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“ *How can the Sanitary Condition of the Population
engaged in the Coast Fisheries of Scotland
be improved?* ”

A Paper

READ BEFORE
THE HEALTH DEPARTMENT OF THE
NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE
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BY
WILLIAM PAUL,
ADVOCATE IN ABERDEEN.

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REMARKS
ON THE
SANITARY CONDITION OF THE POPULATION
ENGAGED IN
THE FISHERIES ON THE NORTH-EAST COAST OF
SCOTLAND.

THE subject appointed for consideration and discussion to-day, in the Health Department, is of great interest, affecting, as it vitally does, a large and important industrial population. The question proposed is "How can the sanitary condition of the population engaged in the coast fisheries of Scotland be improved?" and in the remarks which follow, I shall treat it in a purely practical manner, hoping that the facts I am enabled to submit may be of use to those who wish to acquire a thorough acquaintance with the subject.

I have been long intimately acquainted with the fishermen residing in the villages scattered along the coast of Kincardineshire. In particular, I have had charge, for upwards of twenty years, of one of those villages, and for nearly half of that period I resided near it. I have lately visited the most important villages in Aberdeenshire and Banffshire, and can speak with some confidence of the mode of living of the fishermen, its comforts and discomforts, and compare their several circumstances and surroundings over an extended stretch of coast.

The group of villages situated in Kincardineshire, between Aberdeen and Stonehaven, consists of Cove, Findon, Portlethen, Downies, Newtonhill, and Stranathro. The fisheries thence carried on are principally confined to haddocks, the fishing lines used being unsuited to the capture, except to a limited extent, of cod, ling, skate, and the larger fish. Nearly the whole take of haddocks is smoked by the fishermen in their houses, over a fire

composed of peat and sawdust. The well known Findon haddocks are the product, passing through a process of manufacture which I shall shortly describe. After being gutted and cleaned, the fish are laid in a tub and sprinkled with salt. They are allowed to remain there for some time, and are then slightly dried in the open air, and hung in spits over a large hearth covered with pieces of lighted peat. A rough curtain is drawn around the ample wooden chimney, and a woman kneeling in front of it sprinkles sawdust on the peat. A dense smoke is created, which ascends slowly, and by the deposit of pyroligneous acid cures the haddocks, imparting to them a yellow colour, and a flavour as much appreciated beyond the Border as in their native country. It is to be regretted that thousands of fish, prepared in a less careful manner, far from the village of Findon, are sent by curers to the southern markets, to the injury of the reputation of the genuine production of a small district. If the distinguished strangers, who on this occasion have honoured Aberdeen with their presence, will take the trouble to make the acquaintance of real Findon haddocks, cured and cooked as they ought to be, and will eat them for breakfast by the seaside, after a short journey in the fresh morning air, their labour and daring, in penetrating into these northern regions, will not, I can assure them, have been in vain.

Besides those I have named, three villages at no great distance may be included in the Eastern or Findon group. The village of Footdee forms a suburb of Aberdeen ; and the smaller village of Torry is situated at the south side of the harbour entrance. The village of Collieston lies a little farther north, near the mouth of the river Ythan. These places are of considerable size. Footdee consists of about 74 houses, and sends 23 white-fishing boats to sea. Each boat is manned by a crew of five or six men. In Collieston 87 houses are occupied by a population of about 400, who are owners of 20 boats. There is considerable similarity in the style of houses, and in the manner of prosecuting the fisheries ; but for the most part the fish are disposed of, on being landed, to dealers, and are not cured by the fishermen. The harbour of Aberdeen affords ample accommodation for the Footdee and Torry boats, and many of them of considerable tonnage go far to sea, and, with what is called "great lines," catch large numbers of cod, ling, skate, and halibut, and occasionally turbot. Soles are unfortunately little known on the

coast ; and the use of trawl nets is exceptional, and not remunerative.

