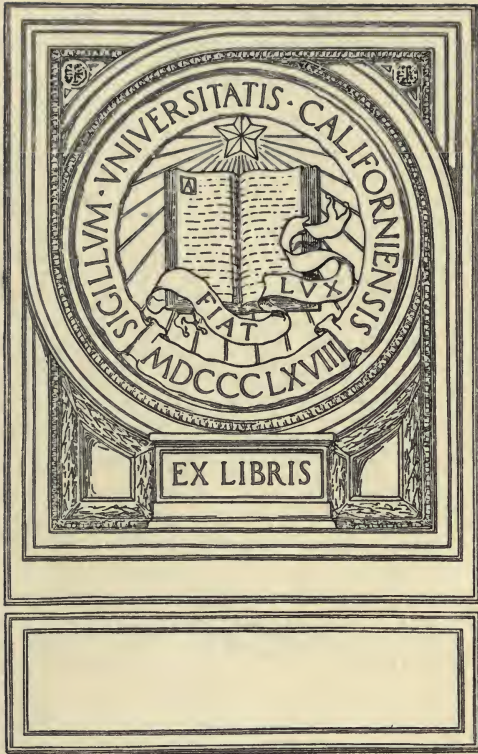


*The History of
The Dwelling House
And Its Future
Robert Ellis Thompson*







**THE HISTORY OF
THE DWELLING-HOUSE
AND ITS FUTURE**



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THE HISTORY OF THE DWELLING-HOUSE AND ITS FUTURE



BY
ROBERT ELLIS THOMPSON, LL.D.



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To

WILLIAM LISETER AUSTIN

IN GRATEFUL RECOGNITION OF MUCH KINDNESS

865676

CONTENTS

CHAPTER	PAGE
INTRODUCTION.	9
I. THE OLD HALL (SKALI)	17
II. FROM HALL TO HOUSE	45
III. THE TOWN-HOUSE	72
IV. THE LATER TOWN-HOUSE	83
V. THE HOUSE OF TO-DAY	105
VI. THE HOUSE THAT IS TO BE: ITS ORGANIZATION	121
VII. THE HOUSE THAT IS TO BE: ITS EQUIPMENT	140
VIII. THE STREETS OF THE FUTURE	153
IX. CONCLUSION	163

INTRODUCTION

SOME eighty years ago a young Lutheran clergyman, the Rev. Eilert Sundt, was giving religious instructions to a class of prisoners in the House of Correction at Christiania in Norway. His attention was drawn to one member of the class, who was a marked contrast to the tall, fair-haired and blue-eyed Norsemen. This man was of short stature, with dark hair and black eyes. He was very forward in answering the questions Mr. Sundt put to the class, but he generally answered them wrongly. When the instruction was finished the young chaplain took the man apart, and asked him who and what he was. He found that this was one of the Fante-folk, as the Norwegians call the Gypsies; and he learned from him

INTRODUCTION

many particulars—not always authentic—as to the habits and beliefs of his people.

The matter interested Mr. Sundt so much that he sent a memoir to the government of the country, telling what the man had told him of the Fante-folk, their numbers and their mode of life, and suggesting that an effort be made to induce them to give up their nomadic habits, and to settle down as orderly and industrious citizens. The authorities in Christiania accepted the suggestion, and commissioned Mr. Sundt himself to travel through Norway, and to meet these wanderers with the offer of help in casting off their vagabondage, and finding permanent homes.¹

In the main purpose of his tour through

¹ *Beretning om Fante- eller Landstrygerfolket i Norge. Bidrag til Kundskab om de laveste Samfundsvorholde.* Christiania: 1850; Andet Oplag. Pp. vi, 394. Christiania: 1852. *Fortsat Beretning om Fante-Folket.* Christiania: 1859. The work is summarized in *Vagabundenthum und Wanderleben in Norwegen.* Von A. Etzel. Berlin: 1870.

INTRODUCTION

Norway, Mr. Sundt had no great success. The habitual life of the Gypsies had too many attractions for them to admit of his getting the hearing he hoped. But he was what Carlyle calls "a credible person with eyes," and he managed to learn a great deal about the Norse-folk themselves. For one thing, he noticed that on a single farm might be found not only one farmhouse, but two, three, four, and in one case as many as eight. Each of these seemed to represent a stage in the development of the country-house, and each in its turn had been discarded as a home, but retained as a store-house for the crops, even hay. By such study as he could make of these successions of houses, he got light on the development of the house, not of Norway alone, but of northern Europe generally.²

² *Bygningsskikken i Norge*. Af Eilert Sundt. Christiania: 1862.

INTRODUCTION

The farm-houses of Norway, like its old churches, were constructed of pine-wood, a material which lasts as long as any other when well taken care of and protected from the weather by paint. There are houses still standing, which were in use when that country was Christianized by its two kings Olaf, early in the eleventh century. Even in America there are such houses, which are still inhabited after a quarter of a millennium. And the early firing arrangements exposed houses to conflagration much less than in later days, and far less than in the cities at all times.

Besides these monuments of domestic architecture, there is what I may call a running commentary on them in the saga literature of the Scandinavian north, which abounds in references to household ways. Text and commentary go together for the student of domestic antiquities in those

INTRODUCTION

northern lands. Prof. Troels Lund of the University of Copenhagen has made a close study of both, and has enlarged our knowledge of them by literary and historical investigations, always acknowledging his obligations to his predecessors in this field. In fact Mr. Sundt's "Building Fashions in Norway," and Prof. Lund's "Every-day Life in the Scandinavian North"³ are memorable books, through the light they have cast on a familiar and naturally interesting branch of human history.

We have in English antiquarian treatises on houses, of a descriptive character, and often of much interest. But I know of none of them that trace the genetic development of the house from its beginnings to the present time. This I have attempted in this short history.

³ *Das Tägliche Leben in Skandinavien während des Sechszehnten Jahrhunderts.* Von Troels Lund. Kopenhagen: 1882.

INTRODUCTION

I must caution my readers against a too literal construction of my statements. It is not meant that the course of development I have traced is that which was followed with mechanical regularity in every case. Houses are the work of men, not of mere mechanical forces. Being men, they sought to adjust their domestic surroundings to their own tastes and preferences. In doing so, however, they also gave great scope to social tradition. Partly to avoid the trouble involved in getting anything done out of the common, and partly to avoid social criticism, which is nowhere so keen as among simple people, they usually built as their neighbors did. But in many cases they showed independence of taste and judgment in the construction, arrangement and adornment of their houses. No row of houses in an old mediæval town would exhibit such a wearisome uniformity as is to

INTRODUCTION

be found even in the wealthier parts of modern cities. Both the house-owner, for whom the work was done, and the workmen engaged in its erection, showed far more independence in design than is to be found in modern men of either class. It was an age of living and original architecture, while modern building, except among the Jain sect in India, as Mr. Ferguson points out, is lifeless and imitative.

Let me not, however, be charged with representing a degree of uniformity in the development of the house, which did not exist in fact. It is impossible to embody in any story the amount of variety which actually exists in human affairs. As Carlyle says, narrative is linear, but life is solid, and can be represented but imperfectly in literature. What I have aimed at is the selection of what is typical and normal out of a boundless variety of facts.

INTRODUCTION

It is my hope that my small book will make to every reader more intelligible, and therefore more interesting, the home he lives in; and that from what he is told here of the reform in the past, he may judge more justly of what are the reforms demanded by the present and the future.

THE HISTORY OF THE DWELLING HOUSE AND ITS FUTURE

CHAPTER I

THE OLD HALL (SKALI)

MR. MACMASTER, in his "History of the American People," says of the house which President Jefferson built for himself at Monticello, that "of all the houses built of man, none more surely was so much a part of the owner. What the shell is to the tortoise, all that was Monticello to Jefferson. The structure had grown with his growth, and bore all the marks of his individuality."

In a broad sense, though perhaps in a less striking degree, this is what every type of house has been to the group which lived in it. As the shell-fish excretes its shell, the family

THE DWELLING-HOUSE

has excreted, as it were, the home suitable to its needs and expressive of its character.

The need of a home of some sort for the shelter and protection of the child must have been felt very early. Sociologists are only now awakening to the importance of the child as a motive to the great process we call civilization, and to the fact that the love of father and mother for child antedated the love of husband and wife. For the child's sake were undertaken the labors by which men emerged from the savage's dependence upon what nature furnished without other toil than that of gathering her gifts. It was for the child's sake that the field was cleared of weeds, fenced and tilled, and the plants whose seeds or roots were most suitable for human food were sought and encouraged. For the child's sake softer clothing than the skins of wild beasts was obtained. And for the child's sake a home was devised to pro-

THE OLD HALL (SKALI)

tect it against the heat of summer and the cold of winter. Its little hand has held the marshal's baton in the great march of human progress.

Of the house devised for the child's safety there are three principal types. These are the tree-house, the cave-house, and the hall.

1. The tree-house belongs to the tropics, where it still survives in the Philippine Islands and some other countries of south-eastern Asia.

The tree plays a very notable part in the sacred traditions, the worship and the economies of primitive mankind. The account of Eden, and of the life of the early patriarchs, in the Hebrew records reflects this. To savage man the tree was a living thing and the first object he found in that upward gaze, by which he searched for the Power which protected and controlled his life. It fed, clothed, and sheltered him. In its

THE DWELLING-HOUSE

branches he found a refuge from floods, wild beasts, and noxious insects. He made it his home by erecting a scaffold within its branches, and fashioned its leaves into a thatched roof to keep off sun and rain. Here he found his safety and that of his family, in that early age when he fled before the wild beasts, because he had not yet devised the weapons which were to make them fly before him.

Mr. Henry Savage-Landor, in his valuable book of travels in the Philippines, shows us the tree-house as still used by some of the natives of that archipelago. At one point in his journey he was expecting to come upon a native village, but at first could see no sign of it. Then he observed a rough ladder leaning against a tall tree. Climbing it, he came to a sort of bridge-path from tree to tree, and on following this he came upon the village.

THE OLD HALL (SKALI)

In another book on the islands of south-eastern Asia Mr. Savage-Landor describes the Manobos of Mindanao, one of the largest tribes of that island, as "tree-dwelling," adding that their houses "could be seen on tree-tops of immense height, some at an elevation of over fifty feet above the ground. . . . Their principal reason for the high location of their houses is that they may be protected against enemies." In another part of the Philippine group he found houses "constructed on the tops of trees, the highest branches having been cut to a level, so as to form supports on which to build these inaccessible houses. One house on the river bank was on piles eighteen feet high."

In Central Africa, in districts where wild beasts abound, the natives live in huts like gigantic beehives, fixed among the branches of the huge baobab tree, sometimes thirty families in one tree.

THE DWELLING-HOUSE

The passage from the perch in the tree to the ground was gradual. In Burmah, the Philippines and other parts of southeastern Asia the house often occupies a lofty platform, and is accessible only by a ladder. And the association of the tree with the house still lingered in the ground-built house. The house of Ulysses in Ithaca was built round a sacred olive, whose trunk its owner had carved into a bed, so that Penelope identified her husband by suggesting that his bed had been moved, and evoking his denial of the possibility of this.

Recent excavations show us that the earliest Greek houses were built of wood, roofed with leaves, and circular in form, thus testifying to their arboreal descent. To enlarge the space the circle afterwards was made an oval, with posts of wood to hold up the roof. Later still the oval either became a rectangle,

THE OLD HALL (SKALI)

or rectangular at one end while retaining the curves at the other,—the origin of the apse in later buildings. The interior was one large room (*megarion*), with the hearth in the centre, and the door on the south side (not on the west as in the northern hall), and sometimes opening into an anteroom or porch. The division into rooms came later. There was nothing distinguished about the domestic architecture of early Greece. Even Athens before the Persian War was made up of narrow streets, lined with closely built houses of wood and stone, with a projecting upper story, and sometimes gardens in front. These were the homes of the women and children rather than of the men, who spent their days in public, and did not receive guests in their houses.⁴

The migrants to northern latitude carried

⁴ See the article "Haus" in Pauly-Wissowa, new edition.

THE DWELLING-HOUSE

with them memories of the connection of the tree with the house. In some of the great halls of the Norse chieftains, which were at times two hundred feet long and sixty wide, a great tree grew in the midst. William Morris, in his "Sigurd the Volsung," describes the "branstock" which grew in the Hall of the Volsung king:

So therein withal was a marvel and a glorious thing
to see,
For amidst of its midmost hall-floor sprang up a
mighty tree,
That reared its blessings roofward, and wreathed
the roof-tree dear
With the glory of the summer and the garland of
the year. . . .
When men tell of Volsung, they call that war-
duke's tree
That crowned stem, the Branstock; and so was it
told to me.
So there was the throne of the Volsung beneath
its blossoming bower,
But high o'er the roof-crest red it rose 'twixt
tower and tower,

THE OLD HALL (SKALI)

And therein were the wild hawks dwelling, abiding
the dole of their lord;
And they wailed high over the wine, and laughed
to the waking sword.

Then at the ill-fated wedding of the Volsung maiden to the king of the Goths, Odin appears—

Then into the Volsung dwelling a mighty man
there strode,
One-eyed and seeming ancient, yet bright his
visage glowed:
Cloud-blue was the hood upon him, and his kirtle
gleaming-grey . . .
So strode he to the Branstock nor greeted any
lord,
But forth from his cloudy raiment he drew a
gleaming sword,
And smote it deep in the tree-bole, and the wild
hawks overhead
Laughed 'neath the naked heaven as at last he
spake and said,
“ Earls of the Goths, and Volsungs, abiders on
the earth,
Lo there amid the Branstock a blade of plenteous
worth! . . .

THE DWELLING-HOUSE

Now let the man among you whose heart and hand
may shift
To pluck it from the oakwood, e'en take it for
my gift."

