whole townships higgledy-piggledy into a howling

wilderness in a foreign land, it also forms a cloak to screen many cruel evictions that have occurred throughout the Highlands. But, as I have said, we must somehow dispose of our over population; and still I question very much if it is a judicious policy to drive from their native land a race of people who, in bygone years, formed the stamina and backbone of the nation.*

“ Ill fares the land, to hast’ning ills a prey,
 Where wealth accumulates and men decay,
 Princes and Lords may flourish or may fade;
 A breath can make them, as a breath has made;
 But a bold peasantry, their country’s pride,
 When once destroyed can never be supplied.”

—GOLDSMITH.

True it may be that it is next to impossible for so large a population as now occupy the barren and swampy wastes of many of the Western Isles to even eke out a miserable existence; yet were the Government aid which was offered to emigrants

* The Island of Skye alone has sent forth since the beginning of the last wars of the French Revolution, 21 lieutenant-generals and major-generals, 48 colonels, 600 commissioned officers, 10,000 soldiers, 4 governors of colonies, 1 governor-general, 1 chief baron of England, and 1 judge of the Supreme Court of Scotland.—DR. NORMAN MACLEOD.

given to them, with the power to migrate and settle on some of the rich fertile lands scattered throughout the many beautiful straths and glens of bonnie Scotland, we should not only be retaining the people and their capital in our midst, but also enriching the land, and, above all, feeling that we were not expatriating a people whose love for their native land is such that, when the heather-clad mountains sank from their view, their hearts would sink, and their arms would shrink like ferns in the winter's frost; and when they reached that far western land, with no heart or energy to face the rough battle of life, they would say—

“The Highlands! the Highlands! O gin I were there,
Tho' the mountains an' moorlands be rugged and bare.”

· · · · ·
“In these grim wastes new homes we'll rear,
New scenes shall wear old names so dear ;
And while our axes fell the tree,
Resound old Scotia's minstrelsy :
Stand fast, stand fast, Craig Elachie !”

—Mrs. D. OGILVY.

After the Anglo-Boer War the Land Settlement Departments of the Transvaal and Orange River Colony made several attempts to settle Government

lands, but after enormous sums of money had been expended on the scheme, the results have been anything but satisfactory. Had one half of this money been expended in erecting houses and supplying stock and implements for re-peopling the fertile straths and glens of Scotland, the result would not only be remunerative, but a more happy and contented community would be the result. The Imperial Government would act wisely if they devoted a large sum of money for this object.

Between the years 1773-1775, 30,000 persons from various parts of the Highlands crossed the Atlantic, but it was not until about the beginning of the last century that the tide of emigration reached its full height, when the crofters were swept away to make room for the wealthy sheep farmers from the southern dales who invaded the Highlands, and offered an enormous increase for the summer "shielings" of the poor crofters. The late Dr. Carruthers, of Inverness, quotes an instance in which a sheep farmer from the south offered no less a rent than £350 for a cattle grazing belonging to the men of Kintail who only paid an annual rent of £15 for it. To impecunious lairds such temptations were beyond their power to resist.

"Then it was that the more active and enter-

prising of the people had emigrated; and the few that remained squatted down in lethargic contentment, so long as their miserable patches of half cultivated lands yielded them a few potatoes and sufficient corn for some meal, with an occasional shoal of herrings throwing themselves within the weirs of the lochs; and thus the people struggled on in that lethargic manner, never endeavouring to elevate or improve themselves above the customs and manners of their forefathers. They married and multiplied; the crofts were sub-divided, and additional huts thrown up to accommodate an ever-increasing population, which, notwithstanding the moderately steady drain of emigration and military employment, still went on growing till the townships failed to support a population now double that of its original settlers. No opportunity was given for spreading out from their confined area; and as they depended wholly on potatoes as their staple food, which now failed them, in 1846, when the destitution crisis began, and became so unequalled for intensity, and which involved both chief and clan, landlord and tenant, in irretrievable embarrassment and ruin." And though the immediate distress was mitigated by the generosity of the British public, its effects are still more or less

chronic; and ever and anon the sad case of human destitution and starvation occurs, and will continue to do so, until permanent remedial measures are introduced that will for ever place it beyond the possibility of recurring.

The natural aversion Highlanders have to emigrate further suggests that some improvement of their condition at home should be first attempted before the adoption of the extreme measure—emigration; for when the late Sir James Matheson of Lewis offered to cancel all arrears of rent, forgive all debts, purchase the stock, and provide a free passage to Canada, to any of his tenants willing to emigrate, his generous offer was only accepted by a few. As I have already observed, men who emigrate and have their whole soul concentrated on “the old country,” cannot be expected to labour with that energy which is necessary to cope with the difficulties of a new country, and to make them successful in proportion to the troubles they have undergone.

Dr. Norman Macleod illustrates this in that graphic and pathetic style so peculiar to him. “To Highlanders,” he says, “emigration has often been a very passion—their only refuge from starvation. Their love of country has been

counteracted on the one hand by the lash of famine, and on the other by the attraction of a better land opening up its arms to receive them with the promise of abundance to reward their toil. They have chosen, then, to emigrate; but what agonising scenes have been witnessed on their leaving their native land? The women have cast themselves on the ground, kissing it with intense fervour. The men, though not manifesting their attachment by such violent demonstrations on this side of the Atlantic, have done so in a still more impressive form in the colonies—whether wisely or not is another question—by retaining their native language and cherishing feelings of the warmest affection for the country which they still call ‘Home.’”

In his “*Reminiscences of a Highland Parish*,” Dr. Macleod, in describing the departure of some emigrants, says:—“Among the emigrants from ‘the parish’ many years ago was the piper of an old family which was broken up by the death of the last laird. Poor ‘Duncan Piper’ had to en-patriate himself from the house which had sheltered him and his ancestors. The evening before he sailed he visited the tomb of his old master, and, playing the family pibroch while he slowly and

solemnly paced round the grave, his wild and wailing notes strangely disturbed the silence of the lonely spot where his chief lay interred. Having done so, he broke his pipes, and laying them on the green sod, departed to return no more."

INDUSTRIES.

AGRICULTURE.

THE Highlands of Scotland, being a purely agricultural and pastoral country, and its prosperity closely linked with those industries, we should naturally expect that the development of agricultural and grazing pursuits would be the chief aim of its inhabitants, and that numerous experimental farms and agricultural colleges should be scattered all over the country; but it is not so. The Highland and Agricultural Society, established over one hundred years ago, undoubtedly has done much good, and to some extent stimulated farmers to practise improved methods of husbandry; but the local associations, or farmers' societies, have done little more than create a wholesome rivalry among the few cattle breeders, and it is only in some localities here and

there that experimental work has been carried on with anything like scientific precision.*

When comparing the present condition of agriculture with what it represented at the commencement of the last century, notwithstanding the inferior nature of the soil and the ungenial climate, many Highland farmers, by their shrewdness and resolute determination, although labouring under so many difficulties, have distinguished themselves more than any other class of farmers perhaps anywhere, and the great progress which agriculture has made in the north-eastern parts of Scotland during the last hundred years testifies to the high position which these Highlanders now occupy as agriculturists. In the poorer localities, particularly among the crofting class, especially in the outer Hebrides, little advance has been made during the past one hundred years. At the commencement of this century, agricultural prices were exceedingly high. In 1812 wheat fetched 126s. 6d. per quarter, but gradually it fell until in 1822 it declined to

* In this respect the Welsh are far in advance of us, for in the year 1898 a fully equipped experimental farm was established in connection with the North Wales University College, Bangor, which had only been in existence 16 years.

44s. 7d. per quarter, while in 1844 wheat sold at 26s. per quarter. Notwithstanding these fluctuations, we find that the rentals of Inverness and Ross-shires stood as follows:—

Rentals,	1815.	1873.	1887.
County of Inverness,	£185,565	£417,951	£420,892
Ross and Cromarty,	121,557	298,325	310,450

Showing an increase in the 72 years of £235,327 on the rental of Inverness-shire, and for the combined counties of Ross and Cromarty £188,893; from these figures—after making a liberal deduction for increase in Burghs and valuation of Railways—we must infer that farmers, seventy years ago, must have had a good time, or that to-day the tillers of the soil must be labouring for nought.

Agriculture during the present century has had a series of revivals and of corresponding depressions. The most notable depression began about the year 1879, when a series of bad seasons came in succession, till affairs became so desperate in 1879 that a Royal Commission of enquiry was appointed to inquire into the prevailing agricultural distress; and the Commissioners' report, which was issued in 1882, pointed out that two of

the most prevalent causes of distress were, bad seasons and foreign competition, aggravated by increased cost of production and heavy loss of live stock from disease.

On the strength of the Commissioners' report Mr. Gladstone's Government, in 1883, passed the Agricultural Holdings' Act, a measure tending in the right direction, yet conferring on the tenant but few of the privileges which he contends he is entitled to. Of the other legislative measures passed during last century I need hardly mention the repeal of the Corn Laws, the Abolition of Hypothec, the Ground Game Act, the Abolition of the Malt Tax,* and the Cattle Diseases Act of 1884, all measures having a tendency to ameliorate the condition of the tenant farmer.