The villages on the north coast of the County of Aberdeen, and in Banffshire, are of a very different character. They are generally much larger, and are more advanced as regards the prosperity and comfort of the inhabitants. The great seat of the white fishery is situated there and on the shores of the Moray Firth. The fishermen are for the most part a superior class of men, and pursue their avocations energetically, backed by an amount of capital which is wanting on the north-east coast. The principal villages are Portgordon, Buckie, Portessie, Whitehills, Gamrie, Cruvie, and Rosehearty. Buckie has a population of upwards of five thousand, a great proportion of which are fishermen, whilst at Cullen, Portsoy, and Banff, large suburbs are occupied in the same manner. At Portgordon a perfect little harbour has been lately formed by the Duke of Richmond, who, without expectation of adequate pecuniary return, expended on the works about £15,000, to the great convenience and comfort of his tenants. At Buckie the accommodation of a fair tidal harbour is being supplemented by a spacious double harbour, in course of construction by Mr. Gordon of Cluny, so placed that the boats belonging to Portessie may be also conveniently accommodated. It covers eight acres of land, and the estimated cost is over £40,000. It will combine depth of water with proper shelter, and, as a harbour of refuge for fishermen from all quarters, is a work of national importance, forming a lasting monument to the munificence of a private individual.

The fisheries are prosecuted throughout the year in the following manner:—The herring fishing is the most valuable, and is chiefly relied on. If successful, it is the means of enabling a family to lay up a fund for a stormy winter, or as a reserve for the erection of a more commodious house. The purchase of a new boat, or more numerous nets and other materials, is also to a great extent dependent on its results. The boats used are of about 17 tons burden, and are manned by five or six men. They are greatly improved of late years, and are now strongly built and invariably decked. The fishermen from the northern villages, and a few from Aberdeen, proceed to the Lews fishing about the middle of May, and remain till the end of June, when they return home to prepare for the more important branch of the herring

fishing, which they prosecute from Fraserburgh, Peterhead, or Aberdeen, for eight weeks, from the middle of July to about the middle of September. During that period the villages are nearly deserted, and the houses shut up; the men, and, not infrequently, the women migrating to the scene of their temporary labours.

On their return the haddock fishing begins and is continued in the Buckie district till about 1st January, and in the Findon district till the beginning of June. The boats in use are comparatively small in size, without decks, and are worked by the same number of men as the herring boats. From the end of the haddock fishing season till the middle of April, when the preparation for the Lews herring fishing begins, the Buckie fishermen confine themselves to deep sea fishing, for the larger fish, making use of a description of boat somewhat different from those I have mentioned. It is of about 20 tons burden, rather larger and stronger than a herring boat, and is manned by nine men and a boy. In these boats they remain from home for a week, and sometimes a fortnight, at a time. When a good take has been obtained, they run for Wick, Helmsdale, Fraserburgh, or other convenient port, and dispose of their fish to the curers there.

The great desideratum for successful fishing is good harbours, the importance of which for outlying stations cannot be over-estimated. A village fortunate in this respect must distance in the race others less conveniently situated. Its inhabitants are in a position to go to sea when their neighbours cannot, and are not deterred from doing so in doubtful weather by the fear that, if overtaken by a gale, they may be unable to make the port of departure. Also they are enabled to use materials in every respect superior. Footdee and Torry are in an exceptionally favourable position, having at their command the whole resources of a large seaport; but the harbours on the Kincardineshire coast are very inferior, consisting only of natural creeks and bays, difficult to make in rough weather, and in north-east or south-east gales. The proprietor of Cove, five miles from Aberdeen, with commendable energy, is about to expend a considerable sum of money in improving his harbour,—an example which, it is hoped, will be followed elsewhere. If otherwise, the tendency of the population

of the detached villages must be to gravitate towards the larger stations, where convenient accommodation is to be met with.

From the state of the harbours large boats cannot be used in the Findon district, and at such places as Collieston, except in fine weather, when they can be safely moored at anchor in the open bays. As a matter of course that is seldom or never, except in the height of summer; and hence small boats which may be daily hauled up on the beach must take the place of the safer craft in use elsewhere. In this department the Northern fishermen are much in advance of their neighbours farther south, whose valuable boats are laid up for nine months in each year, and are only used in the deep-sea fishing for a month before the herring fishing begins. A large amount of capital is thus unproductive for great part of the year; whilst, if better harbours existed, the big boats might be used when small boats could not live at sea, and larger fish might be caught at distances from the land not otherwise accessible.

The villages I have mentioned from Collieston southward, forming the Eastern or Findon group, are on the whole defective in sanitary arrangements.

Within my recollection Stranathro, situated twelve miles south from Aberdeen, was composed of wretched hovels built of clay and thatched with straw. The walls were damp and cracked, and the floor of the living room was laid with clay. The rafters were exposed and black with soot. The turf placed below the thatch was visible, and the rain, too often finding its way through the porous roof, fell on the floor in black filthy drops. Without, the state of matters was little better. Drainage there was none, and the roads were ankle deep with mud. The dung hills were prominently placed before the doors, and contained fermenting heaps of fish offal and other abominations. The sole water supply was drawn from a well a quarter of a mile distant.