2. In prehistoric times the people of at least the north of Europe were cave-dwellers, or troglodytes. An opening in the hillside, enlarged and strengthened, if not constructed, by human labor and skill, gave safety and shelter on the simplest terms. In such caves as those of the Neanderthal and Cro-Magnon we find the oldest human remains of men contemporary with the Mammoth. Nor has this type of home passed away even yet. Mr. Kinglake, in his "Eothen," mentions finding it in the Caucasus. John Bellows found others inhabited by Armenians on the frontier of Persia. In Mexico and some of the adjacent parts of America, there are many remains of cave-dwellings, and some groups who still make

THE OLD HALL (SKALI)

their home "in the clefts of the rock," as Jeremiah says of the Edomites (xlix, 16). In the French valley of the Loire there has been a sort of reversion to the troglodyte type. Some two millions of the people now make their homes in the caves which have been excavated in quarrying for building-stone. These are said to be cool in summer and warm in winter, and free from dampness. The entrances are wreathed with flowering vines.

Entered, lighted and ventilated through its mouth, the cave-house must have been smoky, drafty and damp. But it combined the best comfort that men knew with comparative safety. So our fathers made the best of it.

It probably was not its discomfort, but the scarcity of caves, which led to a change. When a migration brought a people into an open country, where there were no hillsides

THE DWELLING-HOUSE

to furnish caves, or when the available supply of caves ran short of the numbers of the community, the next step was to construct artificial caves. The more conservative peoples did this by excavating a cave underground, and making it accessible by ladders. Xenophon, in his "Anabasis," describes the cave dwellings of this sort which he found in Armenia, where indeed they still exist. In the Aleutian Islands of Alaska the primitive cave is perpetuated by underground homes of this type.

3. The preference for a cave constructed above ground may be said to have led to the Hall, and thus to the modern house.

Traces of the influence of the cave as a model may be seen in its construction. The Hall stood east and west, and the door was placed in the western end, as it had been observed that caves with a western exposure were the more comfortable, giving less access

THE OLD HALL (SKALI)

to cold winds.⁵ The roof was pitched high by lofty gables, so as to allow room for the smoke to rise out of contact with human eyes, as it seldom could have done in the cave. The walls were constructed with a frame-work of wood, filled with kneaded clay; though some halls were of wood throughout. The roof was made by placing layers of birch-bark over the beams which ran up to the roof-tree, and covering this with sods, which were cut so thick that the grass and the weeds went on growing. As the side walls were very low, it was possible for goats, sheep and even pigs to climb upon the roof and graze over it. As the lines of the building were irregular, any one who

⁵ May not this have had as much to do with the "orientation of the churches," as any idea of facing toward Jerusalem? Even in those early times they knew enough of geography to be aware that a building standing east and west in a northern latitude was not facing toward the Holy City. The pagan temples also stood east and west, with their entrances in the western end.

THE DWELLING-HOUSE

approached it from the north or the south might have mistaken it for a mound of grass-grown earth, turned to grazing uses.

The Hall was entered through an opening in the western gable, which looked more like a window-space than a doorway. The lintel was brought so low, and the threshold was raised so high, that no one could enter without both stooping his head so low and lifting his foot so high, that he could be despatched if he came as an enemy. The vulnerable point of the building was not the door, but the window (or wind's eye), an opening in the centre of the roof. From that point the master of the house sometimes was killed by arrow or javelin as he sat at his fireside. So in times of especial danger, an armed man was posted on a small platform under that opening.

Like its predecessor the cave-house, the Hall at first was one great room, undivided

THE OLD HALL (SKALI)

by partition-walls or floors into rooms or stories. Its furniture was simple, and usually made up not of movables, but of fixtures. The principal piece was the "long seat," which ran close to the walls on the north and south sides, and sometimes across the eastern gable. It was fastened firmly to the wall and the floor, and the long but narrow table in front of it sometimes was mounted on trestles, and removable when not in use; but in others was fastened to pillars driven into the ground. When the Grettir-Saga would give us an impression of the violence of the struggle between Grettir and the Vampire, it tells us that the furniture was torn from its fastenings and flung around the Hall.

The middle of the long seat was raised above the level of the rest, and was called the High Seat. It was reserved for the master of the Hall and his wife, while a

THE DWELLING-HOUSE

second High Seat opposite to it was occupied by distinguished guests, if such were present.⁶

This was the place of greatest comfort, as being opposite the fire, which was placed in the centre of the Hall on flat stones, and served to light and warm the Hall, as well as to cook the food. The smoke made its way to the roof, and some of it passed out through the window, but most of it settled on the beams and balks as soot, especially when in bad weather the window was closed with a slightly transparent lid. In damp weather it absorbed so much moisture that its weight overcame its adhesion, and it came down in showers. Although unpleasant, this sprinkling of the Hall was not undesirable, as it served as an antiseptic to

⁶ In the pagan temples, which were built very much like the Halls, the high seat was the place of the three chief gods of the Norse mythology—Odin, Thor and Frey. In Norway Odin generally occupied the central place, as the chief. In Iceland Thor.

THE OLD HALL (SKALI)

render harmless the foulness of the floor, which was covered with straw or rushes. In these the dogs lay and gnawed the bones flung to them. In this on cold nights were quartered the chickens and the four-legged youth of the barnyard, as there were no out-buildings to shelter them. And when the straw rushes grew too foul for endurance, they brought a fresh supply, and spread this over the old.

The occupants of the Hall were not the natural family—father, mother, children, and possibly servants—which we think of as making up a household. Such a group hardly could have lived by itself in safety in the rough times which preceded the abolition of private warfare. It would have found no protection from any public authority, so it must be capable of self-defence. The State was still too feeble to undertake police duties for the prevention of crime, although it already had acquired authority

THE DWELLING-HOUSE

to punish it when committed. So, in a very real sense, a man's house was his castle, and must be garrisoned for defence. Sometimes the garrison—called in Norse the *hird*, and in old English the *menie*—was composed of the real or the supposed kindred of the house-owner; and its members often bore a common name,—that of an “eponymous” ancestor. More often, especially in the case of the kings, barons (*herschers*) and notable chiefs, their numbers were recruited from voluntary adherents, who showed him that personal loyalty, of which the ancient world knew nothing, and which was the Teutonic contribution to the forces which mould political institutions.⁷

⁷ The idea of representation, which made possible the existence of a free community larger than a city, grew out of this loyalty. The people were satisfied with what was done in the Witanagemote at Winchester or Westminster, if it were done with the approval of their chiefs in attendance there. It was to them as if they all were present and consented. Is it not this feeling which underlies the title of the popular branch of the English legislature: “The Commons of England in Parliament assembled?”

THE OLD HALL (SKALI).

There came to the royal Hall of Olaf the Saint (1017-1030) an aged man, who asked to be taken into his *hird*. The king asked him how old he was, and he confessed that he had lost the count of his years, but believed they were above one hundred. "You must have seen many great kings in your time," the king said. "I have been with your grandfather Harold the Fair-haired, with Eric of Sweden, and with Gorm the old of Danemark," he replied. "And which of these had the best *hird*?" "I will show you. In my youth I went to the court of King Eric, and asked to be taken into his *hird*. He told me to take any place that I could. I began with the man who sat on his left hand, and tried to turn him out, but I could not, nor the next, nor the next, until I came to the sixth. Afterwards I went to the court of King Gorm, asked the same question and got the same answer. But I

THE DWELLING-HOUSE

was halfway to the door of the Hall before I could empty a place for myself to sit. Then I fared north to the court of King Harold, and he also gave me leave to take what seat I could. But I wrestled with every one to the very door of the Hall, before I could unseat any man of them. So I think King Harold had the finest *hird*."

The position of a member of the household was no idle or easy one. The Nial-saga, which Mr. Dasent has done into English with the title, "The Story of Burnt Nial" (Edinburgh, 1861), gives a vivid idea of what went on in one district of Iceland between the years 970 and 1014. Thirty-five of its chapters are taken up with "killings" either of individuals or of groups, of which 126 are specified by name, ending with the destruction of Nial's whole family, except his son-in-law, Kari Solmundson. Had the burners been so fortunate as to

THE OLD HALL (SKALI)

kill him as he was leaping through the flame and smoke, they might have escaped all punishment for their crime, as there would have been left no one competent to prosecute them before the All-Thing. What Kari obtained was their banishment from Iceland, besides the infliction of heavy fines.

Those who think that there was no parallel to this in other countries, should look into the "Paston Letters" for a picture of the open lawlessness which prevailed in England at the close of the Middle Ages. Or into Esprit Flechier's *Memoires sur les Grands Jours d'Auvergne* (1844) for a lively account of the lawlessness of a French province in 1665-66. Prosper Merimee in his *Columba* (1840) has shown us this state of society perpetuating itself in Corsica; and the mountain regions of the American states of Kentucky and Tennessee furnish parallels in the new world.

THE DWELLING-HOUSE

Of the inmates of the Hall, the chief occupied a social position as central and as elevated as his place within it. Over some of its occupants he had the authority of a father as well as chief, and he had the final word in every situation which called for deliberation. But he must not push this authority too far. His hirdsmen looked to be consulted in such matters, and if he made the exercise of his authority too exacting, they would seek a more courteous master. Except the thralls, captives in battle or their descendants, they were as free as himself; and while they risked life and limb in his defence during their term of service, they were free to go or stay when it ended.

Among the signs of his rank were the two carved posts, which separated his High Seat from the rest of the long seat. In pagan times these terminated in images of Thor or Odin. When the Norwegian barons fled

THE OLD HALL (SKALI)

to Iceland from the "violence" of Harold the Fair-haired, they carried these posts with them, and on approaching land they threw them overboard, and made their homes wherever these were washed ashore. Another sacred thing was the cord which hung down from the window in the roof, to open or shut this; and when any one came on a grave message to the chief, such as soliciting the hand of his daughter in marriage, he laid hold of this cord while he delivered his message.

The group within the Hall was a sort of school, in which the inmates taught each other all they knew. In the long winter evenings, when the men were busy making or mending weapons, tools and fishing-tackle, and the women were making cloth and garments, every one was expected to contribute something to the entertainment of the household. His travels into outlandish

THE DWELLING-HOUSE

parts, his adventures by land or sea, the tales he had heard from saga-men or travellers, the songs he had made or remembered having heard from the scalds, the riddles and jests his wit or his memory supplied him—all came not amiss to pass the time pleasantly, and to call forth discussion from wise and unwise. Thus was created a common level of intelligence; and a large body of knowledge became the property of all who slept under the same roof.

Even when what was said could not be classed as knowledge, but only as the product of invention or of superstition, such as the wild tales of pixies, huldres, fairies and were-wolves, it yet had its use in developing the imagination. The earth was a stern world in their view, with dark corners innumerable, from which bogles might start out at any minute. They had not acquired the assurance that it was all their Father's

THE OLD HALL (SKALI)

house, into whose most secret places they were free to press with question and light.

One method of drawing out the talents of each of their company, was to require that when the mead-horn went its rounds, he to whom it came must either sing a song, or tell a story, or propound a new riddle. In the great hall at Whitby in Northumberland, where the Lady Hild presided as co-arb over an ecclesiastical sept, according to the usages of the church founded by St. Patrick,⁸ it was the custom that every one in

⁸ I translate the narrative of the venerable Baeda into the language of the earlier date. He makes Hild an abbess, and the hall a monastery, of the Benedictine type to which he was accustomed. He does not explain how she came to have both men and women under the same roof, and Mr. Stopford Brooke is driven to conjecture a "double monastery." Had he read Dr. John Henthorn Todd's "Patrick the Apostle of Ireland" (Dublin, 1864), he would have got the right view.

Baeda is probably using the language of a later time in making Caedmon "go out to the byre," or "go home" when the harp approached him. A sept of the seventh century would probably have no other building than its Hall. Caedmon may have gone out and lain down for warmth among the cattle.

THE DWELLING-HOUSE

turn should sing when he “saw the harp approaching him.” One of company, Caedmon, could not sing, and rose and left the hall for the cattle-byre, when he saw his turn coming. There he had the famous dream in which the command of an angel awoke in him the power of verse and song, and made him the first of English poets upon English soil, for the earlier Beowulf-epic must have been composed on the continent before the invasion of Briton by the Angles.

Latterly, at least, the inmates of the Hall were not entirely dependent upon their own gifts to make the long nights pass easily. There arose, out of the customs of the Hall itself, a class of saga-men and another of scalds or minstrels, who found a welcome as professional story-tellers and poets with the greater chiefs and their households. The longer their stories, and the larger the repertoire of their songs, the more welcome they

THE OLD HALL (SKALI)

were, and especially so if these bore on the achievements of the chief's ancestors. Hence the sagas of Iceland and Norway, which cast such a light upon social usages and popular beliefs. Often, no doubt, the saga-man drew upon his imagination when his memory was at fault, and sometimes he and the scalds rehearsed the praises of unworthy men. But there was a limit to this, as flattery that had no basis in fact might be taken for sarcasm. So in the main we may take the saga as embodying the facts as known.⁹

When the saga-man or the scald departed, the sagas tell us, he did not go empty-

⁹ The general accuracy of the sagas is confirmed by the correspondence of the Nial-Saga with the Irish chronicle, "The Wars of the Gaels with the Galls," in their account of the great battle of Clontarf (A.D. 1014). It is noteworthy that the latter states that it was high tide at sunrise on Good Friday, the day of the battle, and that Prof. Houghton of Trinity College found this to have been true, by calculating the tides back to that year.

THE DWELLING-HOUSE

handed. Rings of silver or gold and garments of fine wadmal repaid his labors.

Such was the half-military life of our forefathers in the old Halls of northern Europe, which they had constructed to replace the cave-houses of a still earlier date. The transition from the Hall to the modern house was gradual. It seems to have begun with the erection of supplementary houses for special purposes, and to have gone forward to the separation of the Hall into stories and rooms.

CHAPTER II

FROM HALL TO HOUSE

IN the year of the Norman Conquest of England, Olaf Kyrre ("the Quiet") began to reign over Norway, and he reigned twenty-seven years. He saw the subjection of the Danes to the native kings of Ireland, as well as the establishment of a finer culture in England by its Norman rulers and churchmen. It was an era of growing peace, which gave opportunity for social progress and improvement. To this Olaf's reign the Norse traditions trace the beginnings of the alterations which were to change the character of the old Hall.

The first of these was made in the sleeping arrangements. With the diffusion of Christian ideas of what is decent and becoming, there came a demand for a privacy

THE DWELLING-HOUSE

which the one-roomed Hall did not afford. So the space under the eaves, and behind the women's cross-seat was separated from the rest of the Hall by a partition, and subdivided into bed-spaces for "lock-beds." These were so named from being shut by a door, which at night was fastened from within by a stout wooden bolt, for safety. In the Gisli-saga its hero incurs outlawry for killing his brother-in-law, while he lay asleep in his lock-bed. The night was warm, and the murderer's victim had left the door open for coolness.