About a quarter of a century ago agricultural prices stood at a remunerative figure, and the demand for farms far exceeded the supply, resulting in fabulous prices being given for land; and

* Some contend that the Abolition of the Malt Tax has been injurious to the farmer, by removing what used to be a practical bounty on British barley. But if this was its effect, the intention of it was undoubtedly good, and the effect was unforeseen by the promoters of the Act.

at the same period landlords were seized with a mania for creating large farms, and consequently hundreds of the small tenants were evicted, and sometimes as many as a dozen holdings were rolled into one vast farm. Men of capital readily took up every farm in the market, many of them on long leases; but a series of bad seasons landed most of these large farmers in bankruptcy. Some managed with difficulty to carry out their agreement, but on the expiry of their lease they quitted as ruined men, while others failed to complete any more than half the terms of their contracts.

Big farms have therefore proved a failure, and several causes can be assigned for this. The chief cause may, however, be attributed to cost of production together with low prices; because the big farmer when not near a town must employ a large permanent staff, whereas in the days when he was surrounded by small tenants and crofters he could secure labour just as he required it.

The landlords also made a fatal mistake when they converted the small and middle class farms into extensive holdings. No doubt they considered it more economical, as one set of offices would serve where perhaps five or six steadings would be required were the various farms to be re-let, the

buildings of nearly all the smaller farms being in a most dilapidated condition at that period. How far their economical policy has benefitted them they themselves know; but now they are compelled to sub-divide those farms as well as to erect premises and offices; and thus it appears to have been simply a case of putting off the evil day for a short period, and during that period the evil was accumulating. Had the small farmers been left in their holdings they would in all probability have weathered through the storm of depression.

CATTLE BREEDING.

WITH the exception of a few well-known herds, particularly in Ross-shire, high class breeding of cattle does not receive the amount of attention in the Highlands which the beef producing counties of Aberdeen, Banff, Forfar, etc., devote to this branch. Indeed, in these days, what with foreign competition and low prices, it does not pay the trouble and risk involved in rearing fat stock.

The West Highland ox, with his shaggy coat and picturesque appearance, is the breed most profitable and best adapted to the Highland counties. In 1884 Argyllshire alone had 660,500 head of best Highland cattle.

Sheep farming is an equally if not more important industry than arable farming. In 1884 it was estimated that in the Highlands there were 6,983,293 sheep, of which 2,393,826 were lambs.

The once remunerative business of sheep farming induced landlords to convert whole tracts of territory, then under cultivation, into extensive sheep runs; and sheep farmers are therefore looked upon by the crofters of Scotland as the primary movers or originators of evictions.

Sheep farming, as well as the kindred branch of agriculture, has suffered in the general depression aggravated by the large importations of foreign mutton and wool. The estimated quantity of wool grown in Scotland in 1884 was about 34,500,000 lbs., and the estimated weight of wool imported from Australasia in the same year was 400,000,000 lbs.*

Again, the fabulous prices offered for sporting estates led to the breaking up of sheep farms and the converting of them into deer forests, so that to-day there are about $2\frac{1}{4}$ millions of acres occupied as deer forests in the Highlands of Scotland.

Before leaving the question of sheep I must allude to the great "Wool Fair" held at Inverness in July of each year. There are hundreds of thousands of sheep sold annually at this market, and yet not a head is exhibited. "This market is

* *Vide* Ordnance Gazetteer.



HIGHLAND CATTLE. 35123 W.

HIGHLAND CATTLE.



peculiar," says a well-known writer, "in so far as no stock whatever is shown, the buyer depending entirely upon the integrity of the seller together with the character the stock is known to possess."

"It is a great source of pride to the farmers in this part of Scotland to be able, as they are, to say that no question involving legal proceedings has ever yet arisen out of a misrepresentation of stock sold at this market, which has been in existence since the commencement almost of last century."

Dairy farming is not carried on scientifically, nor to any great extent beyond the requirements of local consumption, and only in a very few localities is cheese manufactured beyond what is required for home use. There is wide scope for developing this industry, for in many of the English counties the farmers are solely dependent on the manufacture of cheese as the means of paying their rents.*

On the rich alluvial lands skirting the shores of the Cromarty and Moray Firths, and indeed

* Co-Operative Dairies, with Central Creameries, have been established in Ireland, and prove most remunerative investments. There is a wide field in the Highlands for the establishment of similar manufactories.

throughout the Highlands generally, where farms attain an area of any considerable extent, cultivation is carried out on the most improved principles; and large sums of money have been expended on draining, trenching, and squaring lands. The modern improvements in agricultural machinery have materially assisted the farmer in bringing the soil to the present high condition in which we find the arable lands in those districts referred to.

“No account of the agriculture of Scotland,” says the late sub-editor of the “North British Agriculturist”—Mr. James Landells—“would be complete without some reference to the peculiar condition of the smaller tenants of the Highlands and Islands. The system of agriculture pursued by the crofters, or the smaller tenants, is of the most wretched description.”

The chronic state of poverty associated with the crofting class is alluded to in an earlier chapter. The land agitation, which had been smouldering over the Highlands during the past fifteen years, at length broke out in the wild and distant township of Valtos in Skye, and from there it spread rapidly all over the Highlands and Islands.

It was not till 1882 that the agitation reached its climax, when the “Battle of the Braes,” near

Portree, began, where a force of seventy policemen arrested a number of crofters accused of having deforced a Sheriff Officer; they were, however, all acquitted, except two, who were fined. In the autumn of same year another campaign was commenced at Braes, and similar riots broke out in Glendale; and the turbulent spirit was spreading all over Skye, until it was found necessary to despatch H.M. gunboat "Jackal" with a special Government Commission on board to remonstrate with the inhabitants. The agitation had by now raised such a feeling in the country, and so attracted even the attention of Parliament, that in 1883 the Government appointed a Royal Commission to enquire into the condition of the crofters and cottars of the Highlands and Islands of Scotland. The Commission, with Lord Napier as chairman, found "*that the crofter population suffered from undue contraction of the area of holdings, insecurity of tenure, want of compensation for improvements, high rents, defective communications, and withdrawal of the soil in connection with the purposes of sport.*" "Defects in education and in the machinery of justice, and want of facilities for emigration, also contributed to depress the condition of the people, while the fishing

population, who were identified with the farming class, were in want of *harbours, piers, boats, and tackle for deep-sea fishing, and access to the great markets of consumption.*" The Highland Land League was now organised; and at Martinmas, 1884, a "no-rent" manifesto was issued; and many tenants absolutely refused to pay any rent until the land was fairly divided among them. Raids were made on deer forests, march fences were demolished, and lands were forcibly taken possession of, until the whole of Skye and the Long Island were in a complete state of chaotic anarchy. Attempts were made to serve summonses of removal, but the officers were mobbed and deforced. In November, 1884, it became necessary to send a military expedition to Skye with four gun boats and five hundred marines. This formidable force restored order, and the crofters accused of acts of deforcement submitted to be quietly apprehended.

In face of the recommendations contained in the report of the Royal Commission accentuated by those riots in the Hebrides, Parliament in 1886 passed the Crofters' Holdings (Scotland) Act, whereby three Commissioners were appointed to fix "fair rents" and deal with the question of arrears, and at the end of year 1887 the Commissioners had

examined 1767 holdings, and for year ending 31st December, 1888, they examined and awarded decisions on 2185 holdings, being a total of 3952 cases dealt with from the opening of the enquiry, having 7621 applications to be still dealt with as at 31st December, 1888.

I append a table showing number of holdings for which "fair rents" have been fixed, and amount of arrears cancelled.

Year ending	No. of Holdings.	Present Rent.	Fair Rent.	Arrears Cancelled.
31st Dec., 1887.	1767	£12,457 10 0	£8,617 6 0	£14,418 5 1½
31st Dec., 1888.	2185	£11,882 18 8½	£8,380 1 11	£13,897 4 5½
Totals,	3952	£24,340 8 8½	£16,997 7 11	£28,315 9 7
		£16,997 7 11		
Permanent Reduction of Annual Rent,		£7,343 0 9½*		

This gives an average reduction of rent of 30.15 per cent. on the total number of cases examined, and an average of 64.82 per cent. of cancelled arrears. These judicial decisions prove that the crofters had just cause for complaint; and although I shall not attempt to justify the means which they

* The total permanent reductions in rent for the nine years 1886-87 to 1895-96 = £21,387 16s.—and the amount of arrears cancelled in same period = £123,469 2s. 10d.—*Vide* Parliamentary Return, 6th April, 1897.

adopted for the purpose of getting remedial legislation, still I will venture to say that our legislators are pursuing a false policy in allowing bad laws to goad the people to the verge of rebellion before they introduce measures of reform; for this gives an excitable race the idea that nothing for their benefit can be obtained without becoming turbulent and riotous.