It may seem that this picture is overdrawn, but that is not so. Stranathro, as I have described it, is a fair specimen of what existed elsewhere. The state of morality in the district was by no means satisfactory, whilst temperance was a virtue as much honoured in the breach as in the observance. On the outbreak of an epidemic, the proportion of deaths was alarmingly high, especially amongst the young. With many honourable exceptions, improvidence was very prevalent. Rents generally did not

much exceed £1 per annum for each house, with about 30s. for an acre of land, and were paid often irregularly and with difficulty.

The estate on which this village is situated came into the hands of the Trustees of an Educational Bequest, founded by the late Dr. John Milne of Bombay, who resolved to do what they could, consistently with obtaining fair interest on their outlay, to improve the sanitary condition of the fishing population. In this they were successful, and have now the satisfaction of finding their village unsurpassed on the east coast for comfort and cleanliness, and of knowing that the trust funds expended in the process have yielded a profitable return.

The work was commenced by removing the dunghills as far from the houses as possible, and placing them in enclosures properly walled in. This was felt to be a hardship by many a housewife, whose conservative feelings led her to prefer the unsavoury smell of a convenient middin', to pure air under the new system. The roads were macadamised, and a system of drainage, with a good outfall, carried in front of all the houses. It thus became possible to pass from house to house after dark, without fear of the middins, or of the lesser danger arising from mud holes and projecting stones.

The demolition and restoration of houses were next proceeded with, from two to four having been rebuilt every year. The thatch and turf on the roofs were valuable contributions to the dung pit, but the old wood emitted so intolerable an odour when burnt that it was useless as firewood. The walls were demolished, the foundations cleared out, and the stones used, so far as they would go, for rebuilding. The size of the new houses was in a great degree determined by the position they were to occupy, but on an average they measure 36 feet in length by 18 feet in breadth, over walls. The walls are eight feet in height, and are substantially built of stone. The roofs are covered with slates, which are more economical and cleanly than thatch, and drier and more comfortable than tiles,—the worst of all coverings in exposed positions. The internal arrangements are simple, and, though by no means all that could be wished, have the merit of being practicable and a step in the right direction.

The ground floor is divided into two rooms by wooden partitions so arranged as to throw an inclosed bed into the kitchen and one or two of a similar kind into the opposite room. The

lobby and kitchen floor are formed of cement concrete, and the better room is floored with wood and lathed and plastered. A trap stair leads to a loft above, occupying the whole length of the house, and affording convenient storage for nets, buoys, and other implements required in the prosecution of the owner's calling. When the exigencies of a large family require it, one end is partitioned off, and used as a sleeping place for boys or girls.

A simple and primitive cottage is thus provided, capable of many improvements, but cheap and serviceable, and immensely better than the wretched habitations, by no means extinct, or indeed in some quarters greatly diminished in numbers, which were at one time almost universal. The cost has not, in any case, exceeded £100, and some years ago, before the advance in prices, it was at least twenty per cent. less.

In deciding on the scheme to be adopted, the proprietors whom I represented resolved, contrary to usual practice, to bear the chief portion of the outlay, leaving to the tenants such part of the work as they could accomplish without much difficulty, and as more immediately affected their domestic comfort. This tended to the promotion of provident habits, especially in young men contemplating marriage, whilst it lessened the rent payable to the proprietors. Generally speaking, the latter undertook to provide a complete and substantial skeleton house, neatly pointed or harled with lime, floored in part with cement concrete, and provided with spouts to convey away the rain water. The tenants, on the other hand, lathed and plastered where necessary, floored one room and the loft with wood, and divided the house into rooms by means of wooden partitions. The proportion of the total expenditure thus entailed on each may be roughly stated as three-fourths to the proprietors and one-fourth to the tenants.