The next step was to separate the west end of the Hall from the rest by a wall parallel to the western gable, and to divide the space into four small rooms, two above and two below. One of those below became the entry, and that above it was the *berk-friet* or belfry. At an opening in its floor in times of peril, a sentinel was posted, who

FROM HALL TO HOUSE

commanded the entry. The other room below became a store-room for dried fish and the like, while the second room above was made a sleeping-place, and called the "ram-loft" or strong loft. One of these still exists, in which one of the king Olafs slept on his journey through his realm.

As the life of the household grew too complex for such service as a great single room could furnish, this need was supplied at first by erecting additional buildings around the hall. In great establishments, like the Irish monastery at St. Gall, these, as old plans of the premises show, were numbered by the score. We also read in the Norse sagas of guest-houses, audience-houses, seething-houses for cooking, bath-houses, and cot-houses for thralls and poor dependents. Also of barns, kilns, threshing-houses, byres, stables, sheep-folds and pig-sties. Some of

THE DWELLING-HOUSE

these additional buildings deserve especial mention.

(a) The Bower was a strongly built structure for the safe-keeping of valuables and household ornaments. It was raised upon wooden posts to a good height above the ground, and between the steps which led up to it and its threshold there was space for a long stride, that the rats might be kept out. Within it, in wooden chests, were stored the finest clothes of the household, the embroidered hangings, which adorned the Hall on festive occasions, and the cups, bowls and rings of silver and gold, which now are to be seen in the northern museums. Quite commonly the Bower became the sleeping-place of the master and the mistress of the household. Sometimes they gave place to distinguished guests, if there were no guest-house on the premises. Here also the women plied their tasks in day time, espe-

FROM HALL TO HOUSE

cially with the needle. And some of the bitterest family feuds grew out of what was said at such times in the Bower.

The uses of the Bower are shown in the Grettir-Saga. Grettir had been banished from Iceland for man-slaying, and made his way to Norway. The ship in which he took passage met with bad weather, and ran the risk of sinking. At last, through his powerful efforts they reached an island on the coast, and were hospitably entertained by the bonder (farmer) whose home it was. When the rest went on to the mainland, Grettir stayed in the island. When Yule-tide came—somewhat later than our Christmas—the bonder and most of his household went off to keep the festival with a neighbor, leaving on the island his wife, a sick daughter, several servants and Grettir. One day as Grettir was walking on the shore, he saw a ship approaching. He knew by the

THE DWELLING-HOUSE

shields at the rowers' seats that it was a pirate (viking) vessel; and as the bonder had been prominent in getting a law enacted for the suppression of piracy, he presumed that the visit was not friendly. He met them at the landing place, helped them to secure their ship, and congratulated them on their coming in the nick of time. The bonder was away from home, but his wife and daughter were in the hall, along with thralls, and there was a plenty of plunder to be had. As he brought them up to the hall, the women thought him to have joined their enemies, and fled screaming.

Grettir got the pirates into the hall, made them lay aside their weapons and their wet garments, and warm themselves at the big fire. Then he brought a store of ale and mead, and plied them with it, while telling them what fine things they would find in the

FROM HALL TO HOUSE

Bower. At last they got up to go and examine its treasures, and Grettir went with them. He waited for the favored moment to slip out and bolt the door, and to run to the Hall for his sword. He called upon the male thralls to come and help him, which one of them did. By the time the pirates had forced open the door, Grettir was ready for them. He and the thrall killed all but two, who escaped for the time but were frozen to death before morning. When he returned to the Hall the bonder's wife gave him a bright welcome, and made him sit on the lower high seat, across the Hall from that which her husband occupied.

In later times, when the family was small, the Bower seems in some cases to have become the real home, displacing the Hall, which was kept for other uses. The poor widow of Chaucer's "Nun Priest's Tale"

THE DWELLING-HOUSE

had both Hall and Bower, but she and her two daughters dwelt in the Bower, while her “cock, hight Chanticleer,”

among his wives alle
Sat on his perch, that was in the halle.

(b) The seething-house or kitchen must have been devised for the comfort of wealthy householders, who thought they would enjoy their dinner the better for not having it cooked under their noses. It was ranked with the Hall as a “fire-house,” and an old Icelandic law provides that if there be both a hall and a seething-house, the householder must declare for which of the two the community shall be responsible in case it were burnt down. This shows the existence of a system of communal fire-insurance at a much earlier date than we should have supposed. Life-insurance on the contrary hardly could have been a profitable business

FROM HALL TO HOUSE

at that time, when manslaying was so much more common than arson.

(c) In the later sagas we hear of an earth-house for concealment, in case the hall were ransacked by its owner's enemies. It was in one instance constructed behind his bed. It commonly afforded an outlet for escape through an underground passage, either into one of the outhouses, or to some spot in the neighborhood, where its mouth was concealed among bushes, or something of the sort. Sometimes, however, the entrance to this passage was known to the chief's enemies, and was used to enter the house suddenly and unexpected.¹

(d) Some of the Icelandic chiefs had a

¹ In colonial America passages like this were constructed as a means of escape from Indian enemies. Tradition assigns this as the purpose of the underground passage from the Logan house at Stenton to the burial-place of the family. But at no time could an attack from the Indians have been anticipated at a point so near Philadelphia as Stenton is.

THE DWELLING-HOUSE

bath-house, and when the hot-springs were sufficiently near, hot water was conveyed thither in skilfully constructed pipes or channels. This supplied the means to a bath of the type now called Turkish, but once general throughout northern Europe.

The subdivision of the Hall into stories and rooms was impossible so long as the open hearth-fire required space for the smoke to rise. But in Olaf Kyrre's reign a change was made in many halls which forecasted modern arrangements for heating. The hearth-fire was pleasant, but costly, as it was wasteful of fuel. It burnt the forests off Iceland. Ships were built of native timber in the early days of the Norse settlement, although the importation of timber from the mother country began early and was extensive. To-day there is hardly a tree of a respectable size in the island, and the soil has been injured by the denudation

FROM HALL TO HOUSE

of the country of its trees. So the Icelanders had to burn turf, which the Scandinavians, unlike the Celts, disliked for its strongly pungent odor. In the Orkneys they must have done so from the first. It is one of several proofs that the Poetic Edda, although first found in Iceland in the sixteenth century, was not composed in that island but in the Orkneys, that turf is mentioned as the usual fuel.

In the two Scandinavian peninsulas the havoc of the forests was not so great, yet serious, especially in the vicinity of the towns and cities, for to bring fuel from a distance was not so easy as it now is.

To save fuel in heating the Halls, there was devised a structure of masonry, with space for a fire inside, and at the top an escape for flame and smoke directly into the Hall. Into this the fuel was introduced every morning, and a brisk fire secured to

THE DWELLING-HOUSE

warm the whole structure, which then radiated out heat all day. This was the ancestor of the earthenware stove (or *Kakel-ofn*) of the Scandinavian countries, Germany and Russia, from which travellers, especially Americans, derive little comfort. It seems not unlikely that it was copied from Russia.

Two changes resulted from this new device. The first was the use of lamps to light the Hall. As the light of the hearth-fire was no longer available for this, bowls of fish-oil, with vegetable wicks afloat in them and burning, came into use. This probably furnished more smell than illumination. But the world had long to wait for a satisfactory lamp. It was in the eighteenth century that a Frenchman, in experimenting with a glass tube held over a lamp-flame, found he could regulate the supply of air so as to obtain a smokeless flame, or to reduce the small amount to a negligible quantity.

FROM HALL TO HOUSE.

To make the fire in the stove burn brightly, it commonly was placed at the west end of the Hall, where the door would furnish the required amount of draft. So the middle of the long seat was no longer the place of greatest comfort; and the master of the house shifted his seat from that to the end of the long table. King Olaf Kyrre, we are told, did so; but kings and nobles generally retained the open hearth-fire, and kept the middle of the long seat, while the less wealthy householders followed the example set by that king. For this reason the heads of royal and noble houses in Europe to this day sit at the middle, and not at the end, of the table, while the heads of less distinguished families sit at the table-head. Queen Victoria, for instance, never sat at the end of a table.² Yet in common parlance

²I am told that the early settlers of New England were divided in practice in this usage, many of them keeping the middle of the dining-table for the father of the family.

THE DWELLING-HOUSE

“ the head of the table ” has come to be regarded as the place of honor. “ Where the MacGregor sits is the head of the table,” was the proud boast of the chief of the Gregara.

But the great change came with the invention of the chimney in the twelfth century, and in Normandy.

It is hard to realize that the chimney was unknown to the ancients, whether of the East, or of Greece and the Roman empire. Our English Bible, indeed, in both the Authorized and the Revised version of 1884, makes the prophet Hosea (xiii, 3) speak of “ smoke out of a chimney.” The Hebrew word here translated “ chimney ” means an open grating, possibly in the roof, for the escape of smoke and the admission of light. The Hebrews and the Greeks had no chimneys. The most that Roman luxury could achieve was to heat air in one room,

FROM HALL TO HOUSE

and convey it by pipes into another. The great architect Vitruvius, contemporary with Cicero and Cæsar, warns his readers never to place fine wood-carvings in a room where there is a fire, as the smoke will certainly ruin them.

It hardly can be said even now that the chimney has achieved the conquest of southern Europe. A photograph showing the sky-line of any Mediterranean city, will be found to contrast sharply with one of any city of the North. In the contour of the former the chimney is not nearly so prominent as in the latter. An American boy born in Honolulu surprised his classmates by omitting chimneys in the pictures of houses he drew on his slate, until he told them that "in Hawaii houses have no chimbleys on." In Japan the popular substitute for a chimney is an opening in the gable-wall of the house.

THE DWELLING-HOUSE

Americans have learned by experience not to spend a winter in southern Europe, if they can choose between that and the north. Better Stockholm or Berlin than Madrid or Rome, for comfort in the months of frost and chill. The Italian offers you a brazier of burning charcoal, at which you may warm your fingers. In Madrid the brazier is mounted on wheels, and taken from room to room, to take the chill off; but to get even moderately warm you must wrap yourself up and march up and down the Plaza del Sol until your blood circulates. Not only is the city built on a hill, which exposes it to all weathers, but fuel is excessively dear, the prunings of the vines sometimes selling for as much as do the grapes. Mr. Hannibal Hamlin, who was vice-president when Mr. Lincoln was president, was sent to Madrid as American minister by

FROM HALL TO HOUSE

President Grant. He belonged to the State of Maine, which is not considered a warm part of the republic, where indeed a fire is generally welcome as August draws to a close. It was Mr. Hamlin's boast that he never had worn an overcoat. One winter in Madrid satisfied him that he either must put on an overcoat or come home. He resigned the embassy and came back to Maine.

The chimney, as I have said, first made its appearance in Normandy in the twelfth century. Its own name, the name given to its hearth in many languages of continental Europe (*poesil*), and the name of the projecting wall which protects it from an excessive draft (*jamb*) are Norman words. The oldest existing chimneys are found in Normandy. Through the international organization of the building trade of that time, it spread rapidly over the north of

THE DWELLING-HOUSE

Europe, and was adopted by the wealthier house-holders.³

The coming of the chimney transformed the Hall. As the smoke now passed directly and entirely into the open air, the space for it overhead was no longer needed. First, part of this was brought into use by an upper floor, which gave a loft extending over half the Hall. Presently the loft reached over the other half also, and the

³ The cot-dwellers continued to use the hole in the roof until quite recent times. Jeremy Taylor praises "the poor herdsman that dwells upon his own acre, and looks not ambitiously on his neighbor's farm, nor covets the next cottage, which yet he likes well, and thinks it excellent, because it hath a chimney." The farmers also in some places kept up the old fashion. The authors of "The Vale Royall of England, or The County Palatine of Chester" (1656) say that "in the building and furniture of their houses, till of late years, they used the old manner of the Saxons; for they had their fire in the midst of the house, against a hob of clay; but within these forty years they have builded chimneys." Robert Southey, quoting this in 1807, adds, that "the last farm-house of this description was remaining in the township of Tong-with-Hough, near Bolton, in Lancashire, within the last twenty years."

FROM HALL TO HOUSE

house had a second story, which was reached by a staircase outside the building. Then the long, low side-walls were raised much higher and pierced with windows. These at first were mere openings in the wall, and were closed in bad weather by a shutter. Glass was too costly for any but the very rich.⁴ It had come into use for the churches in the seventh and eighth centuries. But as late as the sixteenth century, when the nobles left their country homes to go up to London, they had their glass windows packed away until their return. No handsomer present could be made to a bride at her wedding than a whole sash of glass, which would enable her to have daylight in her bed-room in all kinds of weather.

Along with the separation of the Hall

⁴This seems to explain the venerable practice of breaking a man's windows by way of showing your dislike of him. It was a serious business when glass was scarce and dear.

THE DWELLING-HOUSE

into stories by floors, came the subdivision of those stories by partition walls, and the breaking up of the furniture into smaller pieces. The long seat was moved out from under the eaves, and resolved itself into chests, chairs, settees, and much else. The lock-bed now took whatever place in the room was thought desirable, instead of being fastened, as one of a series, to the wall. It was still a structure of wood, and fully boxed in; and at night it was shut by a door which was bolted. It stood so high that steps were needed to climb up to it; and it commonly was so large as to admit of a number of occupants. The younger children usually slept there with their parents; and as these did not always come to bed sober, many a poor child lost its life by being "overlaid." It was therefore a distinct gain when the trundle-bed was devised for the children, and took its name from its being

FROM HALL TO HOUSE

trundled under their parents' bed in the day time.

In much later times the big box-bed was replaced by something less clumsy, but this was hung with curtains and valances to keep off drafts. Even then no one dared to go to bed without a night-cap, lest he should "get his death of cold." It was over those bed-hangings that our grandmothers did battle with the doctors of their time, who told them it would be more wholesome to sleep in a bed open to fresh air.