I have already shown that in many parts of the Highlands agriculture made rapid strides during the last century; yet in the Hebrides, and, indeed, among nearly the whole crofter community, little if any progress has been made. In the first report issued by the Crofters' Commission we find the following paragraphs:—"The land, both in Skye and in all the other islands visited, is subjected to a process of continuous cropping which is disastrous. There is no particular shift or rotation adopted, the land being continuously cropped as long as it will grow anything. The consequent waste and deterioration of the land, especially the weaker kinds, is enormous. This observation, however, is not true to the same extent of Skye as of South and North Uist, the soil in Skye being generally of a stronger nature."

"It may be added that in Skye as in some other

places we found great room for improvement in the matter of leading drains. It frequently happened that a crofter suffered from his neighbour failing to make and keep these in a state of efficiency. It also frequently occurred that a crofter waited for years on his landlord getting such drains scoured out in reliance on some real or supposed obligation to do so, instead of putting them in working order himself and thereby greatly improving his croft."

The Duke of Argyll, in a very learned article in the "Nineteenth Century" of January, 1889, on "Isolation," after deploring the alarming increase of the population on the barren shores of the wild Hebrides, says:—"But there was another cause that affected the whole of Scotland, where the rising tide of innovation and improvement did not reach and did not submerge it. This cause was the profound and almost unfathomable ignorance and barbarism of the native agriculture, together with a traditional system of occupation, which, as it were, enshrined and encased every ancestral stupidity in an impenetrable panoply of inveterate customs." This language may sound harsh, or even unjust. And so it might be, if such language were not used in the strictest sense, and with a due application of



the lessons to ourselves. We are all stupid in our various degrees, and each generation of men wonders at the blindness and stupidity of those who have gone before them. Man only opens his owlish eyes by gradual winks and blinks to the opportunities of nature and to his own powers in relation to them. Let us just think, for example, of the case of preserving grass in "silos," a resource only discovered, or, at least, recognised, within the last few years, yet a resource which supplied one essential want of agriculture in wet climates at no greater cost of ingenuity or of trouble than digging a hole in the ground, covering the fresh cut and wet material with sticks, and weighting it with stones."

"There is, however, something almost mysterious in the helpless ignorance of Scottish rural customs up to the middle of the last century. . . . In a country where there is a heavy rainfall, its inhabitants never thought of artificial drainage. In a country where the one great natural product was grass of exceptional richness and comparatively long endurance, they never thought of saving a morsel of it in the form of hay. In a country where even the poorest cereal could only grow by careful attention to early sowing, they never sowed till

a season which postponed the harvest to a wet and stormy autumn. In a country where such crops required every nourishment which the soil could afford to sustain them, they were allowed to be choked with weeds, so that the weed crop was heavier than the grain. . . . They sow corn as if they were feeding hens, and plant potatoes as if they were dibbling beans. They think the more they put in the more they will take out. In short, we have here a survival of the wretched husbandry of the lowest period of the military ages staring at us in the fierce light of our own scientific and industrial times." Without a doubt, a great deal of the above is quite true; but then we know that however impartial His Grace may try to be, yet his judgment must be more or less biassed, as His Grace has anything but a favourable opinion of what he calls "the worst of all native customs"—"crofter" townships.

"The whole of the outer Hebrides," continues His Grace, "are mainly composed of the oldest, the hardest, the most obdurate rock existing in the world. It is the same rock which occupies a great area in Canada, on the north bank of the St. Lawrence. The soil which gathers on it is generally poor, and even what is comparatively good is

often inaccessible. In its hollows, stagnant waters have slowly given growth to a vegetation of mosses, reeds, and stunted willows. Gradually these have formed great masses and sheets of peat. Only along the margin of the sea, where calcareous siliceous sands have mixed with local deposits of clay, are there any areas of soil which even skill and industry can make arable with success. The whole of the interior of the island is one vast sheet of black and dreary bog. . . . To root them in that soil is to bury them in a bog—a bog physical, a bog mental, and a bog moral.” So decides His Grace the Duke of Argyll; and yet Mr. Nimmo, one of the Commissioners appointed by the Government to enquire into the nature and extent of the bogs in Ireland, in his report, issued in 1813, says: “I am perfectly convinced, from all that I have seen, that any species of bog is, by tillage and manure, capable of being converted into a soil fit for the support of plants of every description; and, with due management, perhaps the most fertile that can be submitted to the operations of the farmer. Green crops—such as rape, cabbages, and turnips—may be raised with the greatest success on firm bog, with no other manure than the ashes of the same soil. Permanent pastures may be formed on bog,

more productive than on any other soil. Timber may be raised—especially firs, larch, spruce, and all the aquatics—on the deep bog, and the plantations are fenced at little expense; and with a due application of manure, every description of white crops may be raised upon bog.”

The expense of draining and improving bog land, as estimated by Mr. Griffith, one of the Commissioners’ engineers, was about twenty-five shillings per acre, and he reckoned on receiving an annual rent of thirty shillings per acre, on a lease of twenty-one years.

Before the construction of the Grand Canal from Dublin to the River Shannon, a portion of the Bog of Allen, called the “Wet Bog,” was originally valued to the promoters of the Canal at one farthing per acre. It now lets for tillage and grazing at from thirty shillings to forty shillings per acre.

I may be pardoned for introducing this extraneous matter, as I wish to show the beneficial effect arterial drainage would have on the swampy lands of the Highlands. Stagnant waters produce one kind of unprofitable aquatic plants; vegetation is affected by the quantity as well as the quality of the moisture which it absorbs for its sustenance; and the cold, damp exhalations from the swampy

hollows have a most injurious effect on everything in their vicinity.

The draining of bog land in Ireland has proved remunerative, and were the Government to do for the Highlands and Islands of Scotland what they have on several occasions done for Ireland in the way of drainage grants, and a complete scheme of arterial drainage carried out in the Highlands, with a judicious planting of trees, we should have a more fertile soil, a healthier and finer climate, a more contented and industrious peasantry; and while the canals served as the means of carrying off the superabundant waters, they could at the same time be utilized as a waterway for the conveyance of the requirements of the districts they penetrated, or used as a motive power for mills, which might be erected along their banks.

The method of letting farms on long leases was, during prosperous years, considered one of the distinguishing privileges of Scots farms, but in recent years matters have entirely reversed. On the other hand, yearly tenancy has many objections. The uncertainty of tenure tempts the farmer to take all he can out of the soil while he has the opportunity; or perhaps, when he has exhausted or impoverished the soil, he quits the holding. Of

the two evils, therefore, it is difficult to decide which is to be preferred. The most satisfactory solution of the problem is the adoption of the principle embodied in the Crofters' Holdings Act—security of tenure and rent fixed by a Commission.

FISHERIES.

ANOTHER industry in the Highlands of equal importance with agriculture is the sea fisheries. The gross value of the sea fisheries of Scotland, according to the Fishery Board returns for year 1887, amounted to £1,915,602 10s., of which sum £1,128,480 8s. were accredited to the herring fishery. Now, as the herring fishery is chiefly confined to the Highland waters, it can be readily seen what an enormous source of wealth this harvest of the sea yields to the country. The means of employment it also gives to the surplus population of the Highlands is very considerable, for no fewer than 49,221 men and boys were engaged in the sea fisheries in the year 1866. In addition to this number, 50,973 persons were employed in connection with the summer herring fishery. The estimated capital invested in boats, lines, nets, etc., is £1,712,349.

The herring fishery has gone on increasing at an enormous rate since the year 1809, when the total number of barrels cured was 90,185½; in 1850, the

number increased to 544,009 $\frac{1}{4}$; while in 1886 the number of barrels cured amounted to 1,103,424 $\frac{1}{4}$. Of this aggregate quantity, 865,911 $\frac{1}{4}$ barrels were exported to Germany and other places on the Continent; and a large proportion of the balance was sent to America and to Ireland.