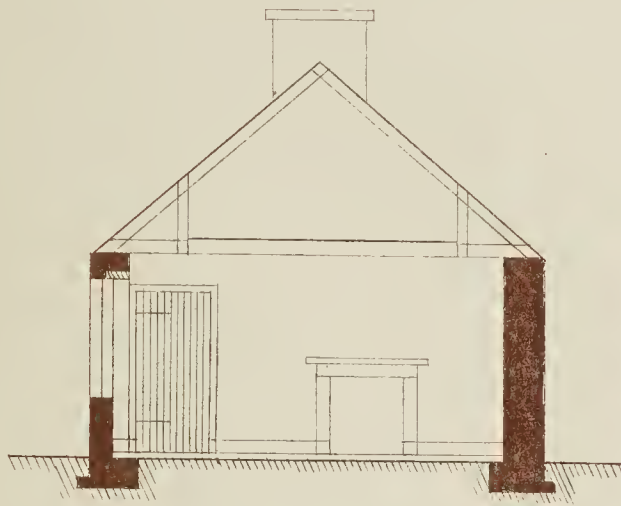
I have mentioned in considerable detail the state of one village, and the operations of which it has been the subject, as illustrative of what has been or might be done for others. The aid given by the proprietors has hastened, and indeed accomplished, the work of improvement, which in other villages is proceeding more slowly, because left in whole or in great part to the tenants.

The selection of a suitable plan of a fisherman's house is a consideration of much importance. That adopted at Stranathro

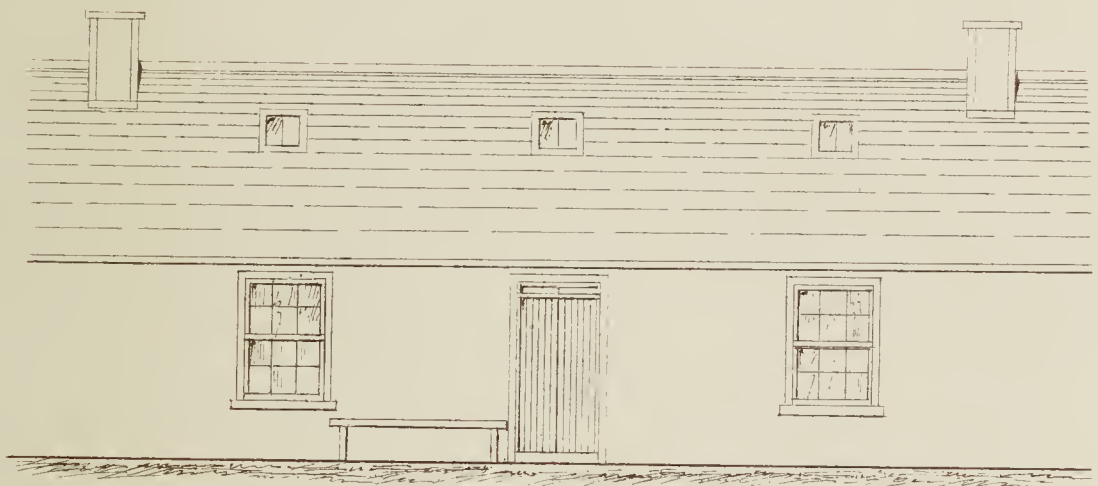
has answered the purpose well, but is not calculated to bear critical examination, or intended as a model. I have had a sketch prepared of a cottage superior, but in its leading features similar to that which I have described. I hope it will satisfactorily show how, at a moderate cost (about £140), the reasonable requirements of health and convenience may be provided.

I regret to state that the village at Footdee, belonging to the Corporation of Aberdeen, is in a worse state, on the whole, than any one on the coast. A few new houses have been erected from time to time, and others have been improved, but the great proportion are small and damp, and in few cases water-tight. Overcrowding prevails to an alarming extent. Some time ago I communicated to the Town Council the result of my observations, and I am glad to say that they readily agreed to take decided steps for the amelioration of the condition of the inhabitants. I found, after careful personal enquiry, that the village consists of 74 houses, occupied by 128 tenants. Of these, 94 families have but one small room available as a living, working, and sleeping apartment. Only twenty families enjoy the luxury of a separate house with two rooms, and of these six possess one room and two closets. In addition, fourteen houses of rather a superior character are occupied by pilots. In no case is there adequate storage for nets and other fishing appliances, and in few instances is any space whatever provided for such a purpose. They must be kept in the corner of a room, or on frames above and within a few feet of the beds, or stuffed underneath.