The old ladies, however, had much to say for themselves. Those old houses were exceedingly drafty through their defects of construction. The modern niceties of measurement, the use of the spirit-level, and the close fitting of woodwork, were unknown. Floors were rarely free from slopes and cracks; doors and sashes did not fit. When the builder conjectured that it was

THE DWELLING-HOUSE

time to put on another floor, he trusted to his eye and went ahead, without bothering about exact measurements and levellings. Even in the eighteenth century this was the case. I have lived in a house which dated from before 1750, and I found that the corners of my library differed by three or four inches in height; while I could have put my hand under any door of the house when it was shut.

Literature reflects the passionate welcome with which our forefathers greeted the return of Spring. The oldest English song, of which we have the music, begins with the joyful statement:

Sommer is y-comen.

Chaucer begins the Prologue to the Canterbury Tales with a picture which shows how keenly the return of warmth was felt:

FROM HALL TO HOUSE

Whan that Aprilé, with his schowrés swoote,
The drought of March hath percéd to the roote,
And bathéd every veyne in swich licour,
Of which vertue engendred is the flour;
Whan Zephirus eek with his sweté breathe
Enspired hath in every holte and heethe
The tender croppés, and the yongé sonne
Hath in the Ram his halfé cours i-ronne,
And smallé fowlés maken melodie,
That sleepen al the night with open eye,
So pricketh hem nature in here corages:—
Thanne longen folk to gon on pilgrimages.

It is a far call from Chaucer (1387) to James Thomson (1726), but in that year the Scotch poet published his "Winter," which he had written in bed, with his arm through a hole in the blanket, trying to keep warm. The practice of writing "Spring poetry," which persists especially in America, is a survival of the earlier attitude toward the time of year when men escaped the harsh severity of winter's frost, as they felt it in damp and drafty houses. "How

THE DWELLING-HOUSE

did you keep warm in that old house in winter?" was asked of a venerable lady of Philadelphia. "My dears," she answered, "I never was warm in winter until I was sixty years old."

A still greater change was going on in society at large, and was assisting and even hastening the transformation of the Hall into the House. This was the cessation of private warfare. Governments were growing strong enough to exercise a sort of police for the prevention of crimes of violence, and thus were making it unnecessary to garrison the house, and to live under arms in a place of strength. So the half-military group of the *hird* or Menie⁵ began to break up, and

⁵ It is to be regretted that this fine old word survives only in the term "menial," which once was honorable enough, but now emphasizes the subordinate and commercial character of the servant and his services, and in "minion" (F. *mignon*) which is equally contemptuous. Such, however, has been the fate of many good words—*caitif*, *boor*, etc.

FROM HALL TO HOUSE

the natural family emerged to take its place. The inmates of the house were greatly reduced in number, and the distance between them and the family proper was greatly widened. From retainers they became hired servants merely, kept on wages and liable to dismissal. The household school, in which greatest and least acquired the same elements of knowledge, and the same acquaintance with traditional and oral literature, was broken up. Education became the privilege of the few who could pay for instruction, while the rest clung to the fragments of the old and popular culture of the Hall, which survived in ballads and folk-tales. The common workshop was replaced by the shops of the town's people; but here also there was a loss of that goodfellowship between master and men, which belonged to the familiar relations of the earlier time.

Something of the old character clung to

THE DWELLING-HOUSE

the “menials” after the change, especially in Scotland, where mediæval usage still prevailed. Dean Ramsay illustrates this in his delightful “Reminiscences of Scottish Life and Character” (1858), in the chapter “On the Old Scottish Domestic Servant.” The Dean fails to trace the peculiarity of the old-fashioned servant to its historic source, but he illustrates it very amply. One laird, in his wrath, ordered his man to leave the place, and was answered, “Na, na, I’m no gangin’. If ye dinna ken whan ye’ve a gude servant, I ken whan I’ve a gude place.” Their care of the family interests was often embarrassing. At a dinner-party, the hostess said to her butler, “Thomas, Mrs. Murray has not a salt-spoon.” As Thomas paid no attention, she repeated her words in a peremptory tone. “Last time Mrs. Murray was here, we lost a salt-spoon,” was the reply.

FROM HALL TO HOUSE

Those old servants were very exacting, expecting to be consulted in all serious crises of the family life, and resenting every slight. This was especially true where they were attached to their masters by a sort of hereditary tie, one generation after another entering the service. They spoke to the head of the house almost as equals, and over the children they exercised sharp authority. Those who speak with regret of the disappearance of this class of menials, are aware only of one side of its relations with the home. Its loyalty they admire; its arrogance they would not endure.

CHAPTER III

THE TOWN-HOUSE

THE town-house is much the junior of the rural "hall." Our Celtic, German and Scandinavian forefathers did not love towns, or town-life. As the Douglas said of himself, they "would rather hear the lark sing, than the mouse cheep." Tacitus notes that the Germans, even while they lived in *thorps* (*dorfs*), for safety or convenience, yet built their houses well apart from each other. When they overran the Roman Empire in the fifth century, they did not make their homes in the cities which composed it. Some of them they wiped out, but they left others in the hands of their new subjects, under the operation of Roman law and its municipal rule, while they imposed upon them the payment of tribute and the duty of coining money.

The rise of towns in Europe grew out of

THE TOWN-HOUSE

a new division of labor, in which men ceased to produce in a clumsy way on their farms all they needed, and began to leave this or that trade to persons expert in it. Then it was found convenient to have these trades-people gather into towns, where others would be sure to find workmen of the kind they wanted, when they had a purchase to make.

Hardly any people lived in the towns except trades-people, unless it were the courtiers at the king's residence, or the attendants on the courts of law. Even these hurried off to their homes in the country as soon as they had opportunity, and thus escaped the risk of pestilence. Washington Irving notes this as still the habit of the residents of London in his time; and since that the growth of wealth has made it as common in America as in England.

If we entered one of those early towns, with the purpose—let us say—to buy a

THE DWELLING-HOUSE

saddle, we did not look for street-names on the corners. The towns-people, knowing that we probably could not read, did not insult us by reminding us of our ignorance. For the same reason they put no names on signs. But each trade had its own symbol, which every one recognized. The vintner displayed a bush. Hence the saying in Shakespeare, "Good wine needs no bush." The doctor hung out three gilded pills; and when the Medici passed from that profession to the loan business, they took the pills with them, and there they stay. The barber-surgeon, who combined the trimming of beards and hair with the letting of blood, displayed a white arm with streaks of red on it; and thus originated our barber's pole. The harness-maker naturally exhibited a horse's head; and it is for this we are looking.

As we pass up the town on this search, we keep to the middle of the street. Side-walks

THE TOWN-HOUSE

there are none, but down the middle runs a series of broad, flat stones, called in continental countries "the Burgomaster's Stone," because if His Honor the mayor came down it, we should have to step off to give him room. And this stepping off was a serious business. From the middle of the street to the houses on both sides lay a vast collection of filth, ripening for transportation to the farms when spring opened. In this the pigs wallowed when driven in from the beech or oak woods by the hog-reeve at the close of day. Into this was thrown all the refuse and filth of the house.¹

¹ Until toward the close of the eighteenth century the streets of Glasgow were lined with such middens, as were those of Scotch towns generally. John Galt, in his "Annals of the Parish" (1821), has a vivid picture of the streets of a Scotch town, and of mishaps which befell travellers in driving through it. The filth of Edinburgh was proverbial, as refuse of all sorts was flung into the streets from every story of the lofty houses in the Old Town, with the warning "Gardy loo" (*Gardez de l'Eau*) to the passers-by. My mother told me that when she visited Belfast in her girlhood, she found the town intolerable for its bad smells, and was delighted to get away from it to her home on the shores of Lough Neagh.

THE DWELLING-HOUSE

When we see the sign of a harness-maker, we pick our steps across the midden to his shop, aided probably by stepping-stones he has placed for the convenience of his customers. We find that the town-house stands with its gable-end to the street, as the Dutch houses still do, and also the older houses in American towns built by the Dutch colonists (Schenectady, Albany and others). It was built of the same materials as the country-house, except that the roof was of thatch, not of sod. It was at first one large hall, lighted by a hearth-fire, and not divided into stories or rooms. These came afterward, in due time. The entrance was easier of access, as there was no such need of defence. Its peril was in the roof. As the thatch grew very dry in the sun, especially during a long drought, it was liable to catch fire. If the women would not keep the fire in all night, and went out in the morning to borrow a

THE TOWN-HOUSE

bowl of embers (creish) from a neighbor, and there was enough wind to blow the sparks about, a conflagration followed. The towns of the north of Europe were burnt down about once in sixty years. This is why those who look for very old houses, must seek them in the country rather than in the towns. To check this fire loss the substitution of slates or tiles for thatch was enacted by law, but hardly enforced. People preferred the risk to the expense.

When we enter our saddler's house, we find it a sort of double workshop. The big room is divided between the men and the women. On one side the master with his journeymen and apprentices is busy with the making of harness and saddles. On the other the women of the family are spinning and weaving wool or flax, cutting and sewing garments, making candles, dressing and cooking food, etc.

THE DWELLING-HOUSE

To the master we state what we want, but are met by the disclaimer that he does indeed make saddles, but not for persons in our class. We really must go elsewhere for what we need. As we know what this means, we insist on being shown what he has in stock. He turns up a part of the long-seat, and brings from the chest thus opened one saddle after another, showing them with evident pride in his handiwork. At last we see one we think will suit our need, and our purse. Then the chaffering begins, to last an hour or two. He asks about seven times as much as he means to take, and we offer about a seventh of what we mean to give. In a highly dramatic colloquy, in which we start several times to go elsewhere, and he as often to put the saddle back into the chest, we work toward an agreement. At the end we declare we are swindled, and he that he is

THE TOWN-HOUSE

ruined, and we part well pleased with the transaction.²

With the introduction of the chimney, the town-house was transformed even more rapidly than that of the country. In England of the fifteenth century the chimney was of obligation. When a new member was admitted into one of the guilds, it was required that he should build him a house and a chimney, and keep both in good repair. In the town the division of the house into stories, which the chimney made possible, was welcome as an addition practically to the area of the town in its densely peopled space. Some audacity was shown in extending the

² It was in this way that the chaffering of buyer and seller was carried on all over Europe, somewhat as in the bazars of Asia to this day. In England and America it was put down by the Discipline of the Society of Friends, which required Quaker tradesmen to adhere to the rule, "One Price, and no Abatement." Whoever had to make a purchase in haste, and had not time or taste for chaffering, looked for a Quaker in that line of trade, and bought what he wanted in a few minutes. Then the rival shopkeepers had to abide by the same rule.

THE DWELLING-HOUSE

higher stories over the street, so that even when this was wide enough at the ground, it was possible to shake hands across it at the top. One of the old houses in York encroaches on the street in this way by fifteen feet. This helped the mass of filth to keep the town unhealthy, by checking the circulation of the air.³

To one European country belongs the honor of anticipating the modern standard of cleanliness. No kitchen-middens reeked in the streets of the Dutch towns, and no pigs wallowed there. Within Dutch houses cleanliness was carried to a high point. Tradition tells of one Dutch Mefrow, who

³The streets were narrow enough, as also in ancient times. Rome herself had but one street of respectable width, the Via Sacra, along which religious processions had to pass, especially the triumphs and ovations of the Roman generals, on their way to sacrifice ox or sheep in the temple of Jupiter on the Capitoline mount. Sir Thomas More, in his "Utopia" (1516), praises the people of that ideal state for having no street of less than sixty feet in width.

THE TOWN-HOUSE

scrubbed through the floor and fell into the cellar; but this is not authenticated by contemporary evidence. We have seen what Erasmus of Rotterdam wrote of the filth of the English Halls, with their stale rushes and dogs' refuse on the floors. Mr. Charles Reade takes the father of Erasmus as the hero of his story, "The Cloister and the Hearth" (1861), and makes him turn up his nose at the foulness of the inns of Germany and France.

Wherever the Dutch went they took with them their passion for cleanliness. In the sixteenth century a Dutch woman, Mefrow Sigrit, acquired great influence over King Christian II of Denmark, and used this to get the streets of the Danish cities paved and kept clean. Later in that century one of those towns was expecting a visit from a personage of the royal family, when it occurred to the city fathers that if his royal

THE DWELLING-HOUSE

highness "had a nose on his face," he would not relish the streets of their town. So they enlisted the services of all the carts and wagons in the town to bring up sand from the seashore, and they spread this over the filth to the depth of several inches, which would serve to mask it so long as his visit lasted.

Not that Denmark was a whit worse than other countries than Holland. Koeln (Cologne) was proverbial for its foulness and its bad smells even in the eighteenth century.

CHAPTER IV

THE LATER TOWN-HOUSE

THE towns of northern Europe had made their beginnings in a despised poverty, but during the Middle Ages they had advanced fast in wealth and importance. Their support of the kings against the local authority of the nobles had enabled monarchy to displace the feudal aristocracy in the actual control of the peoples, and thus to shift the centre of political gravity and of sovereignty.

This was especially true of those towns, which had succeeded in making themselves centres of manufacturing industry, and thus to draw wealth into their hands from less advanced countries. The towns of Flanders had made that naturally barren region into the foremost industrial centre of northern Europe, able to meet the dukes of Bur-

THE DWELLING-HOUSE

gundy and the kings of France on equal terms, as the cities of northern Italy had met the emperors a century earlier.

As the town's people were now the wealthiest class in Europe, the fact became visible in both their public and their domestic architecture. The great cathedral churches of northern Europe were not usually the fruit of royal or noble piety and generosity, or the creation of the monastic orders or of wealthy churchmen. They were built and adorned by the tradesmen of the towns in which they stand, and were rivalled in costliness and beauty by the magnificent town-halls, in which municipal architecture reaches its highest point.

Many of the private houses erected during the later Middle Ages and the period of the Renaissance take rank among the finest monuments of artistic taste and skill which those cities possess. Their large design and

LATER TOWN-HOUSE

their exquisite details show them to be the work of genuine artists. Those of Nuremberg are best known, but many French, German and Swiss towns are the fortunate possessors of others not less handsome. The men of that age loved to beautify not only the houses in which they worshipped God, but also the places of their daily toil and their nightly rest—of their domestic joys and sorrows.¹

The town-house was no longer a “block-house,” as Professor Lund calls the country-house. The close association of thousands of families in one social bond had transferred

¹ See the beautifully illustrated article “Maison” in M. Viollet-le-Duc’s *“Dictionnaire de l’Architecture.”* I regret that I have not been able to make much use of this eminent author’s *“Histoire de l’Habitation Humaine.”* It seems to be rather the geography than the history of the subject, as no growth or evolution connects its several chapters. On the other hand I have had abundant help from Prof. Troels Lund’s work *“Das Tägliche Leben in Skandinavien während des Sechszehnten Jahrhunderts”* (Copenhagen: 1882).