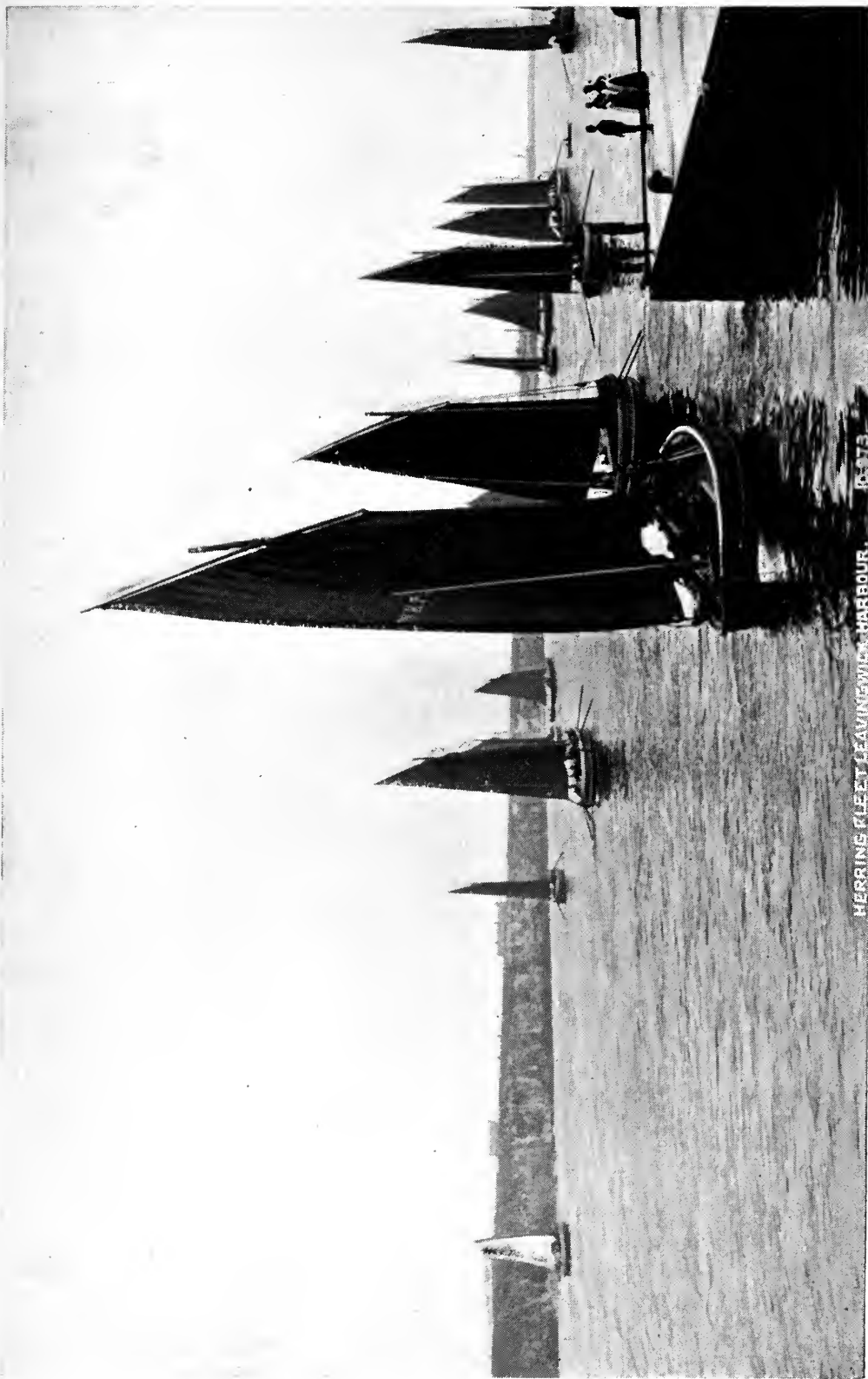
If it were not for this industry, the Highlands—with its present low ebb in agricultural matters—would be in a most deplorable state of starvation and misery; but the All-wise Creator has compensated the poor Hebridean for his bleak and barren land by providing a rich and inexhaustible store in the precious treasures of the mighty deep.

Although the fisheries of Scotland have made extraordinary progress during the last fifty years, still there is much room for further development; and, to accomplish this, several things are necessary. State aid must be given for the construction of harbours and railways,* and existing railway companies should be compelled to carry fresh fish at a rate sufficient to pay them a fair percentage for haulage, without swallowing up the entire pro-

* Since the above was written, the Government granted subsidies to the Highland Railway and West Highland Railway for extensions of their systems.

fits of the industry; a suitable and central station ought to be selected on the west coast, where boats and steamers could land their cargoes so as to be dispatched by the most rapid and economical route to the great consuming centres of the Empire; and lastly, grants should be made to fishermen, on favourable terms, for the proper equipment of the fishing fleet.

The restrictions surrounding sums devoted by the Treasury under the Crofters' Holdings Act, have rendered it next to impossible to apply the money for what it was intended; and consequently very few crofter fishermen have benefited therefrom.



HERRING FLEET LEAVING HARBOUR.

HIGHLAND FISHING BOATS.



THE DEVELOPMENT OF THE FISHERIES.

I APPEND the most interesting statement made by Professor Ewart before a committee of the House of Lords, in evidence for the proposed railway for the West Highlands, in March, 1889.

Professor Cossar Ewart, of the Scottish Fishery Board, said "that great shoals of herring were to be found all along the West of Scotland; and both inside and outside the Long Island there were immense shoals. There were always large shoals running up the coasts of Coll and Tiree. Many of them pass along between Skye and the mainland into Lochs Hourn and Nevis, and others skirted the outside of Skye. There was a sort of concentration of herring shoals on the inner coast of Skye, especially upon the southern part. In 1882 there were cured from Lochs Hourn and Nevis no less than 80,000 crans of herring. The fishing in the following year did not prove quite so good, but there was no reason to suppose that the number of fish had decreased. On the coast the number of

fish taken has enormously increased during the last fifty years; some years as many as one million crans were taken. In his opinion it was impossible to diminish by any means in our power the number of herrings on our coasts. Even when the herring did not enter Lochs Hourn and Nevis they were to be found in abundance in the vicinity; but the fishermen in the district were not equipped in such a way as enabled them to follow the fish, their boats being too small and their gear insufficient. On the East Coast the fishermen with their large boats scoured the whole of the north seas in search of the herring, going out as far as fifty or sixty miles; and they followed up the shoals wherever they might go. The West Coast fishermen were an entirely different class. Fishing had never been prosecuted by them in any systematic manner. It is difficult to learn the trade of fishing; but the men of the West Coast were taking advantage of the example shown them by the East Coast fishermen who had migrated there, and already there was a number of very expert fishermen belonging to Stornoway and other centres. Hitherto, except in certain cases, the fishermen of the West had received little encouragement. They had been standing, if he might say so, with one foot on the

land and the other on the water, unable to make up their minds whether to engage in fishing or to work their crops. He had known men who, after having the necessary lines and hooks, had forsaken their resolutions to become fishermen and reverted to their crofts. The difficulty was that they had no prospect of disposing of the fish with any profit after they were caught. Little was known about the white fish banks on the West Coast. He knew, however, of a large bank lying to the north-west of Coll. The bank ran up to Canna and outwards, and had a depth of from 11 to 50 fathoms. In addition there were banks extending south-west towards Skerryvore and Dhuheartich Lighthouses. So famous, indeed, was this bank that East Coast fishermen found it paid them to go round to Coll, build themselves huts, and fish for cod and ling, which they dried and took home with them, or exported to the Continent. Undoubtedly these men would prefer to have a market to which they might send the fish in a fresh condition. The white fishing on the West Coast had not been developed in the least, because as long as herring paid well fishermen preferred to keep to that branch of the industry. After suitable boats and gear, what the fishermen on the West Coast required was ready and

cheap access to the markets. The existing railways of course performed valuable work, but there was a large district between Strome Ferry and Oban totally unprovided for. Roshven he regarded as an extremely suitable place for a harbour connecting with a railway line. It was convenient for all the fishing grounds within the Hebrides, and it could readily be reached from outside. The development of the fishing industry on the West Coast was only a question of time. Already English fishing schooners visited the Hebrides, and Irish vessels came to Tiree. He had had some experience of Norway, and he found that it cost less to convey herring to London from Norway than from any part of Scotland.

“ A scheme of co-operation should also be organised by the fishermen, whereby they could establish a central depot with a responsible agent in every large town. By these means complete train loads of fresh fish might be despatched at cheaper rates than by sending in dribbles, and the various agents could keep the senders fully apprised by telegrams of the demands of their respective markets. ”



REMNANTS OF THE GREAT CALEDONIAN FOREST.



TREE PLANTING.

AT one period in the early history of the Highlands the country was covered by vast tracts of pine trees, and the remnants of these natural forests may be seen on mountain sides where solitary pine trees are dotted like stray sentinels on the bleak crags of Glenorchy or buried in the deep morasses of Rannoch Moor.

The great forest of Caledonia must have extended over many square miles of territory, and to-day large areas of the country are covered by plantations of fir, oak, and other trees, which take readily to the soil of our Northern Highlands.

The re-forestation of the Highlands is a matter which should engage the attention of Parliament or the Congested District Board, for, apart from the effect on the climate, advantages are likely to accrue from sheltering bleak tracts of country and affording cover for stock and game. The beautification of the country is no small factor, but above and beyond all these considerations, there is the possibility of a vast industry in the future, and the possibility of not only supplying our home require-

ments in the way of timber for railway sleepers and other industrial works, but, owing to the denuding of the Norwegian and Swedish forests, it will be quite within the range of probability that a large timber trade can be carried on with our colonies.

The nature of the soil in nearly every portion of the Highlands is most admirably adapted for the growth of pine, and from the slow growth of timber on our mountain sides, the quality should even rival Baltic timbers.

There are thousands of acres available for afforesting, land not suitable for cultivation or pastoral purposes, but which could be profitably utilised for tree-planting. Again, the vast amount of water power available in nearly every district of the Highlands could be utilised in the manufacturing of the timber thus grown.

MANUFACTORIES.