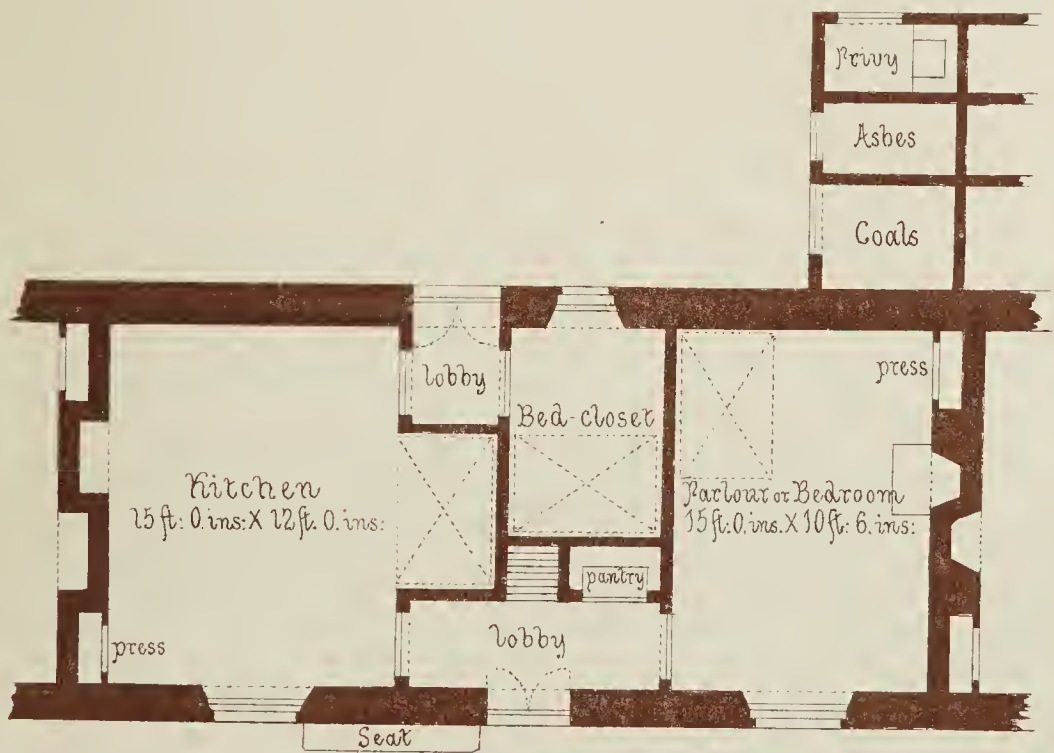
The houses may be divided into four classes :—1. The original type of house, consisting of two rooms, varying in size from 13 feet by 11 feet to 14 feet square. The walls are 6 feet 6 inches in height, and the ceilings are alcovod so as to be a little over 8 feet high. Thus there are no lofts, and, did they exist, they would be useless for storage, as the rain water finds its way so freely through the tiled roofs that the rooms below are saturated from above, and are in a constant state of dampness from ill-built walls, destitute of lath and plaster. 2. The same style of house, recently roofed and slated, and having concrete floors, but otherwise unchanged. These are on the sea line, and are happily limited in number to sixteen, as the work of improvement has been most inadequately executed. 3. Similar houses, also re-roofed, and increased in height by the addition of one



Cross Section.



Front Elevation.



Ground Floor Plan.



Arthur Clynne, Archt.

foot to the walls ; but, as these are not lathed and plastered, they are as damp as before. 4. Houses substantially built and slated, having a living room on the ground floor and two small apartments up-stairs. These are in some cases lathed and plastered, and in others not.

I have no hesitation in saying that the houses of the first and second class are totally unfit for habitation in their present state. In one house the chaff beds were found soaked with wet, which penetrated through the walls. It would seem to those accustomed to comfortable bedrooms as certain death to sleep in beds enclosed on two sides by wet plaster. A poor woman showed me a little bed, occupied by three of her children, upon which, on wet nights, the rain literally dropped. Another, who resides in one of the best houses in Pilots' Square, though unlathed, informed me that she had lost one of her children from bronchitis soon after taking possession, and that she was told by her medical man that damp was the cause. She subsequently nearly lost another. A family, temporarily dispossessed whilst the houses on the east side were being re-roofed, was compelled to take possession the day after the walls were plastered. The poor mother was in bed, which she had scarcely left for two years, having been struck down by rheumatism, and there she lay, when I saw her, almost in contact with the moist wall.

The damp uncomfortable walls are at frequent intervals whitewashed or covered with a cheap paper, which, as a matter of course, adheres but a few weeks. This is one of many indications, to which I gladly bear testimony, of an anxiety on the part of the fisherwomen to make the best of adverse circumstances, and of their scrupulous regard for neatness amidst many privations and discomforts.

It is painful to record a state of matters so distressing. I believe everything possible will be done to remedy it, but an indispensable preliminary must be the erection of new houses to absorb the superabundant population, and to permit of one family out of every two being transplanted into a convenient separate habitation. Then, but not till then, the improvement of existing houses may be beneficially proceeded with. Whilst overcrowding exists, it is in vain to attempt remedial measures which would leave the chief source of evil untouched.