THE DWELLING-HOUSE

the line of defence from the threshold to the ring-wall, and to the strongly built and carefully watched gates which pierced it. Buildings outside the wall had not much more than a temporary character, as they were liable to be swept away in anticipation of a siege, so as not to cover the approach of the enemy.

Yet the safety within the town was not entire. Thieves abounded and shrank from no violence, as knowing that their lives were forfeit if they were taken. Even reputable London tradesmen were known to have sallied out at night-fall, when their own shutters were up, to rob the shops of their neighbors.² So a half-soldierly quality attached to the townsmen even in time of peace. They and their journeymen might have to defend their stock of materials and their finished work by force of arms, in the absence of any police worth mentioning.

²See Pike's "History of Crime in England," Vol. i, pp. 141-2.

LATER TOWN-HOUSE

And this fact naturally modified the construction of their houses.

The materials of which town-houses were built were changed in the sixteenth century. The frame-work of wood continued in use, but the filling changed from clay to stone or brick and was laid in mortar. On the roofs thatch was giving place to shingles, tiles or slates, under the pressure of the law, but slowly. As the manufacture of glass was naturalized in every country of Europe during this century, it grew cheaper and more in use. But in the earlier part of the century it was still so costly that a Danish king, in his plans for a new palace, specifies one part only as to be furnished with glass windows. And their relative costliness caused such windows to be firmly fixed into the wall, to avoid the risks which attended opening and shutting them. More light thus meant less fresh air. Before the end of the

THE DWELLING-HOUSE

sixteenth century, however, what had been the privilege of a few was becoming the general possession of all but the poorest.

Some important additions were made to the equipment of the house, while the older forms of furniture were elaborated to a degree which showed the new taste for household art. One was an hour-glass, which, being costly, was kept in a place of especial safety. Then came the clock, which at first lay in a square box, face up, like a compass. The Nurembergers had already invented the watch, but that pocket timepiece was rarely seen. The clock, especially if it struck the hours, and still more if the quarters, was delightful, and the possession of it conferred social distinction. But clocks generally kept bad time before Galilei's discovery of the law governing the motion of the pendulum, and the application of the discovery to clock-making by his son. The actual reliance for

LATER TOWN-HOUSE

correct time was on the sun-dial, and that of course was rarely available in the cloudy atmosphere of northern Europe.

The subdivision of the house, which resulted from the introduction of the chimney, followed a plan so general that it may be taken as normal. Inside the front door, which generally lay open in the daytime, was an anteroom of larger dimensions than in later houses. Here guests laid aside their over-clothing and their weapons, except sword or dagger. From this two doors opened. That to the right led into the workshop, where master, journeymen and apprentices labored. From this room there was also an opening into a stall on the street, where wares were offered for sale. The door on the left was into the living-room, which was at all ordinary times the social centre of the home. It was lighted as well as warmed by an open hearth-fire under a chimney.

THE DWELLING-HOUSE

Here old and young gathered in the evenings, somewhat as in the old Hall, but a far less miscellaneous company. Here the food was served from the adjacent kitchen. Here also in many cases were box-beds for the older members of the family.

On high days and holidays, such as weddings, christenings, and the visits of distinguished guests, the living-room was displaced by the "great room," in which the family's treasures were kept, and its best decorative hangings were displayed. Among these none were more notable than the great bed, called in some countries "the heaven bed," because of its canopy. On this bed immense sums were expended, the finest Flemish, Italian and oriental fabrics being employed in its curtains and its canopy. Queens and princesses vied with each other in their outlay on their beds; and in wills of that age astonishing sums are mentioned as

LATER TOWN-HOUSE

having been spent on them. In earlier times this great room was on the ground-floor; but to get more space it was afterward placed on the second story. The facilities that story offered for several bedrooms were not employed to the extent we should expect. The old idea of the family sleeping together seems to have clung to them, and to have made them crowd into one or a few rooms at night.³

Another feature of the upper story of the town-house was the open gallery, extending along the front of the house, under the shelter of its protruding roof. This was originally a part of the out-door staircase, by which that story was reached. It re-

³This type of house seems to have been brought to New England by the early settlers. Mr. William B. Weedon, in his "Economic and Social History of New England" (Boston, 1890) says that "a common arrangement of the first floor was in a 'great room'—*i.e.*, company room—and a kitchen, each twenty feet square, with a bedroom and a large milk and cheese pantry."

THE DWELLING-HOUSE

placed the Bower of the earlier house, as in it the women of the family carried on the lighter employments of their sex, while they enjoyed the air in the closest approach to purity that the town's streets permitted. It had some resemblance to the open *loggia* of the Italian house.

In the rear of the living-room lay the kitchen, with a large hearth-fire on a raised hearth, and a chimney. Seething was done in great kettles suspended over the fire from the crooks, and roasting on spits placed in front of the open fire and constantly turned. In great houses the kitchen fires were of charcoal to avoid smoking the food; but generally the fuel was wood or peat, as the possibilities of coal had not been discovered.

The provisions—as indeed the word means—were not bought from day to day, but provided in quantities which would last for months or even a year. Through the winter

LATER TOWN-HOUSE

salt meats and fish were the main dependence, supplemented by game and fresh fish in summer. The favorite dish was a meat pasty (dish-pie). Vegetables were used very little, being in some countries inaccessible. In England kitchen-gardening was introduced by the religious refugees from France and the Low Countries. Before that Queen Elizabeth had to send to the Continent for the vegetables, when she wanted to give a grand dinner. The cookery-books of even the next century surprise us by their slight reference to vegetable food, and their array of meat and fish dishes.

Water, being generally impure in the supply of the towns, was not drunk by young or old, rich or poor. Every house brewed its own beer, and the big kettles of the kitchen came into this use.

The last room I shall mention is the bath-room, for giving the steam bath of the type

THE DWELLING-HOUSE

now known as Turkish or Russian. When the peoples of Europe wore fur or wool next the skin, the use of the steam bath was general, and was thought indispensable. England alone had not such baths, but we find them coming into use as a novelty in Elizabeth's reign. On the Continent every householder who could afford it had his bath-room of this type. But even where he had one, he was not unapt to prefer the public baths of the same sort, which existed in all the continental towns, and especially to take his guests to these. They were the club-houses and the taverns of the time. Acquaintances were made, good fellowship cultivated, games played, and beer in abundance drunk in the soaking atmosphere.

The discovery that these places were the means of spreading diseases gave them their first backset, and brought the home bath again into favor. But the great change

LATER TOWN-HOUSE

came with the general use of linen for under-clothing, which made it possible for men to be comfortable with less bathing, as they wore clean linen next their skins. This brought with it the family festival called "washing day," observed as a weekly feast in modern times, but formerly but once a month, or even in some countries but twice a year. In the latter case an entire room of the house was devoted to the reception of soiled clothes.

The streets were less changed than were the houses. The townsman admitted of interference on the part of the government in many other things, but not with his privilege of keeping the surroundings of his house in a condition which made life uncomfortable and death by pestilence common. He still claimed his rights in the space between the house and the middle of the street. That part which lay next his house, and was

THE DWELLING-HOUSE

covered by his protruding upper-stories and his projecting roof, he treated as especially his own. Here he erected his stall for selling his wares, and added benches for the comfort of himself and his visitors, chests to hold household refuse, and the like.

The increase of carts and coaches was beginning to encroach on his rights, by using much of the narrow street for travel. This space was not cleaned, nor was there any even pavement under its accumulations! The driver proceeded at his own risks, over piles of refuse, deep hollows full of foul water, and the like. By way of a partial drainage, the middle of the street, which had been its highest point, was now hollowed into a channel, which served as open sewer. Foot-passengers now walked as close to the houses as possible. Somewhat later posts were placed to distinguish the sidewalk from the

LATER TOWN-HOUSE

rest of the street, but there was no smoother pavement ⁴ for those who used it.

In the centuries succeeding, the most important change in the town-house was the removal of trades to separate buildings, first workshops, and then factories. This meant the more complete dedication of the house to home uses, through the elimination of alien elements from its life. James Watt by the invention of an economic steam-engine (1769) enabled an organization of industry the workshop could not compete with, as to quality and price. But even before, as well as after, Watt's invention, the liberation of women from many domestic employments was in progress. New and independent industries sprang up, which took from them

⁴In America, Philadelphia was the first city that established smooth sidewalks, paving them with brick. Franklin remarks that a Philadelphian walking over the cobblestones of New York seemed to be suffering from corns; while a New Yorker on the sidewalks of Philadelphia reminded him of a parrot sprawling over a mahogany table.

THE DWELLING-HOUSE

their spinning and weaving, knitting, tailoring, candle and soap-making, brewing of beer, baking, distilling of extracts, preserving fruits and berries, plaiting of straw, and the like. This process of elimination was not altogether relished by the house-mistresses, who felt at each change that they were losing a province of life which belonged to them. My paternal grandmother used to say that the house would lose half its charm, if the maids did not sit down to the spinning-wheel when their other tasks were done, and give her the familiar music of early days. But both the better quality and the lower price of the goods produced on a larger scale and with modern machinery, carried the day, against a sentiment which Mr. Ruskin tried to revive in his time.

A still more beneficent change was the introduction of pure water into the cities,

LATER TOWN-HOUSE

and into houses within city bounds. There the modern world was challenged by the great remains of the aqueducts, which brought pure water from the Sabine and Latin hills to the imperial city. The challenge has been more than met, as undertakings of this sort in modern times surpass those of the ancient world in the audacity of their ingenuity, the distances overcome, and the abundance of the supply. The gain to the family was in quantity as well as quality, a sufficiency for all household uses, whether of cleansing, or cooking, or drinking, having been secured it. And the purity of the supply established the modern habit of drinking water, to which our remoter forefathers had a well grounded repugnance.

Not until early in the nineteenth century did there arise any substitute for the tallow candle, and the lamp for burning fish-oil.

THE DWELLING-HOUSE

Then from Glasgow came illuminating gas, which, from London and Philadelphia as centres of this enterprise, was spread over the two worlds. The gain was much greater than we are apt to realize. Candle-grease had been one of the plagues of life. It dropt on clothes, stained carpets, spotted furniture, and added an undesirable flavor to food. And candle light was so meagre and inadequate, especially when a church or other public building had to be lighted, that its use could not but impair sight. The staunchest upholders of the traditions of the past did not deny that in this respect the world changed for the better.

Illuminating gas also enabled the lighting of the streets in a new and fairly effective fashion. Heretofore smoky oil lamps hung across the street on ropes, had been the only dependence, just making "darkness visible."

LATER TOWN-HOUSE

Hence the necessity for link-boys, to light to their homes those who must return after night-fall, especially in winter. Gaslight also made possible the policing of the towns, for the safety of life and property. The old watchman, carrying his horn lanthorn, and calling out the hours as they passed, gave way to the modern officer on his beat.

The policeman's work was made much easier by the construction of proper roads and streets, to the advantage of health as well as travel. Outside of Holland and a few favored localities, the old roads were little better than tracks worn by travel, up hill and down dale, involving almost a certainty of an upset on any journey of greater length. It was in the second half of the eighteenth century that the business of road-making and street-making took hold of the practical English mind, with the result that

THE DWELLING-HOUSE

the roads of the British Empire now surpass those of Assyrian and the Roman, and are not yet equalled by those of any other country. Not only do good highways traverse every part of the British Islands, but even in outlying dependencies—in Hong Kong or Mauritius—better roads are to be found than between the largest centres of population in America.

The city streets generally presented a more difficult problem, as obliged to sustain a much greater stress of traffic, and as requiring a nicer finish. The middens were now cleaned out of the towns, and the space thus laid bare was taken in hand by the municipal rulers to supply a place of safe and pleasant travel. The mere separation for foot-passengers of a part of the streets from the rest by posts—those posts which Dr. Johnson must touch on his way home to

LATER TOWN-HOUSE

Bolt Court or Gough Square—gave way to a raised and smooth pathway bounded by a kerb-stone, and unencumbered by the stalls and the benches of the house-owners. The roadway was the subject of various experiments before Telford—the Macadam of the cities—showed that the main thing in a good street is not the surface, but the foundation on which it rests. This settled, it remains to determine what possible surface is the best, *i.e.*, lasts longest, is the most easily repaired, is least hard on the feet and legs of horses, and is the wholesomest. It cannot be said that this problem has been solved, but the present choice lies between asphalt and wooden blocks.

The open sewer, which took the place of the burgomaster's stone in the middle of the street, was now displaced by underground sewers, not without some increase of peril

THE DWELLING-HOUSE

to health, as these are connected with the latrines of the houses, and sewer-gas is the plague both of the builder and the plumber. The regular cleaning of the streets was undertaken, but in a fashion which still is very unsatisfactory. The asphalt pavements of our time bring into light the harm done by the horses of a great city in keeping its streets dirty, and suggesting the exclusion of all quadrupeds from the city limits.

CHAPTER V

THE HOUSE OF TO-DAY

IF any one who knew nothing of the history of the House, were asked to define the word, he probably would answer that it is a structure of wood or masonry, divided into stories by floors of wood, and these into rooms by slight party walls; lighted by glass windows; heated by stoves, furnaces, or open hearth-fires; roofed with shingles, slates, tiles or sheets of metal; and meant for the home of a natural family and its servants.

This definition stands for the stage now reached in the evolution of the House, but at no point does it define the House in which our forefathers lived a thousand years ago. And probably it is just as poor a description of the houses in which our posterity will be living a thousand years hence. It stands

THE DWELLING-HOUSE

merely for the present stage in a process of development, which began with the cave, and will end with the palace. In coming centuries people will wonder at the inconveniences we put up with, at the awkward arrangements which seem to us the height of ingenuity, and at our lack of insight into the nature of the problem we had to solve in devising a suitable home for the family.