THE Highlands are singularly destitute of manufactories, at least to any appreciable extent, for, with the exception of a few wool mills and several distilleries, there is no other branch of the manufacturing industry in the country. Shipbuilding was at one period—before ironclads were introduced—carried on in the Highlands; and we find it recorded by Matthew Paris that, as far back as 1249, a magnificent vessel (*Navis Miranda*) was specially built at Inverness for the Earl of St. Pol and Bloise, to carry him with Louis IX. of France to the Holy Land. As far as Inverness is now concerned this industry is extinct. I have not seen a vessel on the stocks for years. In so extensive a wool-growing country as the Highlands, with its unlimited source of water-power, one would naturally expect to find the country studded with woollen factories; but it is not so. Sir George Mackenzie, in his “Survey of Ross and Cromarty, 1810,” complains bitterly of the total want of encouragement by the inhabitants of the

country, and from the proprietors, in supporting a woollen manufactory started at Inverness by himself in conjunction with other gentlemen, who thought the inhabitants of the Highlands would eagerly encourage home industry.

About the beginning of this century there were a good many woollen mills scattered over the Highlands; but improved machinery caused the old-fashioned hand-loom to go the way of the world, and they have fallen to decay, and neither sufficient energy nor capital has arisen to replace them with modern machinery.

As an example of the decline of the manufacturing industry, let us take the case of the Black Isle, where at this date not a factory of any description exists.* At Avoch, fifty years ago, there was a large woollen mill in operation, and the manufacturing of coarse linen from home-grown lint was carried on, and herring and salmon nets and fishing tackle were extensively made, and several carding mills were scattered over the peninsula.

* Through the enterprising efforts of Mr. J. Douglas Fletcher of Rosehaugh, the Avoch Woollen Mills have been recently equipped with new machinery, and a considerable amount of business is now being done.

At Cromarty, less than eighty years ago, "there was a mill for carding wool and jennies for spinning it; also a wauk-mill, two flax mills, and a flour mill," . . . "a large brewery, and houses for hemp manufactory. From the 5th January, 1807, to 5th January, 1808, there were imported 185 tons of hemp, and about 10,000 pieces of bagging were sent to London, which were valued at £25,000. During the same period were exported 1550 casks and tubs containing 112 tons of pickled pork and hams, and 60 tons of dried cod-fish. There is also a ropework in operation, and ship-building just begun."* To-day, I daresay, there is not another town of the size of Cromarty in Scotland more destitute of commerce, nor more deserted. One may well ask the question, whence this decay? It is simply isolation, and what is here true of Cromarty and the Black Isle is also true of many other isolated districts in the Highlands.

* Sir George E. Mackenzie's "Survey of Ross and Cromarty, 1810."

DISTILLERIES.

THE most extensive industry in the Highlands is the distillation of whisky, and so enormous has the demand been for Highland whisky that in the year 1884 the quantity of spirits produced in Scotland amounted to 20,164,962 gallons, by far the greater quantity of which was manufactured in the Highlands. In the year 1825, when the duty was reduced from 6s. 2d. to 2s. 4d. per imperial gallon, the quantity distilled was only 4,324,322 gallons. The Government duty per imperial gallon now is 10s. 4d. per proof gallon. Smuggling or illicit distilling is carried on to a considerable extent in the remote districts of the Highlands at this very hour; and although the Revenue Officers make many captures, yet the practice can never be suppressed so long as there is so high a duty on whisky. By evading this high duty, the profit is so remunerative as to tempt many a poverty-stricken crofter to venture the risk of capture that he may be enabled to meet his obligations, and in many cases he depends on the sale of

his smuggled whisky for the money with which to pay his rent.

Smuggling is an evil which cannot be too much deprecated, for it not only demoralises the manufacturer, but often leads to intemperance and immorality in communities that might otherwise be sober and industrious.

KELP.

THE manufacture of kelp at the beginning of last century was one of the most remunerative industries ever established in the Highlands, and maritime proprietors have suffered material loss from the abandonment of this manufacture.

The product of the alkaline sea-weed was used in the manufacture of plate-glass and soap; but scientific research discovered a cheaper substitute, which, together with the reduction of duty on Spanish barilla, completely outworked the profitable production of kelp in the Highlands. As a source of income it was enormous, especially when the price ranged from £15 to £20 per ton; it, however, gradually declined to £4 and £5 per ton, and now little if any kelp is made in Scotland. I recollect seeing some burnt in Orkney about twenty years ago. Lord Teignmouth, in his "Sketches of the Coasts and Islands of Scotland," states "that the number thrown out of employment

by the failure of the kelp manufacture—in a memorial prepared at Edinburgh, in the beginning of 1828, by the proprietors of the western maritime estates—amounted to 50,000.”

DEVELOPMENT OF THE HIGHLANDS.

MEANS OF COMMUNICATION.

ROADS.

FROM the peculiar configuration of the Highlands, this region of Scotland was completely isolated from the rest of the kingdom, until the disturbed state of the country in 1715 forced the Government to consider a scheme for the construction of military roads in the Highlands, so that the Royal forces might with ease be able to enter a hitherto impenetrable part of the kingdom. General Wade was therefore commissioned to construct about 250 miles of roads in the Highlands, and although we cannot rank the General as a first-class engineer, yet, as the "Irish" couplet puts it:—

"Had you seen these roads before they were made,
You would lift up both hands and bless General Wade."

It was not, however, until the year 1803 that

any material benefit was derived from the construction of roads; for General Wade's roads, well suited as they were for military purposes, were from the nature of their construction entirely inadequate and unsuited for the commerce of the country. It was left to Thomas Telford to intersect the Highlands with a net-work of roads, which to this day stand unrivalled in Scotland.

In 1803 Parliament passed an Act granting £20,000 towards making roads and bridges in the Highlands, and for enabling the proprietors to charge their estates with a proportion of the expense of maintaining the different lines of communication.

Subsequent grants were made for the same purpose, and by 1820 no less than 875 miles of road were made, at a cost to Parliament of £267,000, to the counties of £214,000, and to individual proprietors of estates of £60,000. The whole of these lines were then under one management, and the maintenance cost about £10,000 per annum. This amount was chiefly raised by tolls, which, however, were considered such a grievance that a Royal Commission was appointed in 1859 which recommended the total abolition of tolls in Scotland. In 1883, under a general act passed in 1878, tolls ceased to

be collected on any road in Scotland, and these are now maintained by a general assessment, and managed by County Road Boards.

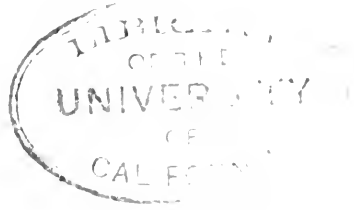
“The extent of roads, completed by means of the Highland Road and Bridge Act, and absolutely placed under our care by the Road Repair Act, is no less than 400 miles, and 60 miles more await only the formality of exonerating the contractors. Besides these, 270 miles are under contract and in various stages of progress, and at least 170 miles more will hereafter be placed under contract and finished, presenting a total of 900 miles, and proving how eagerly the inhabitants of the Highlands have availed themselves of the liberal assistance held out to them by the Government for the improvement of their country. Independently of the above extent of roads, the bridges built and constructed under distinct contracts have cost the public £30,000 and the contributors upwards of £40,000.”*

It may be imagined what an impetus would have been given to commerce in the Highlands after thus being intersected with so many roads. Before the

* *Vide* Report (7th) of the Commission on Highland Roads and Bridges, 1815.



ONE OF GENERAL WADE'S BRIDGES.



commencement of the last century no public coach or other regular vehicle of conveyance existed in the Highlands. In 1800 an attempt was made to establish coaches between Inverness and Aberdeen, but from the wretched state of the roads at that time, and the little intercourse that took place, it was found necessary to discontinue them, and it was not till 1806 and 1811 that coaches were regularly established on this route. In 1832 no less than seven different stage coaches passed to and from Inverness, making forty-four coaches arriving at, and the same number departing from it in the course of every week. Three of these included the mail run between Inverness and Aberdeen, and between Inverness and Perth over the Highland road; two between Inverness and Dingwall, Invergordon, Cromarty, and Tain; and the mail coach between Inverness, Wick, and Thurso, extending from London, made in a direct line eight hundred miles. There was also a coach from Inverness to Oban, which ran over a considerable part of the military road.



CANALS.

THE next step towards opening up the Highlands was the construction of the Crinan and Caledonian Canals. The Caledonian Canal is the largest of its kind in the United Kingdom, and passes through some of the most picturesque and romantic scenery in the Highlands. The estimated cost of constructing the work was £474,531, whereas the actual expenditure amounted to about one and a quarter million pounds sterling. From the Canal Commissioners' report in 1831 it appears that the total expenditure from 20th October, 1803, to the 1st May, 1831, was £990,559 10s. 9½d. The total length of the canal from east to west sea is 59 miles, 16 chains, of which distance 37 miles 41 chains is formed of natural waterway, leaving 21 miles 55 chains, which required to be cut. Throughout the entire canal there are 29 locks, each being 40 feet wide and 172 feet long. At the Inverness entrance of the canal from the Beaully Firth there is a large basin or floating dock covering 32 acres.

The Caledonian Canal was opened in October, 1822, by Charles Grant, Esq., one of the Canal Commissioners, and for a long period member of Parliament for Inverness-shire. The canal has done a great deal towards opening up and facilitating intercourse with the central Highlands, but still the anticipations of the promoters have not been fully realised. It was expected that all the coasting trade would pass along this waterway, and thus save rounding the stormy Cape Wrath, but a very small proportion of this class of vessel patronises the route, although the Commissioners gave every inducement by lowering the dues to a minimum with little good effect. As it is, the concern is a dead loss to the nation. Mr. David MacBrayne's excellent fleet of Highland steamers ply regularly through the canal between Inverness the Western Isles, and Glasgow. It is a favourite tourist route, and for grandeur and picturesqueness in scenery without a rival in Scotland.