Many of the remarks I have made may appear out of place when addressed to the Health Department, but it seemed to me that until the relative position and circumstances of the population engaged in the fishing industry in the several districts are understood, it would be difficult to appreciate the causes of differences in their household arrangements, and to suggest improvements in the sanitary condition of villages far behind others in the comforts and decencies of life.

As closely affecting the subject, I shall shortly remark on the tenure of fishermè's houses on the coast. The almost invariable rule is that fishermen are tenants-at-will. In few places do they receive any assistance in erecting their houses. It generally happens that, before marrying, a young man must save enough money to enable him to build and furnish a house. When this has been done, at a cost of from £80 to £200, and even more, he is liable at any time to ejectment by his landlord. Although this arbitrary right exists, its exercise is in practice almost unknown; and it is often arranged that, in the event of removal, the tenant shall be compensated for his outlay. In the Northern villages, I am glad to learn, building leases of ninety-nine years' duration are now being occasionally given, and this most commendable innovation almost necessarily arises from the superior class of houses which the improved habits, tastes, and circumstances of the fishermen lead them to erect. A relaxation being conceded, a further step might well be taken, and the convenient system of tenure known in Scotland as a feu-right adopted, whereby the houses would belong absolutely and in perpetuity to the feuars. They would thus be in a position to borrow on mortgage, at moderate interest, part of the money required in building, and to employ their own means more advantageously in the purchase of superior boats, and a larger stock of nets.

With these observations, and before considering how the special question proposed is to be answered, another may fairly be put,—“How far does the sanitary condition of the fishing population stand in need of improvement?” To this I reply that, as regards the villages on the coast of Banffshire and on the north coast of Aberdeenshire, the subject may be practically dismissed, save in one particular. The houses now being erected are admirable.

The drainage is satisfactory, and the roads are good, but there are no privies. This want should be attended to, and remedied at the instance of the Proprietors or the Boards of Health. Except at Footdee there is no overcrowding in any village of either group, and the testimony of physicians practising in the districts—men of high attainments and rare devotion to their noble profession—conclusively shows that no diseases are distinctly traceable to insanitary arrangements.

The Villages in the Eastern or Findon group are in a less favourable position. They are wanting, except at Aberdeen, in proper harbour accommodation, and in the appliances necessary for prosecuting the fisheries in a profitable and satisfactory manner. They are also unprovided with many essential comforts and conveniences of home life, and, as I stated, their sanitary condition, with the exception of Stranathro, stands in great need of improvement.

I would therefore suggest as indispensable requisites for the profitable conduct of the fishing industry, and for the improvement of the sanitary condition of those engaged in it :—

1.—That, where practicable, breakwaters or harbours of concrete should be formed so as to enable the fishing boats to run for shelter on the sudden approach of bad weather, and to afford depth of water sufficient to permit decked boats, of from 15 to 20 tons burden, to be safely moored. The Duke of Richmond's Harbour at Portgordon is an admirable model, though too extensive and costly for general adoption.

Larger and safer boats might thus be used. The fishermen might venture further from the coast to localities where large fish are to be found, and put to sea in doubtful weather, with a feeling of security in having a reasonably safe harbour as a base of operations. The labour would be saved them of launching and of hauling their boats on the beach every time they proceed to sea, and the boats would escape the severe wear and tear to which they are now subjected. Finally, the men would be enabled to sail without getting wet, a cause of discomfort which, in the process of launching, is often experienced, with the usual accompaniments of colds and rheumatism.

2.—That in the several villages the roads or streets be kept in good order, and that a complete system of drainage be carried in

front of the houses, provided with properly constructed gullies for the reception of slop and surface water.

3.—That a copious supply of water be introduced into the villages by gravitation, if possible.