To learn what direction will be taken by the farther evolution of the House, we naturally look back upon that through which it has passed already. And we find here four indications worthy of notice: Healthfulness, comfort, adaptability and economy.

1. *Healthfulness*.—The primitive house, both in its structure and its environment showed the indifference of its occupants to the things which make for health and length of life. They dispensed with ventilation, except where it was forced upon them by bad

THE HOUSE OF TO-DAY

carpentry and defective masonry. They permitted a degree of filthiness in their halls, which we would find intolerable in our streets. And they accumulated dunghills at their very doors. Their streets were narrow and unsafe for every kind of travel; and were encroached upon above by projecting stories and roofs.

These evils we have corrected or are correcting. In the most crowded parts of our great cities there is a striving after a cleanliness, which was not to be seen in the royal palaces of the past. The public mind is pervaded by an enthusiasm for sanitary precautions of this kind. *Sanitas sanitatum, omnia Sanitas*, as D'Israeli said in jesting variation of the Royal Preacher (Ecclesiastes i, 2). But our methods of heating our houses are still highly unwholesome. The ordinary furnace discharges into our rooms currents of parched and moistureless air, which work

THE DWELLING-HOUSE

ruin to throat and lungs, skin and liver, in winter. And in summer the ventilation of our rooms without introducing cold drafts is an unsolved problem.

Especially the cleansing of the house and its adjacent street presents a difficulty we have not overcome. We are beginning to learn how deleterious dust¹ is to the human organism, and how fertile in infection in pulmonic and other diseases. City homes stand on streets, where every wind carries

¹ Archæological exploration has shown us how effectually it can bury a city, during any long suspension of popular activity. It was necessary to dig down thirty-seven feet to reach that pavement of the Roman Forum, on which Cato and Cicero had walked. This was supposed to be the earliest level, but on cleaning out some of the old wells in the Forum, they came on one pavement under another to the number of a dozen. So the remains of Nineveh were a mound of dust, which Xenophon, in the Anabasis, mentions as being on the line of march of the retreating Greeks, but without the slightest notion of what those dust-heaps covered. Schliemann found one Troy beneath another, and much the same condition at Argos. The Palestine Survey found seven such cities in the mound where Lachish stood, and the third from the bottom was that which Joshua destroyed in his conquest of Canaan.

THE HOUSE OF TO-DAY

with it a load of dust of varied character, and often whirls it high into the air. When a house long untenanted is opened anew, it is found that everything in it is coated with dust, in spite of efforts made to seal it against this subtle intruder. And for most of us the only correctives are the broom, the brush, and the duster, which do as much to diffuse it as to remove it.

2. *Comfort*.—Our forefathers seemed to regard as a piece of effeminacy that consideration for our ease which makes us prefer soft to hard, adaptation to the human form in furniture,² and the like. We have advanced greatly on their arrangements. We can be reasonably warm in winter, if not

² It is noteworthy that there was a prejudice at first against taking advantage of many comforts. Women at least held it a point of good manners, until within the memory of people still living, not to let their backs come into contact with the back of a chair, nor to sit in any but the most erect position. It was also an offence to rest elbow or arm on a dining table.

THE DWELLING-HOUSE

always reasonably cool in summer. Carpets and rugs are softer under the foot than a bare or a sanded floor. Windows which shut and open, and are fitted with glass, are better than holes in the wall shut by a wooden shutter, or glass sashes imbedded in the wall for safety. Doors which fit their frames save us from drafts. Wall papers of pleasant design, and pictures multiplied by modern processes, rest the eye better than did a bare wall, or even the elaborate tapestries of the wealthy. And the whole equipment of a house,—tables, chairs, lounges, china, cutlery, etc.—are obtainable of better design and at less cost, and enable us to take life easier.

But we still climb from story to story on the series of small platforms we call staircases, at risk of life and limb, and accept these as a law of nature, although safety-elevators have made them superfluous. The

THE HOUSE OF TO-DAY

time may come when curious folk will go a long way to see a staircase, and will ask any of us who survive, "Did you really go up and down by that funny arrangement? Didn't you find it very tiresome, and very dangerous? Did people never fall on it?" And then we will begin to recall our own tumbles, from the first days of adventurous youth to the coming of the domestic lift. And perhaps we will remember also how a fall down a staircase cost us Helen Hunt Jackson, and other less notable victims.

We also still endure in our houses in the heat of summer, the added heat of kitchen ranges for the preparation of food. We still endure the heat from gas-jets and oil-lamps for lighting the house, when far cooler means of illumination are accessible to most of us. We still have loads of coal carried into our basements, to keep up fires in furnaces and ranges, when these services

THE DWELLING-HOUSE

could be far better rendered from outside our homes.

3. *Adaptability*.—The primitive house was adapted to the uses of the primitive group, which was a military, industrial and educational unit. That group has passed away, leaving traces of its existence and its demands on the house of our day, especially in the perpetuation of trades within the house. Men's work has gone to factory or workshop. The trades of the brewer, baker, chandler, weaver and tailor have removed the most of the employments once imposed by tradition on the house-mistress and her companions.

But some linger still. (*a*) The public laundry has not yet entirely superseded the domestic washing-day. (*b*) The work of the baker is still rivalled in many homes, where the preference for "home-made bread" lingers. (*c*) The heating of the

THE HOUSE OF TO-DAY

house in most cases is done from its own furnace, instead of having heat supplied from some central plant, where the use of coal in a scientific way ought to make it cheaper and better. (*d*) Worst of all, the preparation of food is a business still imposed on the mistress and her servants.

These are the principal reminders of the old system, in which the housewife was truly a "Gill of all trades," and had very little time or strength for her proper work of making the home attractive and pleasant, the centre of human affections, the resting-place of the weary. They all are obstacles to the adaptation of the modern house to the real needs of the natural family.

Especially the modern house fails to realize its idea as the home of such a family, because of the residence of others than the family within its walls. In the early times their presence was unavoidable, and their

THE DWELLING-HOUSE

relations with the family were personal and human. They were members of the only group that could constitute a household with safety; and a bond of personal loyalty held them to the head of the house. But the servant of to-day is essentially a wage-earner, living in the house on a commercial basis, and supposed to be compensated for such services as are rendered by the money-payment. And yet there clings to the position something of the old claim to more than wages, and this is reinforced by continuous residence in the house.

Furthermore the mistress of the house is obliged by the conditions of modern service to undertake the rule and discipline of a number of persons, whether many or few, who have no kinship or personal relation with her, in addition to the care of her children and her husband. She has some responsibility for their health, their morals and

THE HOUSE OF TO-DAY

their manners. She has to select her servants, train the inexperienced, control the wayward, and keep all in some sort of good humor with each other and with herself. This requirement in many cases falls upon women who have had no experience in their youth to guide them in later years, as they have been brought by change of fortune into a position in which they look to others to do for them what they always had done for themselves. And the housewife has to endure frequent changes in their number, as they grow dissatisfied, and seek to "better themselves," by finding another mistress.

On the other side the maids have enough to complain of. They are obliged, in many cases, to live under rules which are extemporized from day to day. They are required to do work in a needless hurry, because they are not notified in time what is expected of them. They are stowed away in any part

THE DWELLING-HOUSE

of the house which is not needed for other uses. Their rooms are often so cold in winter and so hot in summer, as to be almost uninhabitable. They have no society except that of other servants, if there are any; and their whole time, except what is needed for sleep, and with the exception of one-half day a week and every other Sunday, is exacted of them. So most of the girls, who might have been available for domestic service, revolt against its conditions, and seek employment in shops and factories, where they are mistresses of their time outside of working hours, and do not live the lonely life of the household servant. An American manufacturer, who employed girls by the hundred in his garment factory at five dollars a week, was actually unable to secure one of them for service in his suburban home at twenty-five dollars a month, with her board and lodging. New York reports

THE HOUSE OF TO-DAY

places for 100,000 domestic servants, which cannot be filled. Every class in turn has abandoned such service—native Americans, Irish, Scandinavians, Germans—until it seems probable that the main dependence will be the negro and the Chinese. Yet these very classes enter the higher service of the trained nurse, where greater liberty is enjoyed.

The portrait of the modern servant drawn by the mistress, and that of the modern mistress drawn by the servant, are equally untrue to life, except in a minority of cases. Human beings, living under the same roof, come in most cases to a sort of understanding, which often rises through esteem into affection. But there is truth enough in the complaints on both sides to show that the present arrangements for the care of the home are becoming intolerable, and that a

THE DWELLING-HOUSE

better organization of this side of household life is imperatively needed.

It is not strange, therefore, that many families have given up housekeeping under present conditions, and find refuge in lodgings or apartment-houses. It even has been suggested that this indicates what will be the housekeeping of the future, when separate houses will be abandoned, and families will gather in large groups under one roof. It is undeniable that the apartment-house has been a relief for many weary and perplexed housekeepers, as it furnishes an escape from the wear and tear of preparing three meals a day, and from the perplexities of the problem of domestic service, besides the avoidance of stair-climbing where the suite of rooms is all on one floor. It is not, however, an ideal home for a family with small children, and for their sake it is desirable to

THE HOUSE OF TO-DAY

maintain the seclusion of the separate home, while improving its conditions.

4. *Economy.*—The modern house is far more costly than it need be, through lack of proper management. This applies first of all to its purchases. The housekeeper of earlier days laid in a large stock of necessaries of the sorts which would keep until used, and thus was able to buy at low prices. Such supplies now are usually bought in small quantities and at high rates, because we are paying the dealer for his time, trouble and use of his capital. Losses also are incurred through unintelligent buying, as inferior articles are passed off for the best, and adulterated goods at the price of pure. By the co-operation of several households the services of an expert buyer could be had on terms which would result in gain to all of them.

The direct use of coal for heating and

THE DWELLING-HOUSE

cooking within the house involves great waste. Most of the caloric we obtain from it passes up the chimney, while coal-gas is often discharged through the house. The scientific use of coal under co-operative arrangements would secure us both services at far less cost, and would diminish the consumption of this valuable mineral.

In the chapters which follow I shall try to foresee the changes which are impending in household management.

CHAPTER VI

THE HOUSE THAT IS TO BE: ITS ORGANIZATION

To avoid repetitions I shall not discuss the methods of household reform in just the order in which I have enumerated the evils of which these are to rid us. I shall, however, cover the same ground in constructive suggestion as I have in criticism.

It will be observed that in almost every case the solution of our present difficulties must be found in the application of co-operative method, to bring the families out of their isolation into a plan of working together for the relief of social burdens. Free co-operation, indeed, will be found to be the corrective of most of the evils on which the Socialist rests his case for the overthrow of the present order of society. And no-

THE DWELLING-HOUSE

where will its usefulness be more seen than in the reconstruction of household relations.

1. Household service will cease to be a matter of contract between a single house-keeper and a single servant, and will become one between a group of householders and a staff of expert servants, through the agency of a chartered corporation, or a co-operative association. This agency will send its workers to the houses in its field of action at hours specified in the contract, to do what is to be done, and then pass on to another home of the group. They will be responsible, not to the house-mistress whose work they do, but to the agency, which will hear all complaints and act upon them.

Each corporation or association will represent families of about the same social class, numerous enough to make its organization worth while. But every family will be free to withdraw from its agreement when the

ITS ORGANIZATION

time that specifies has expired, and to seek service elsewhere.

Of course each of these agencies, either by itself or in co-operation with others, will have a staff of extra workers—including possibly physicians and trained nurses—who can be summoned for an emergency by telephone. And it may supply an exceptional class, who will remain in the house overnight, for such work as the care of infants. But ordinarily the workers the agency supplies will have their homes elsewhere.

The advantages of this plan over that now in use, will be found to be manifold.

(a) It will be found more economical than the hiring of servants for a single home. It is nothing but the application to this field of employment of the co-operative arrangement, by which expense has been lightened and service improved in every other. The time was when the household which needed

THE DWELLING-HOUSE

the service of a physician, a musician, a teacher, or even a barber, had to employ and support a person who claimed expertness in such things. My grandfather gave a man a cottage on his property rent-free, on condition that he would shave him every morning. And such arrangements, corresponding somewhat to "feudal services," were not unusual a hundred years ago. It is because the application of the principle to the intimacies of family life is harder, that we still keep servants of our own, instead of seeking the service of experts, who would minister in other households as well as our own.

(*b*) The gain to family privacy will be great, when ordinarily the family will have its home to itself, except at the hours when it expects the attendance of these workers. It was the demand for privacy which abolished the old Hall, with its association of the members of the "menie" both day

ITS ORGANIZATION

and night. It was the same demand which broke up the house into rooms, and gradually abolished the earlier tendency to gather into groups for sleep and safety. And it now demands the relief of the family from the presence of alien and often hostile elements, and the substitution of workers who will have their homes elsewhere.

(c) The efficiency of the service will be much greater. The employing agency will be able to secure the service of a much more intelligent class of women than will consent to live under the domestic rule which now exists. They will accept the new arrangement because it will leave them the control of their time after their day's work is done; it will place them under the direction of a company, whose rules will be known beforehand, and not extemporized from day to day; and it will free them from the obliga-

THE DWELLING-HOUSE

tion to show the house-mistress other deference than simple, natural courtesy.

But to obtain and support this position, they will have to acquire expertness in the branch of service they accept. At present only the rich are able to employ so many servants that each may be required to be expert in his (or her) proper work. Others have to accept those who do many things imperfectly, rather than one thing well. But the new arrangement will secure for them the advantage now confined to the rich.

(*d*) The house-mistress will be set free from a number of requirements which do not properly belong to her position. She will no longer have to select, train and supervise a number of work-people, and to see them provided in the matter of food, lodging, health and good humor. She will enjoy freedom from what is too often unfriendly

ITS ORGANIZATION

observation, ministering to neighborhood gossip. She will come into contact with a superior class of women, and at specified hours of the day. She will be able to give herself to her proper work as the homemaker, to the care of her children, and to the comfort of her husband.

I am not unaware of the difficulties which will beset the establishment and the administration of such an agency as this. At first, no doubt there will be some friction, until the purpose, the advantages and the limitations of the plan are properly understood. But both sides will learn to adjust themselves to the new order, and the supervising authorities will obtain a chart of the rocks they have to avoid.