RAILWAYS.

BUT the most important factor in developing the Highlands has been the construction of railways, and, although the first portion of the Highland system of railways was opened in 1854, still at this date we have only a little over 600 miles of railway in the Highlands. At the same time we feel truly thankful for what noblemen and capitalists in the country have done for us, yet there is a wide field for developing railways in the northern and central Highlands. A comparison with any part of Ireland will illustrate how Scotland is comparatively isolated in this direction. I am glad to notice that the attention of the present Government is engaged at this moment in considering the advisability of granting a subsidy towards constructing railways and tramways in the Highlands and Islands,* and I fail to see how the loyal

* When the Light Railways Act was passed, it was thought that a great impetus would be given to railway development in the Highlands. It is now ten years since the Act has been in force, yet during that period only 21

Scottish Celt is not as fully entitled to Government aid as his more boisterous brother beyond the Irish Sea. Before the opening of railways in the north, an inside seat in the coach from Inverness to Perth cost 60s., and an outside seat 35s. By rail you can now get a return fare to London for £3 ;

miles of railway have been constructed, and $52\frac{1}{2}$ miles sanctioned but not yet carried out, under its powers. For pioneer or developing lines, the Act is still too severe, and until more latitude in construction is granted, and more liberal subsidies are provided by the Government, there is but little hope for any further extensions of railways in the Highlands, of the character and cost compatible with the requirements of the traffic.

Mr. T. R. Price, C.M.G., General Manager of the Central South African Railways, in his valuable and comprehensive report on the "Construction and Working of Light and Narrow Gauge Railways," strongly advocates the construction of 2 ft. gauges in localities where traffic will not warrant the standard gauge. I take the liberty of making two extracts from Mr. Price's report :—

"The extent of and the importance attached to what are known in Europe as secondary railways of a lighter type and narrower gauge than the standard (4 ft. $8\frac{1}{2}$ in. as in England and America) is further indicated by the information furnished and the attention given to the subject at the recent International Railway Congress at Washington, as

and you can also perform the return journey to the metropolis in less time than the coach took to run from Inverness to Perth.

The cost of constructing a 2 ft. gauge, on the average, will cost £2000 to £2500 per mile, including the necessary rolling stock ; but, while prepared to

well as at previous Congresses. It is made clear that similar reasons to those which obtained in Belgium, to which reference has been made, have compelled the adoption of similar action in the other European States and elsewhere.

“It is also clear, from the discussions at the Congress and the comments in the American newspapers, that it is at last realised, both in America and in England, that this question can be no longer neglected.

“The resolution passed by the section of the International Congress which dealt with the question is as follows :—

“‘Light railways merit in the highest degree the attention of public authorities. Their construction makes it possible to encourage the progress and development of districts which previously have remained in the background, and it is accordingly not only the interest but the duty of the Governments to assist them. It is desirable, therefore, not to adhere to old types and old methods of construction, operation, and regulation, but to introduce every facility possible adaptable to local needs and available resources.’

“As the extent to which this principle of light or secondary railways of narrower gauge than the standard

advocate the building of 2 ft. gauge lines in the Hebridean Islands for the development of the fisheries, and also for "cul de sac" lines on the mainland, I do not advocate the construction of 2 ft. gauge lines in districts on the mainland, as, for instance, from Pitlochry to Kinloch Rannoch, or from

railways has been acted upon is not, I believe, generally known, I have prepared a statement (Appendix K.) setting out the gauges and lengths of the standard and of the narrower lines constructed in the various countries by 1904, summarized from the compilation by the Editor of the Universal Directory of Railway Officials. The information will, I think, be regarded as instructive. A noticeable feature is that in two such densely peopled countries as Belgium and India, the mileages of the narrower gauge railways closely approximate to those of the standard gauge lines.

"Turning to another source, the following extracts from an important report of the Government of India (Annexure D to Appendix L) on the type and gauge of railway to be provided (the whole report and annexures are especially well worth reading), serve as useful guides :—

"It was agreed that the justification of light 2 ft. commercial feeder lines must be sought from experiment, there being no sufficient data available for the formation of any reliable opinion or forecast of their success ; but in arriving meantime at the conclusion that the 2 ft. should be the

Garve to Ullapool, where the apparent traffic is considerable. In such localities a 3 ft. gauge would be necessary, and sufficient for all time to cope with present or prospective traffic.

A 2 ft. gauge should be constructed at once encircling the Isle of Skye, touching at the numerous fishing villages along the coast, with a terminus at Kyle of Lochalsh, whence a steam ferry would convey the train loads of fish to the Highland Railway

standard for all feeders not following the parent gauge, the Conference considered such a conclusion to be warranted by the consideration that the lesser of the two light gauges was sufficient to carry all traffic offering, up to the point when the amount of that traffic was sufficient to warrant the substitution of the parent gauge. It was further agreed that to be commercially successful such feeders should be constructed and worked on the cheapest lines possible, compatible with normal expenditure on maintenance, the rails not to be lighter than from 20 to 25 lbs. per yard, the rolling stock to be simple and as light and easy to handle as possible.'

“Reference may be made to the same despatches as quoted above in respect to the question of gauge. Again in the opening paragraphs of Colonel Conway-Gordon's note, which forms an enclosure to Government of India despatch No. 48 R of April 22nd, 1884, to Secretary of State, it was pointed out :—

““That the principle underlying all questions of gauge

terminus on the mainland. These light railways, should, where possible, be constructed along the main roads, thus avoiding the cost of earthwork and in many cases bridges. The space taken up by the track would not inconvenience the small amount of vehicular traffic on any of these roads.

In connection with light railways of the parent gauge, a standard similar to our Colonial railways should be adopted by the Light Railway Commis-

is that a machine is, comparatively speaking, economical only when working at its full power. The best gauge for any particular railway is, therefore, merely a question of the amount and description of traffic that will probably be conveyed on the line.”

“ ‘ Mr. E. Calthrop, in his “ Economics of Light Railway Construction,” says :—

“ “ It is well to point out that there is a great principle underlying the question of gauge. A railway is a machine, and, like any other machine, is economical only when working within a reasonable measure of its full power. In a recognition and observance of this principle lies the whole art and mystery of the financial success which has attended the working of narrow-gauge feeder lines on the Continent and in India, in districts where a standard gauge line would not only starve, but would lose money at the end of the chapter.” ”—

Vide Report by Mr. T. R. PRICE, C.M.G., to the Cape Parliament.

sioners. It will then be possible to build a line of 4 ft. 8½ in. gauge for £4000 to £5000 per mile, and in very many districts, with favourable contours, such lines can be constructed on a dividend-paying basis.

There are no known minerals except granite in the Highlands of sufficient value ever to yield wealth to the country, and this region must therefore look largely to its fisheries as the future source of prosperity; and it is most important that everything which science and money can accomplish should be employed in developing this great industry. The fishing centres should have direct railway communication with the interior of the country, and cheap and rapid means of transit to the large English towns and thickly populated districts; and the Government should construct safe and commodious harbours, as well as make liberal grants to fully equip the fishing fleet. I should also like to see a fishery school established at Inverness, or some central station in the Highlands, where young fishermen and boys could receive technical training and instruction in making fishing gear, as well as in constructing and repairing boats. And last, but not least, all the tillable lands in the Highlands should be allotted to the surplus population of con-

gested districts, and light or narrow gauge railways constructed through the newly settled glens. When these things are done we shall have an enriched nation and a peaceful, contented, and prosperous peasantry—their country's stay and their nation's pride.

PEAT.

THERE is another source of industry which might yield a large income if properly and scientifically developed. I refer to the thousands of acres of peat-mosses scattered over the Highlands. The primitive method of making peat suitable for fuel by cutting the turf into rectangular blocks and drying them in small stacks in the open air—and that in a climate so uncertain—is so crude that, in an age steeped in scientific discoveries, one marvels that this remnant of what one might call barbarism should possibly exist, for no matter how the cubes are left drying, a large proportion of water will be retained. Notwithstanding this, thousands of tons of peat are annually consumed as a fuel; and in many districts in the Highlands of Scotland and Ireland this is the only fuel used. Experiments made by Sir Archibald Geikie put the constituent elements of peat after being dried at 100 degrees, C. carbon, 60.48; hydrogen, 6.10; oxygen, 32.55; nitrogen, 0.88.

The large proportion of water which cannot be extracted from peat is the great obstacle to its use as a fuel, but under a pressure of 6000 atmospheres, peat may be converted into as hard, black, and brilliant a substance, and having the same aspect as physical coal.

If a syndicate were formed having an efficient stock of cutting, compressing, and drying machinery, a lucrative enterprise might be established in the Highlands, benefiting both the promoters and the inhabitants. A fuel thus manufactured would be equal in many respects to coal, and the cost not more than half what that mineral costs. In the large peat-moss of Lancashire, lying between Liverpool and Manchester, a considerable trade is carried on in manufacturing the most fibrous portion of the peat into material for litter.