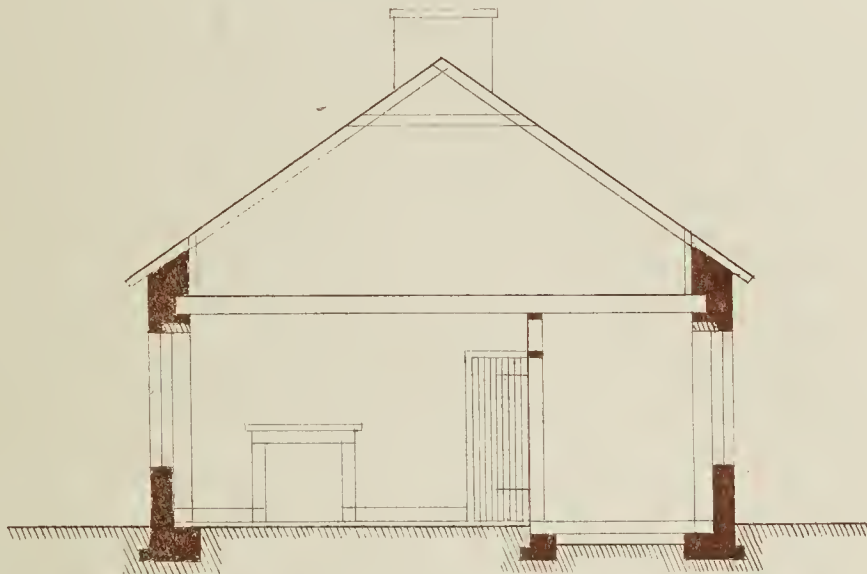
4.—That dung pits be removed to a safe distance from the houses ; and, where the fishermen do not cultivate patches of land requiring all the manure they can collect, that fish offal be deposited in public receptacles and removed daily.

5.—That dwelling houses in every case contain two rooms and one or two bed closets on the ground floor, and, above, a spacious loft for storing nets, lines, buoys, &c., and for use as a work-room. That the living-room and lobby be floored with cement concrete, and the parlour and closets with wood, and that the whole be lathed and plastered. That the roofs be covered with slates and fitted with spouts to convey away rain water. That a privy, coal-house, and ashpit be provided.

6.—That the mason work, carpenter work of roof, doors, and windows, slater work and plumber work be at least executed by the proprietor. That the interior work be completed at the expense of the tenant, subject to the condition that if the latter be removed within a period to be named, he shall receive reasonable compensation for permanent improvements.

7.—That when houses are built by fishermen, entirely at their own cost, the site be given them on feu or on a lease of ninety-nine years' duration.

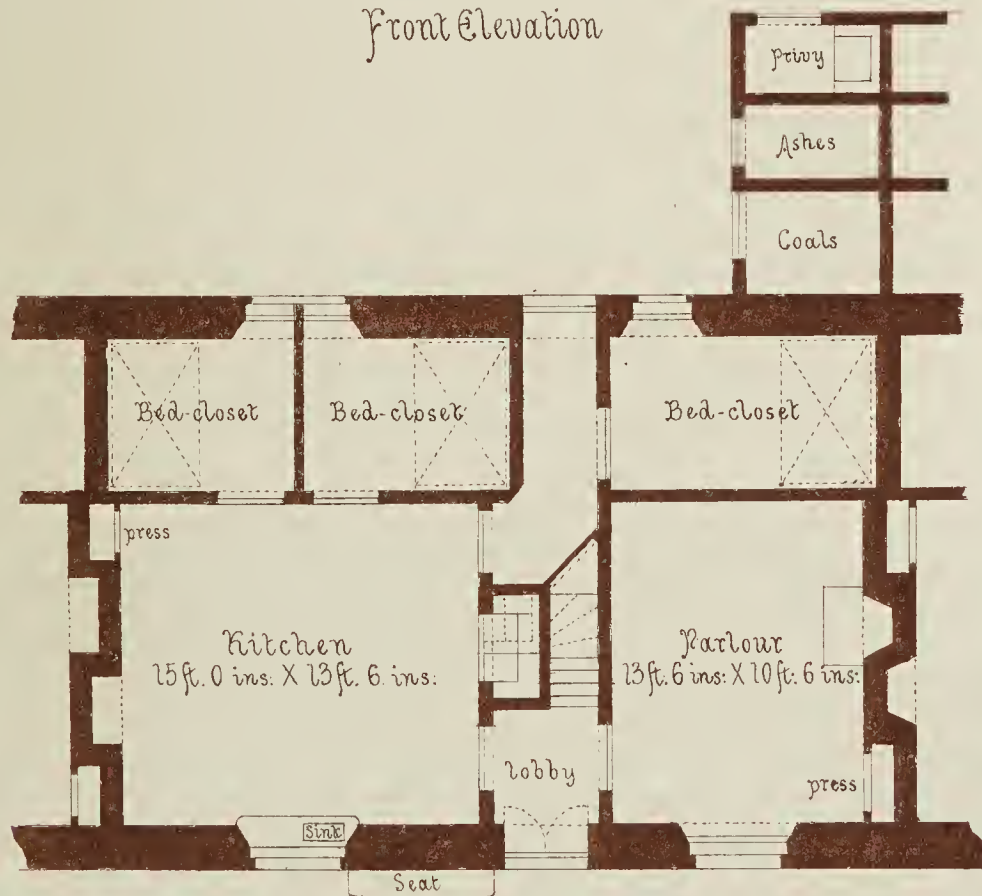
I am satisfied that under a secure system of tenure fishermen's houses would soon exhibit, in every particular, a marked advance. The design submitted on the opposite page is that of a better class of house which might at least be aimed at, and would in many cases be reached. It contains, as will be observed, two living rooms and three sleeping apartments on the ground floor, with a large loft and ample space for another small bedroom up stairs. Its cost would be about £210, and of this sum the owner might borrow two-thirds at $4\frac{1}{2}$ per cent. interest. Were it erected by the proprietor of the land, or by a building association, the rent could not be less than £11 or £12 a-year. This is more than a fisherman in ordinary circumstances could afford to pay ; but the interior arrangements are such that in ports like Aberdeen, where the want of house accommodation in the herring fishing season