Nor are there wanting indications that we are already approaching a co-operative system of this kind. In some of the towns of New England one woman takes charge of

THE DWELLING-HOUSE

all the lamps in the homes; another of all the darning and mending; and so on. In several great houses of New York the care of the pictures, the bric-a-brac and the like, is put into the hands of capable women, who serve a number of families in this way. In our cities generally it is usual to employ one man to attend in several houses to work too rough or too severe for the women servants. We also have cleaning companies, who send their experts when called by telephone, and charge for this by the hour. It requires but the unification and enlargement of such methods to give us the agency for domestic service.

2. Along with this reform will go such a simplification of the work of the household as will greatly reduce the amount of service required. As I already have shown, a great part of the progress of the home in its adaptation to the natural family, has con-

ITS ORGANIZATION

sisted in the removal of industries not essential to its comfort. Most are gone, but several remain.

(a) The heating of the house is managed in most cases by the burning of coal inside the house, with bad results both to the health of the inmates, and to the purse of the householder. In America the Universities found that they could not afford the waste this involved, and they now are heated from a central plant through all their buildings. In several districts of our cities the same method is employed, and also in some great industrial establishments, where the business is not such as to supply heat. The day will come when not a piece of coal will be taken into a private house, unless it is to be added to a collection of minerals.

(b) The cooking of food must be taken from the house, and conducted in large co-

THE DWELLING-HOUSE

operative kitchens, by men and not by women.

This last point is essential. There has been no greater blunder in our household administration than the imposition of the burden of cooking upon a sex, which has no natural fitness for it. The preparation of food in forms at once attractive to all our senses, and wholesome for our sustenance, is a scientific problem; and women have not the scientific mind. They naturally take hold of every such question by the personal side. They give us not what will be best for us, but what they know we will like the best. Hence the wide diffusion of dyspepsia in civilized countries. Hence also the complaints of young husbands that their wives do not come up to their mothers in the making of toothsome things. In fact their mothers had spoiled their digestions before their wives got a fair show.

ITS ORGANIZATION

History supports my contention here. On the Egyptian monuments there are many pictures of cooks at work, but never a woman among them. In the Homeric poems the Greek heroes prepare their banquets with their own hands, even where there are women within call. So of the Bible. Abraham does not bid Sarah prepare a meal for his three mysterious guests. He tells her to make flour cakes for them, but he himself makes ready their repast (Genesis, xviii, 6-8). An unnamed prophet of the time of Manasseh indicates a farther extension of masculine responsibility in the matter. He makes Jehovah say, "I will wipe Jerusalem as a man wipeth a dish, wiping it and turning it upside down" (2 Kings, xxi, 13). And even in modern times, when it is a question of cooking for a palace, an army, or a great hotel, nobody thinks of calling in women to do it. It always is a *chef* that is

THE DWELLING-HOUSE

employed; and there is no feminine of that French noun.

Nor do women spontaneously undertake to be cooks. The most zealous asserters of female equality are modest at this point. In a biographical dictionary of "Eminent Women of the Nineteenth Century," edited by women, not one is named who attained eminence as a cook. In M. Vapereau's "Dictionnaire des Contemporains" a good number of men are described as eminent in this field. Apicius, Vatal, Brillat-Savarin, Savourin, Careme, Soyer, and the rest were not of the gentler sex.

It has been objected that with the establishment of co-operative cooking, the family meal will disappear, to the great loss of sociability. There is no necessity for any such loss. The new order can be so managed as to secure both preference in the choice of food, and its service at home at any

ITS ORGANIZATION

hour that is desired, as warm and as palatable as at present.

This is made possible by a very simple contrivance, which will keep food warm during its transmission to almost any distance. It is called in France the Norwegian kitchen, and is used by the workingmen of Paris. It consists of an outer tin can lined with felt and an inner can which fits it closely. The workman's wife puts his soup into the inner can, and "brings it to the boil" on the fire. She then shuts it into the outer can, where it goes on cooking until her husband's dinner-time. The Germans use the same contrivance to economize fuel, and to secure slow and thorough cooking. By an extension of this contrivance, a dinner could be sent a hundred miles without losing heat or flavor.

The co-operative kitchen will enable the application of both science and economy to the art of cooking. The work will be done

THE DWELLING-HOUSE

under the direction of an expert, who will make purchases with regard to both quality and price, and will buy in quantities which will secure wholesale rates. He will demand of his subordinates cleanliness, thoroughness, and the watchfulness which will prevent the ruin of food. The thermometer, the clock, the scales and other instruments of precision will control operations now done at haphazard or by "rule of thumb." There will be a scientific economy of fuel and of food-materials, which probably will cover the costs of administration.

This is not merely the suggestion of plans unrealized. Already the method I propose has been tested. In Bergen (Norway) cooperative cooking has been in use for the working-people for a generation past. They can no longer afford to have their cooking done in their own houses, just as they cannot afford to have their clothing spun and

ITS ORGANIZATION

woven at home. There also have been successful experiments in Mobile and in some places in the West Indies, the late Dr. John Fulton told me. There is, indeed, a record of failures, each of them due to the fact that the experiment was left in the hands of women.

The disappearance of the domestic kitchen will be a notable relief to the house-mistress, relieving her from responsibility for burnt food, ill-served dishes, and the endless series of disasters attendant in so many cases on domestic cooking. Especially great will be the boon to the wife of the working-man, who now is compelled to do her cooking herself. Philadelphia is justly proud of the myriads of small houses, built by her working people through their building associations, and amounting in value to one-fifth of her realty. But in the rear of every house is a room nearly filled by a cooking-

THE DWELLING-HOUSE

stove, where the mistress of the house destroys her health, temper and good looks in wasting fuel and food. Yet one co-operative kitchen would do the work for several blocks of such houses, in an intelligent and wholesome way.

What shall we say of the waste involved in the activity of 150,000 such kitchens, great and small, in such a city, each of them pouring up its chimney all but a fraction of the caloric contained in the coal they consume? If we had a thousand men under arms to feed, and were to set up two hundred kitchens to do it, we should be thought insane. Yet for every thousand in a city, we have that number, and more.

Yet I have heard men say that "if you take the cooking out of the home, you have taken out the comfort!" So their grandmothers felt about taking the spinning out of the house. So others have felt about

ITS ORGANIZATION

every change that has been made for the improvement of the home. Nor do I find this altogether blameworthy. It is a wholesome instinct which makes us reluctant to leave a home we have long occupied to betake ourselves to another, even if it be a better. It is a foretaste of the great shrinking from that removal from life to life, which we all must undergo. So the passage from one style of home to another must have been attended by a struggle at every stage, between men's instincts and their judgment.

Only a small minority of men, indeed, have been led by their judgments to choose the better, and having drunk the old wine, to presently desire the new. The majority, as Sir Henry Sumner Maine says, "have stereotyped their institutions." They have called a halt at an early stage of the great march of civilization, and beyond this they will not move. They feel about changes from worse to better, as a man might feel,

THE DWELLING-HOUSE

whom you had wakened out of a deep sleep to put a softer pillow under his head.

But "the better is the enemy of the good;" and the people who have come thus far in the upward march, will not stop where they are. Our "comfort," which often means no more than contentment with what we are used to seeing and having, will not suffice as a motive for stopping the march, especially when so much is at stake.

More worthy of attention is the objection that "there will be nothing left for women to do," after these changes have been wrought. Everything will be left, which belongs to woman's functions as mother, sister and wife. She will have the opportunity to become more truly the home-maker of the race, when she no longer has to enlist a body of servants, to supervise their work, and to carry on some half-dozen of trades, which can be better attended to outside the house. She will have more time to give to

ITS ORGANIZATION

her children, in that great education which precedes the school, and on which that of the school and of life so much depends. She will no longer leave to schools and to school-teachers what should be her joy—the training of her children in morals and manners. She will have time to keep herself abreast of her husband in knowledge of what the world is doing, and in acquaintance of the best that has been said by the wisest men. She will no longer dismiss the larger interests of life with the assumption of the wedding-ring. She will have something else to talk of than the worries of domestic management, of which he soon grows sick and tired. She will have time for social duties, especially toward her actual neighbors, rich and poor, whom she is fitted to aid and comfort. She will have room to be more of a woman and less of a drudge than society at present allows her to be.

CHAPTER VII

THE HOUSE THAT IS TO BE: ITS EQUIPMENT

1. THE cleaning of the house is a matter which concerns health, comfort and economy. It is in modern times only that the importance of this has been recognized; but even we have been very slow to apply the methods which mechanical science has put within reach.

The carpet-sweeper was the first application of mechanism to the task, and it left much to be desired. The besom, the broom, the feather-duster, and the like, all belong to one stock, and exhibit the same defects. They leave nearly as much dirt behind as they remove; and they often do more harm than good by transferring a great portion of the dust from the floor we walk on to the air we breathe.

ITS EQUIPMENT

The suggestion of cleaning by an exhaust apparatus, or by suction, was made by an obscure inventor more than half a century ago, and nothing came of it. It was suggested more recently by the application of the exhaust method in some processes of manufacture. Thus the fine particles of sand and steel, which are ground off in sharpening cutlery on a grindstone, are drawn into an exhaust-chamber, and the steel separated from the sand by magnets, that it may be worked over again. So in cotton-factories the "flowings" of the cotton are drawn off in the same way, and utilized.

My experience as a university librarian in the early years of 1870-80 led me to desire some such apparatus for the cleaning of the books. I began to advocate cleaning by suction for both homes and libraries, and even streets, in my public lectures. This was regarded at first as a fad of no practical

THE DWELLING-HOUSE

value. But now the method has come into large use, though on a limited scale. Like Dr. Edward Everett Hale, I begin to regard myself as "one of the minor prophets, —a very minor prophet!"¹

The new Congressional Library at Washington realizes my dream by cleaning its books by an exhaust apparatus. Several of our large railroads use it in cleaning their passenger-cars. And at last it has come into use for cleaning houses in the cities of Germany and America, in two ways. In the first a big automobile is run to the front of the house, and flexible rubber tubes are introduced through the windows of the

¹ Dr. Hale's claim was based on a sentence in his "Sybaris and Other Homes" (1869), in which he makes his Colonel Ingham say that when the street-cars of that admirable city have received their proper number of passengers, the mules are detached, and the cars are conveyed to their destination by power supplied from a central engine. A gentleman interested in street-cars wrote to Dr. Hale to ask how it was done, and received the answer that Colonel Ingham had not explained that.

ITS EQUIPMENT

second story. Through these the exhaust pumps outside draw off the dust and loose dirt from every part of the house in turn, and it is carried off for use in florists' seed-beds. The second method applies the exhaust process to a smaller apparatus, operated by an electric current within the house itself. Where no such current is obtainable, other machines offer to supply the power by the labor of hand or foot; but this is toilsome, and hardly efficient.

These devices are but prophecies of better things yet to come. They enable us to look forward with confidence to a time when this method of cleaning will be applied to the homes and the streets of a whole city, just as in the supply of water. This, of course, would require a general and permanent system of piping, to connect every room in the houses with powerful exhaust engines outside the city. When a room is to be cleaned,

THE DWELLING-HOUSE

the operator will connect these metal pipes with a flexible tube, terminating in a proper metal mouthpiece, and, by going over every point, send the dust not only out of the house, but out of town.

The location of the sites of these exhaustion-engines will be a matter of importance. There are few cities which have not in their neighborhood places of low grade and damp soil, where the dust might be used to level the surface, and enable the use of the new level for the erection of buildings, after thorough drainage. The utilization of this arch-enemy dust, this by-product of our civilization, to extend the city instead of burying it, would be a great gain to most of our cities. The flats we pass in approaching New York from the southwest, for instance, are at present hopeless. It is said that Horace Greeley spent nights in studying them, to ascertain the possibility of utilizing

ITS EQUIPMENT

them as sites for homes for the workingmen. But if the dust and loose dirt of the city, instead of being thrown into the sea, were to be used in raising those flats above tide water, within forty years the problem would be solved.

The streets of our cities undergo an operation called cleaning which leaves them almost as dirty as before it is done. Mostly it is with brooms and scrapers, and a considerable amount of dirt is removed; but it is hardly missed when the wind blows, after a drying period, and the dust whirls along into our houses, our eyes and our throats. Nor is anything better effected by the use of mechanical brushes, fastened to a framework drawn by horses. These are meant to bring the dirt from the centre of the street to the gutters, and thus facilitate its removal. It would not be fair to say they do no good; but it is certain that they do not give us clean streets.

THE DWELLING-HOUSE

What we need here also is the application of the exhaust-engine to the streets as well as the houses. By a steady application of this we might make our streets the envy of the country-folk, with their dusty roads and muddy lanes. But this would require the entire banishment of the horse from the city. Our asphalt pavements have made us see the extent to which that quadruped is a contributor to the refuse of our streets.

I do not speak with the same confidence in suggesting that the exhaust engine might be applied to the ventilation of our city houses. It has been used with success to the supply of fresh air to many business houses and offices; and it might be so used through the whole city. The reduction of fires to the number required for co-operative cooking, heating and the generation of power, and the prevention of waste in these by the scientific use of coal, would go far to purify the air

ITS EQUIPMENT

of our cities from the noxious gases generated in our waste of that mineral. The extent to which we now suffer from this is indicated by the fretting and darkening of marble fronts, even where no smoke has been affecting them directly. Yet under the new conditions it might be advisable to erect a tall chimney at the centre of every block of houses, and to bring down fresh air into the houses, from a higher and cooler stratum.

2. The supply of electric force to the city house falls far short of what is possible and desirable.

(a) The sewing-machine is still worked by the operator's hand or foot, mostly the latter. The result is often injurious to her health, especially when everything below the table-board is made of iron. She is then employing the heat of her body in warming this mass of cold metal. I may add in passing that the same objection applies to school

THE DWELLING-HOUSE

desks and seats, in whose construction iron is freely used. They should be of wood throughout, as are those of our Philadelphia high schools.

(*b*) The substitution of the safety lift (or elevator) for the staircase will require a supply of electric force. At present the elevator is associated in many minds with ugly and even fatal accidents. Hardly one of these but might have been avoided by such a construction of machinery, as is seen in the safety elevators of continental Europe. The type of elevator there evolved is less slow than the English lift, and less rapid than the American flyer. It seems to reduce risk to the vanishing point.