I fear some sceptical reader will say that many Highland proprietors have tried the "improvement scheme" with but poor success. Sir James Matheson of Lewis expended in six years the sum of £67,980 more than the entire revenue derived from his estate in three years. The late Mr. James Fletcher of Rosehaugh informed me that for twelve years after purchasing his Black Isle properties he annually expended over £10,000 on improvements,

this being more than his entire rental, with the result that there is not at the present time in all the Highlands an estate so well equipped with houses and farm offices and intersected with such excellent roads. The Duke of Argyll between 1846 and 1852 spent £1790 in addition to the revenue derived from his property in the island of Mull; and the Duke of Sutherland spent £254,900 on the reclamation works at Lairg; while nearly every proprietor throughout the islands has spent more or less in developing and improving his estates. But can it be said that those sums of money were expended to no purpose? Certainly not; for, for every penny judiciously spent, the property was proportionally enhanced in value. A brief glance at the rental roll twenty or thirty years ago compared with that of to-day will demonstrate that those expenditures were good investments, which, other things being equal, have paid well, or will pay well, in the end. Recent and prospective legislation on the land question places landlords in a position from which we cannot expect them to expend much capital on improvements; and it is therefore the more necessary for them to allot their unoccupied lands at a fair figure, and allow the crofter to bring them into cultivation. The country will thereby

retain the people, and the capital which they would take with them if they emigrated, and in the place of as now

“The flocks of a stranger the long glens are roaming,
Where a thousand fair homesteads smoked bonnie at
 gloaming ;
Our wee crofts run wild wi’ the bracken and heather,
And our gables stand ruinous and bare to the weather.”

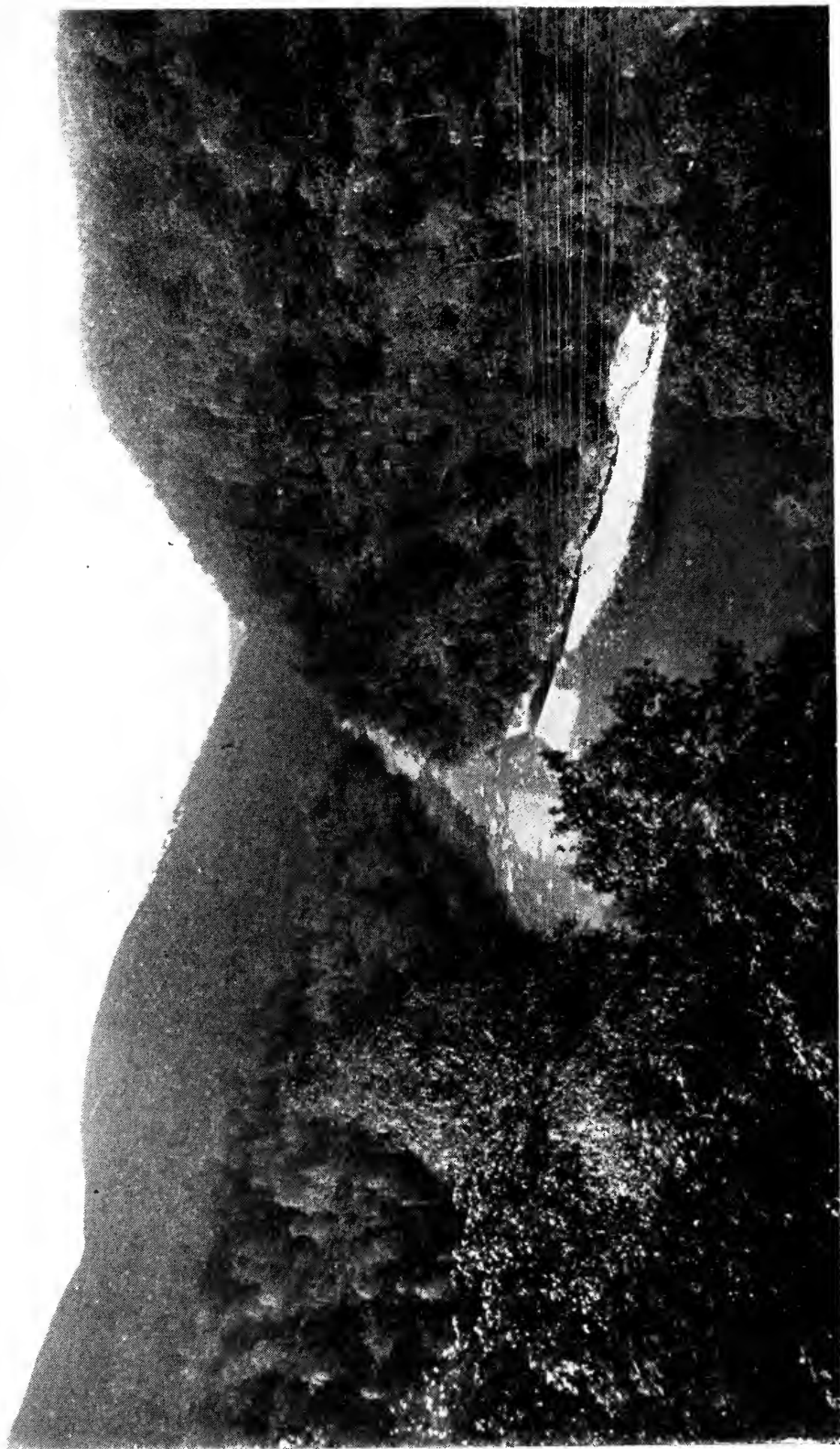
We would then have instead of the dreary and barren moorland and deserted and lonely glen, rich fields of waving golden grain, and happy homes of virtuous women and brave and pious men.

A P P E N D I X .

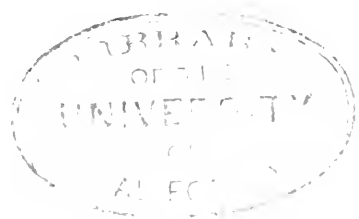
WATER SUPPLIES.

NO conception can be formed of the amount of energy running to waste from the lochs and streams of the Highlands. There are enormous possibilities in this connection, and it is quite possible that in the near future the whole of waterfalls and high-level lochs in Scotland will be utilized for motive power in connection with electric and other works, which must eventually inevitably gravitate to regions where economy in natural energy is obtainable, to enable British manufactories to compete successfully with foreign rivals.

No better proof can be adduced than the great success attendant on the establishment of the British Aluminium Company's Works at Foyers, where an installation of water power was established in 1895-1896, when two lochs have been impounded, making one continuous stretch of water six miles long by half a mile in width, giving sufficient storage to run the entire plant of the factory for fifty continuous days and nights in the driest season, and capable of driving nine turbines of 700 h.p. each.



A PASS IN THE HIGHLANDS.



So unobtrusive are the works, that one has almost to search for them, thus completely upsetting the outcry once raised against the anticipated desecration of the romantic scenery of the Falls of Foyers.

On the contrary, the picturesque little village and residential homes of the staff have, if anything, enhanced the charming scenery of this locality, as well as adding an important factor to the economy and commerce of the district.

The utilization of the rise and fall of the tide along our sea board is nothing new, for we find that a "salt water mill" was in existence at Munloch 100 years ago.

The tidal water was impounded in a dam by means of simple self-acting sluices, and retained in the dam until the tide ebbed, when the water was used to drive the water wheel, but now that powerful turbines can be used a considerable increase of energy may be obtained.

LIGHT RAILWAYS.

SINCE the passing of the Light Railways Act in 1896, the number of Orders confirmed by the Commissioners was 234, representing 1552 miles of railway.

Of this mileage, only $79\frac{1}{2}$ miles apply to the

Highlands of Scotland, representing six separate undertakings, while out of the $79\frac{1}{2}$ miles sanctioned only $45\frac{1}{2}$ miles have actually been constructed. It will thus be seen that about 6 miles per annum is the average mileage of railways carried out in the Highlands since the inauguration of the Light Railways Act.

It is obviously clear that the Highlands have benefited but very little in this connection, nor do I suppose that any great developments will take place in this direction until more liberal subsidies are granted by the Government, and the standard of construction considerably modified.

PEAT.

CRUDE Peat contains about 85 per cent. of water, 13 per cent. of combustible material, and 2 per cent. of inorganic substances. Of this, 80 per cent. can be got rid of or eliminated by draining and evaporation.

Finished briquettes contain no less than 66 per cent. of combustible material.

By carbonizing peat in retorts, 3 tons produce 1 ton of peat coke, with valuable by-products of gases, tar, methyl, alcohol, calcium, acetate, and ammonium sulphate.

In Russia, where coal is expensive, peat coke is used to great advantage in lieu of coal.

FISHERIES.

I append a tabular statement from the 23rd Annual Report of the Fishery Board for Scotland.

SUMMARY.