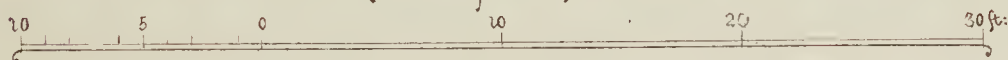
Cross Section.



Front Elevation



Ground Floor Plan.



Arthur Clynne, Archt.

is severely felt, two rooms, and occasionally three, might, without much inconvenience to the tenant, be sub-let for a couple of months with great advantage to the multitudes in temporary need of shelter, and to the sensible reduction of his own rent.

By partial or complete purchase, a fisherman might, in the most effectual way, be enabled to avoid the pressure of rent consequent on his occupation of a house so superior in character as I have indicated. A method admirably suited to the attainment of this end has been adopted in the case of dwellings erected for the industrial classes, and, in some instances, for fishermen. A house having been built by an individual or by an association, the cost, with progressive interest at five per cent., is divided into ten or fifteen equal sums, one of which is paid annually by the occupant, who at the end of the period agreed on becomes the absolute proprietor. A great stimulus to industry and frugality is thus given, a specific object for saving being constantly presented to the tenant. The feeling of laudable importance arising from the proprietorship of one's own dwelling is the parent of continuous exertion and self-denial, and the determined enemy of dissipation and idleness. To become the owner of the habitation dignified as the family home, and the shrine of the domestic affections, and which, in the poetic fancy of the ancients, was the abode of their household gods, is a commendable object of ambition, and a pure source of satisfaction. Whoever can aid his fellow-creatures in the attainment of such an object deserves well of his country.

I have avoided, from want of time, entering on an important branch of my subject—I refer to accommodation in the various ports for the population engaged in the herring fisheries. At Aberdeen it has been hitherto very defective, from the sudden growth of the industry, which, within a few years, has increased fivefold. It is required for eight weeks only in the finest season of the year, so that many expedients may be adopted to provide temporary house room. Several blocks of wooden houses have been recently run up in Aberdeen, and the importance of the trade is such that the necessary accommodation will not long be wanting. That it should not is imperative, but it is with the permanent abodes of those who, for a short period only, are migratory, that I have felt in this paper chiefly concerned.

I shall only further remark, that, within my own experience,

improved houses and proper sanitary arrangements have had a marked and most beneficial effect on the character, energies, and social relations of the fishermen on the East Coast. It is interesting to observe the anxiety often expressed that, as each succeeding house is erected, it should in some detail excel that which preceded it. A taste for home comforts is, with every man, a powerful rival to the public house, and a strong incentive to industry and frugality. I am satisfied that, as their material prosperity has increased, intemperance has sensibly decreased among our fishing population.

Improved harbours ; fixity of tenure, where outlay is contemplated by the tenant ; and proper police arrangements in the fishing villages, will soon be followed by commodious, comfortable, and healthy dwellings. Progress in this respect is unquestionably at the root of moral not less than physical improvement. Cleanliness is akin to godliness. The teaching of religion, all-powerful as the highest motive to human action, is successful in no small degree in proportion to the progress of sanitary science. The diffusion of the principles which govern that science, and their practical application amongst a class of the community deserving of our strongest interest and solicitude, and to whom we are indebted for an important contribution to the national resources, are therefore worthy of prominent attention and exhaustive discussion at any congress of Social Reformers.