Woman especially will have reason to be gratified by the substitution of the elevator for the staircase. On her falls mainly the business of climbing from story to story, in the management of her house. Whether

ITS EQUIPMENT

with or without a burden, she is unfitted by her physiological structure for that sort of effort.

(c) The electric fan has come into extensive use for cooling offices and other places of business, but not largely for that service in houses. The usefulness of the ordinary fan as a cooler is discounted somewhat by the generation of bodily heat in the exercise. The electric fan avoids this. Something of the same sort is needed in churches and other places of assemblage in summer, but less in evidence and less clumsy than the punkah used in the East.

(d) The introduction of the telephone into our houses has been not only a great convenience, but a promotion of mental health. The solitary farmhouses of Great Britain and America, by isolating the women who reside in them from human fellowship through a large part of the working

THE DWELLING-HOUSE

day, do much harm. It is said that more wives and daughters of farmers lose their reason, than do women of any other class. But a notable change has been wrought by the telephone, which enables a woman to talk with her friends and neighbors without leaving her house. In many parts of America the whole body of houses in a neighborhood often is equipped with this beneficent instrument. It is said for instance, that every house on Block Island is furnished with a telephone, so that in the bleakest winter its people can talk freely with any one on the island. In our cities the use of the telephone advances rapidly, but we are still far from having this universal enjoyment of it, and the public "pay-telephones" indicate this. Here is room for an improvement of no small importance.

Nor are the uses of the electric wire to the family to be confined to private messages

ITS EQUIPMENT

from neighbor to neighbor. A recent invention makes it possible to establish in every house a music room, in which its inmates may enjoy at any hour of the afternoon and evening whatever quality of music they prefer, as played at that time by a competent musician at a musical centre.

A telephonic device for transmission of the news has been introduced recently for the service of the blind. May not the day come when the march of improvement will have rendered the newspaper obsolete for those who see, by repeating to us at the breakfast table the really important facts of the world's happenings?

These are a part only of the mechanical changes for the better adaptation of the House to the needs of the Family, to which we may look forward. They probably will meet with less resistance than will the social changes advocated in the previous chapter.

THE DWELLING-HOUSE

The modern world is less sceptical of mechanical than of social progress.

The two together should make housekeeping more attractive and less costly to the coming generations. They certainly will have the advantage of enabling those generations to ascertain in advance, and with more exactness, the actual cost of having a home, and thus remove an uncertainty which is more deterrent than any foreseen drawback. Thus the social drift toward the apartment-house will be diverted to a more wholesome home-life, with its privacy and its substantial joys. No greater social service could be rendered to the modern world.

CHAPTER VIII

THE STREETS OF THE FUTURE

As has appeared more than once from the history I have given of the House, it is not possible to regard it as independent of its surroundings. This is especially true of the town-house, whose relations with the street on which it stands, are intimate and important.

1. The present facilities for rapid travel make it a question whether there is any need to build the residential districts of a large city in the compact order which has been usual hitherto. When William Penn laid out Philadelphia, on a suggestion taken from the account of Babylon in Herodotus, he planned that every house should be placed in a garden, so that the citizens should not forfeit the advantages of the country life

THE DWELLING-HOUSE

in the matter of fresh air and the companionship of the trees and plants. The plan was impossible under such conditions as arose when the city became an important port of entry. But the suggestion might well be heeded in the erection of new cities under modern conditions.

It ought to be possible for the greater part of the city's population to live within easy reach of their places of business, and yet in the rural atmosphere, which means wholesome air and soothing quiet during the hours of sleep. This is now the privilege of the comparatively wealthy, and is probably the most solid advantage that riches bring them. But there is no reason for a monopoly of it by them. Their search for fresh and peaceful surroundings is but the expression of a popular instinct, which stirs in all of us, and which will find a reasonable gratification in the future. At present it is pathetic to

STREETS OF THE FUTURE

watch the first contact with the country which many city children obtain in the "country-week" holidays now devised for them.

Until that change comes more pains should be taken to diminish the drawbacks of life among our "Saharas of brick and mortar," as Carlyle called London. The increase of open spaces, and especially of playgrounds for the children of the city, is now recognized as a public necessity. London has more than three hundred of these, mostly old churchyards cleared of their tombstones, levelled, and equipped with a simple gymnastic apparatus. The larger American cities have been moving in the same direction, and New York has led the way in converting house-roofs into playgrounds.

The lining of the streets with trees seems to have been another of William

THE DWELLING-HOUSE

Penn's ideas, and Philadelphia was once known as "the sylvan city" for this reason, and because its leading streets took the names of the trees. Hence Longfellow's beautiful reference—

In that delightful land, which is washed by the
Delaware's waters,
Guarding in sylvan shades the name of Penn the
apostle,
Stands on the banks of its beautiful stream the
city he founded.
There all the air is balm, and the peach is the
emblem of beauty.
And the streets still re-echo the names of the trees
of the forest,
As if they fain would appease the Dryads whose
haunts they molested.

But the encroachment of electric wires, and the cutting off the natural supply of water by asphalt pavements, have denuded our streets generally. The Japanese ampelopsis serves to alleviate the glare from

STREETS OF THE FUTURE

heated walls, and supplies the element of natural beauty; but it is not commonly used where it is most needed, in the poorer parts of the city. Every green leaf within a city is a means of freshening the air, and comforting humanity.

2. The substitution of automobile travel and conveyance of goods, for the use of horses, is not yet complete; but it advances so rapidly as to indicate that this is to be the only means of transportation in the near future. This will require great modifications in the densely peopled parts of the city. It will make the streets increasingly difficult to foot-passengers, especially to the timid and the aged. Already they are almost as perilous as the tracks of a crowded railroad, and they are sure to grow worse.

The remedy I would suggest is the transfer of the sidewalks to the second story of the houses throughout the closely built dis-

THE DWELLING-HOUSE

tricts. Watergate Row in Chester is an instance of this arrangement, and the beauty of the old houses, constructed in this way to escape the marauding raids of the Welsh in the Middle Ages, shows that the plan would not interfere with fine architectural effects. For our modern need, we should have to connect these elevated sidewalks with bridges at the crossing of streets, while at every corner there would be a landing-place to enable foot-passengers to come down to the street level, to reach an electric car or an automobile. An additional advantage would be the protection of the sidewalk by the projecting third story, making foot-passengers independent of the weather; while the travelling machines on the street could move at any rate of speed consistent with the avoidance of collisions.

3. The proper pavement for the streets of a city is still a moot-point. The Macadam-

STREETS OF THE FUTURE

ized road was by no means the worst, but it is now impossible through the raising of dust by automobiles. The cobble-stone pavement is still older, and vastly worse, having long been the torture of horses, and the discomfort of men, in the time when it extended to the sidewalks as well as the road. "Belgian blocks" of granite have not fulfilled the prophecy of their friends, as they are severe on horses, and are apt to grow rough and irregular. Bricks placed edgewise are too slippery in frosty weather, and like granite are always inelastic. Asphalt has many merits, among others that it makes street barricades difficult if not impossible, as was foreseen by M. Haussmann when he laid it on the streets of Paris. But it is deadly to trees, reflects the glare of the sun as does a brick wall, and is also hard on horses' feet. Thus far wood-blocks set in tar appear the best material in sight, and

THE DWELLING-HOUSE

have stood severe tests on both sides of the Atlantic. They also have the merit of being less noisy: the reduction of noise in our streets is one of our most urgent necessities.

Any kind of street pavement might very well be supplemented by flat metal plates at the distance which now separates car-rails, each curving downward at the centre just enough to make wheels stay in them, but not enough to subject axles to a strain in turning out. These would take the place of the heavy and ugly rails now used by the street-car lines, which break the surface of the street far more than is necessary.

4. The sewers of a great city, as Victor Hugo shows us of Paris, form a world by themselves. This generally has been a world rife with perils to those who live in the daylight world above them, both through the generation and diffusion of noisome gases, and through their serving as the home of

STREETS OF THE FUTURE

countless rats. These evils are so great, and so much connected with the diffusion of epidemics, that some even have expressed their preference for the old-fashioned sewer, which ran down the middle of the open street.

The city of the future will have to deal with this under-street system more vigorously than in the past. It will see that its refuse is carried swiftly and harmlessly to its destination, and transformed into a fertilizer. But this need not be the only use to which this underground passage shall be put. Electric wires of all sorts, gas-pipes, and the like, should be placed there, so as to be reached easily for repairs, and to avoid tearing up the streets for alterations of any kind. Thus will disappear the unsightly tangle of overhead wires—telephonic, telegraphic and dynamic—which now disfigure many of our cities. And by the city's ex-

THE DWELLING-HOUSE

haust engines the sewers will be cleared of sewer-gas, which often is almost the despair of the architect and the plumber.

Such suggestions might be prolonged to much greater length, but I have already sketched what to many may seem a revolutionary programme. It would be so, if all these things were undertaken at once. They belong to a vista of gradual alterations, which will bring about not only the comfort of the few, but the common advantage of all.

CHAPTER IX

CONCLUSION

No external feature of man's life is more important to his growth in character and comfort than is his home. This is the space enclosed from the world, within which love works its miracles, as the old wizard drew the magic circle around him, before he undertook to work wonders. Here men learned the law of mutual service and kindly help, when all out of doors was full of conflict, rapine, and cruelty. Here the domestic pets, the dog and the cat, entered the circle of human interest as the poor relations of our race. Here the kindly ministrations of fire and water began. The former especially marked our human dignity in the mastery of what was a terror to every other form of animate life, but to us a faithful servant. The great Hellenic myth of

THE DWELLING-HOUSE

Prometheus, who stole fire from heaven for the sake of man, marks the sense men had of the value of this ennobling gift. Men alone kindle and feed the fire; and for ages the fireside was but another name for home. And the most progressive of mankind hardly can escape the feeling that something was lost through its disappearance from modern arrangements.

But change is the law of life, on our planet at least. Some welcome it; some resist it; all must bow to it. The Arabs have a mythical tale of Chidher the Ever-Young, which Friedrich Rückert has rendered into beautiful German verse. I give it in the good yet not quite adequate translation of the late Moncton Milnes, the first Lord Houghton:

Chidher the Prophet, ever young,
Thus loosed the bridle of his tongue.

CONCLUSION

I journeyed by a goodly town,
Beset with many a garden fair,
And asked with one who gathered down
Large fruit, how long the town was there.
He spoke, nor chose his hand to stay—
“The town has stood for many a day,
And will be here forever and aye.”

A thousand years went by and then
I went the selfsame road again.

No vestige of that town I traced,
But one poor swain his horn employed—
His sheep unconscious browsed and grazed;
I asked, “When was that town destroyed?”
He spoke, nor would his horn lay by,
“One thing may grow and another die,
But I know nothing of towns—not I.”

A thousand years went by, and then
I passed the selfsame place again.

There in the deep of waters cast
His nets one lonely fisherman,
And as he drew them up at last,
I asked him how that lake began.
He looked at me and laughed to say,
“The waters spring forever and aye,
And fish are plenty every day.”

THE DWELLING-HOUSE

A thousand years went by, and then
I went the selfsame road again.

I found a country wild and rude,
And, axe in hand, beside a tree,
The hermit of that solitude.
I asked how old that wood might be.
He spoke, "I count not time at all,
A tree may rise, a tree may fall,
The forest overlives us all."

A thousand years went on, and then
I passed the selfsame place again.

And there a glorious city stood,
And mid tumultuous market-cry,
I asked when rose the town, where wood,
Pasture and lake forgotten lie.
They heard me not, and little blame—
For them the world is as it came,
And all things must be still the same.

A thousand years shall pass, and then
I mean to try that road again.

History is Chidher the ever young. Its
message is that what we have come to regard

CONCLUSION

as permanent features of our lives, is the outcome of a development, which has its roots in the remote past, but which will not stay its growth so long as men reach out to what is better and higher than they have. And in no field of human life is this more clearly shown than in the evolution of the dwelling-house from the primitive tree or cave, to the palace.

INDEX

- Africa, 21
America's old houses, 10, 66,
68, 91
Apartment houses, 118, 119,
152
Baeda, 41
Baths and bath-houses, 52-54,
93-95
Beds, 22, 45, 48, 64, 65, 90, 91
Belfry (Berkfriet), 46, 47
Bellows, John, 26
Bible:
 Ecclesiastes, 107
 Genesis, 19, 131
 Hosea, 58
 Jeremiah, 27
 Joshua, 108
 2. Kings, 131
Bower, 48-52, 92
Brooke, Stopford, 41
Building associations, 135
Burgomaster's stone, 74, 75
Burmah, 22
Caedmon, 41, 42
Candles and candle-grease, 77,
100
Carlyle, Thomas, 9, 13, 155
Carpentry, 65-68
Chaffering of buyer and seller,
78, 79
Chaucer, 51, 52, 66, 67
Chester, 158
Chidher the Ever-young, 164-
166
Child, importance of the, 18, 19
Chimney, 58-62, 79
Cleaning by suction, 140-147
Clocks and watches, 88, 89
Cooking, 52, 53, 77, 92, 93,
111-113, 129-136
Co-operation, 119-121, 128-
130
Dasent, Sir George Webbe, 36
Denmark, 81, 82, 87
Dust, 108, 109, 140, 143-145
Dutch cleanliness, 76, 80, 81,
101
Economy in house-keeping,
119, 120, 123, 124
Education, 39, 40, 69, 139
Egyptian monuments, 131
Electric power, 147-151, 157,
158, 161
Erasmus, 81

INDEX

- Tacitus, 72
Taylor, Jeremy, 62
Telephones, 123, 149-151
Telford, Thomas, 103
Teutonic loyalty, 34
Thomson, James, 67
Towns, 72-104
Town-halls, 84
Town-Middens, 75, 76, 80, 107
Tree-dwellers, 19-23
Tradesmen, 86, 89
 their signs, 74

Ulysses, the bed of, 22

Vapereau, Gustave, 132

Ventilation, 65, 106, 107, 146-147
Violet-Leduc, Eugene Emmanuel, 85
Vitruvius, 59

Washing-day, 95
Water, 93, 98, 99
West Indies, 135
Windows, 30, 39, 63, 87, 88, 105, 110
Woman's work, 39, 48, 49, 77, 97, 98, 138, 139
Workshops, 69, 77-79, 89

Xenophon, 28, 108

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