The following Table gives a summary of the means of capture employed, and the resulting catch in Scotland for the last ten years :—

Year.	Number of Vessels.	Tonnage.	Value of Boats and Gear.	Total Catch.*	
				Quantity.	Value.
			£	Cwts.	£
1895	13,098	117,287	1,820,429	6,107,044	1,763,991
1896	12,040	113,382	1,873,870	6,146,738	1,571,803
1897	11,633	111,933	1,922,685	5,001,672	1,627,754
1898	11,576	113,557	2,029,384	6,558,768	1,879,866
1899	11,245	114,448	2,383,776	5,145,076	2,189,933
1900	11,275	119,426	2,711,877	5,369,265	2,325,994
1901	11,201	124,639	3,001,301	6,385,170	2,238,310
1902	11,097	131,692	3,212,455	6,866,028	2,502,668
1903	11,008	140,531	3,448,168	6,518,808	2,401,287
1904	10,891	140,396	3,431,284	7,947,829	2,231,102

* Excluding shell-fish.

It will be seen that the progress during the above ten years has been gradual, although not so great as would be desirable.

The total number of persons engaged in connection with the Scottish Fisheries and allied industries was 88,000 in 1904, as compared with 86,000 in 1894.

Since the above was written, a large number of "Steam Drifters"—a larger fishing craft propelled by steam—has been introduced at several fishing stations in the Moray Firth. This is decidedly a step in the right direction, enabling the vessels to move rapidly after the fish shoals and avoiding the serious risk of getting becalmed and the catch of fish damaged before reaching the curing station.

On many of the craft ice-making plant is carried, and small "shotts" of fish cured on board or preserved in the ice chamber.

NOTES ON TREE PLANTING.

I AM indebted to Sir Arthur Bignold, M.P., for the following note on tree planting. Sir Arthur, an enthusiast in this respect, between the years 1879 and 1896 has planted eight million trees on his Lochrosque estate.

NOTE ON TREE PLANTING.

“The system now approved and adopted in the North of Scotland is to allocate 4800 trees to each acre. According to the altitude of the ground, so the result: but where protection to the plantation has been secured, not only by fencing, but also by fire trenches, and where also the trees have been planted under the supervision of an experienced gaffer, the average result of two-year-old trees is a production of 95 per cent. of those embedded.

“Again, the altitude of the ground comes in: when the thinning moment arrives, each tree has protected its neighbour from the wind, and, therefore, an unnecessarily close construction is desirable in order that those which are left at thinning time may have the benefit of the warmth contributed in their earlier years by the contiguous trees it had been determined to remove. The victims come in serviceably for use in forming arbours, wood houses, and decorations. Practically the only suitable firs are the *P. Sylvestris* Scotch fir, the spruce, and the larch; the latter being the only one deciduous conifer in Great Britain. The spruce is in reality of no more than ornamental service, but the larch pole is valuable, and is steadily increasing in demand.

Fifteen years from the date of plantation is on the average the moment to begin the thinning, and at twenty-five years the trees become of commercial value: all the expense entailed is the cost of the tree plants (12/6 per 1000), the cutting of catch-water drains, and the erection of the fence, and, say a twenty-foot fire trench at the back of the fence. This being done, the proprietor can limit his part to watching the growth of his wood, while nature completes her work.

The essential point, never to be lost sight, is, how high up the hill you will go. The attempt at Ardross, some thirty-five years ago, at an altitude of 1000 feet, has demonstrated the impossibility of success at that elevation, for these trees are now, though still alive, no higher than six feet from the ground. The advantages of protection from game and deer, which the woods afford, ought not to be ignored in a Highland district, and strangely, almost inexplicably, the creation of the wood has brought with it the reproduction of animals almost extinct in the Highlands: the badger, and even the marten cat as well as the wild cat, have reappeared in the North, and the rain has been deflected, and the temperature appreciably lowered.

“Of course, these artificial woods do not reproduce

the Scotland of the past with its 'shaggy wood,' to which Sir Walter Scott refers, or

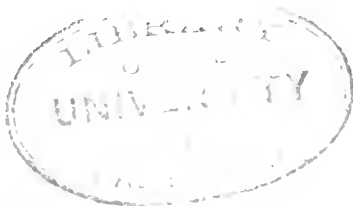
'The copse wood grey,
Which waved and wept
On Loch Achray.'

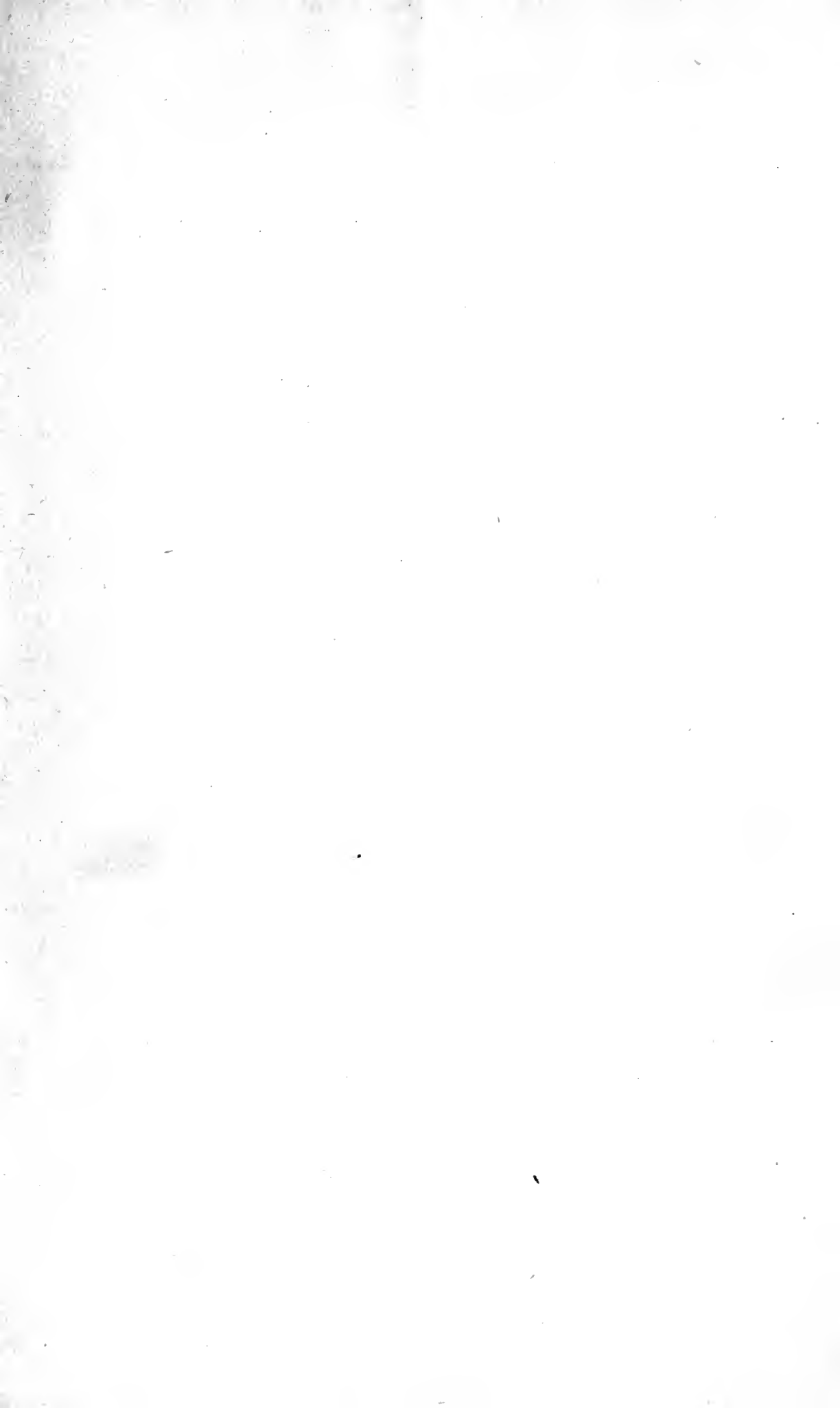
Nor has any attempt been made to renew the rowan, the seeds of which, scattered by the wind, continue to reproduce the parent tree, until they are eaten down by the sheep: nor the natural, though ornamental, wood of ancient Ross-shire, which boasted not only the holly (the *chwillinn*), the alder (the *phearna*), the willow (the *shellach*), the oak, the hawthorn, the aspen, and the hazel, thousands of which still remain, and are cherished by all true foresters."

Of all the countries of Europe the United Kingdom is that with the smallest proportion of woodland. It is, therefore, all the more imperative, owing to the threatened failure of the world's wood supply, that advantage should be taken of the thousands of acres of land in the Highlands so admirably adapted for the growing of *P. Sylvestris*.

The effect of afforestation on the climate, public health, or landscape, as well as the length of time to mature any large scheme on a purely commercial

basis, is such that very few private individuals can undertake such an extensive scheme as is absolutely necessary to make the undertaking a success. It is, therefore, all the more necessary that the Government should undertake the work, either by acquiring by purchase outright suitable areas of land, which is neither suited for agricultural nor grazing lands, and carry out extensive planting, which in after years will be a source of income to the State, and make us independent of imported timber for commercial and domestic purposes.





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