

On Her Majesty's Service

WASC 490

ravens' nests in Essex, within living memory, as there were others in various parts of the county. My list refers only to those with which I came personally in contact in my boyhood, either by trying to steal their eggs or young, or by observing them when visiting in their districts.

KYNOCHTOWN.

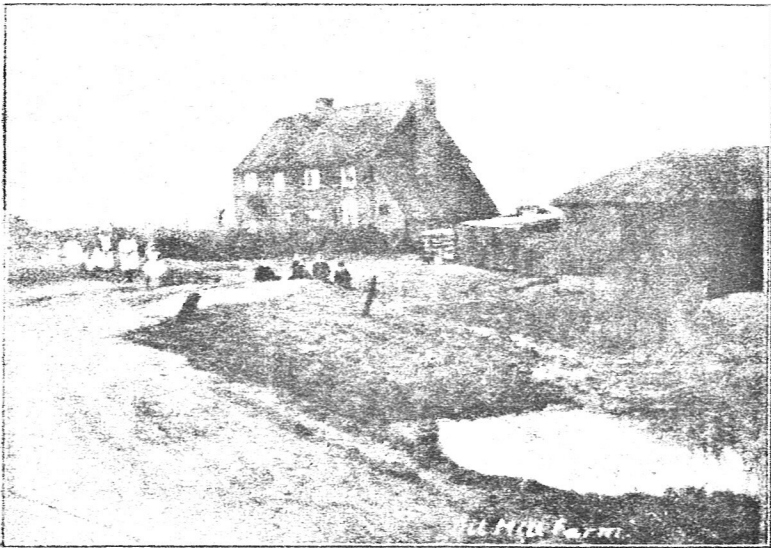
A GREAT EXPLOSIVES FACTORY ON THE ESSEX MARSHES.

BY A. CLIFTON KELWAY.

TEN years ago there was no such place as Kynochtown, but only a couple of quaint old Essex farmhouses, 'Borley' and 'Shellhaven,' divided from each other by a mile of marshland, and from the villages of Corringham and Fobbing by several miles of similar ground, in the midst of which dangerous ditches were more abundant than paths. There they stood, those ancient farmhouses, very much as they had done time out of mind, almost unapproachable in winter, quite out of the beaten track at the best of times, and practically unknown save to the dwellers in the adjacent villages. One of them still stands, and is known as 'Oil Mill Farm.' Somewhat pathetic in its picturesque appearance, so suggestive of the days that are gone, the old cottage is no longer isolated, but forms part of Kynochtown, which, with its splendidly equipped factory, up-to-date 'stores,' schools, institute, post and telegraph office, embodies all that is most modern in commercial and social development. At few, if any, points along the Essex shore of the Thames can so great and startling a transformation have been effected with such rapidity and completeness as at Kynochtown, from whence during the last ten years cordite, nitro explosives, smokeless sporting powder, black gunpowder, and other deadly chemicals have been poured into the markets of the world in quantities too vast to be imagined.

It was, of course, the extreme isolation of this Essex marshland which constituted its chief fitness for the site of an explosives factory; and isolated it still remains, although two hundred acres of the freehold estate which Kynoch, Limited,

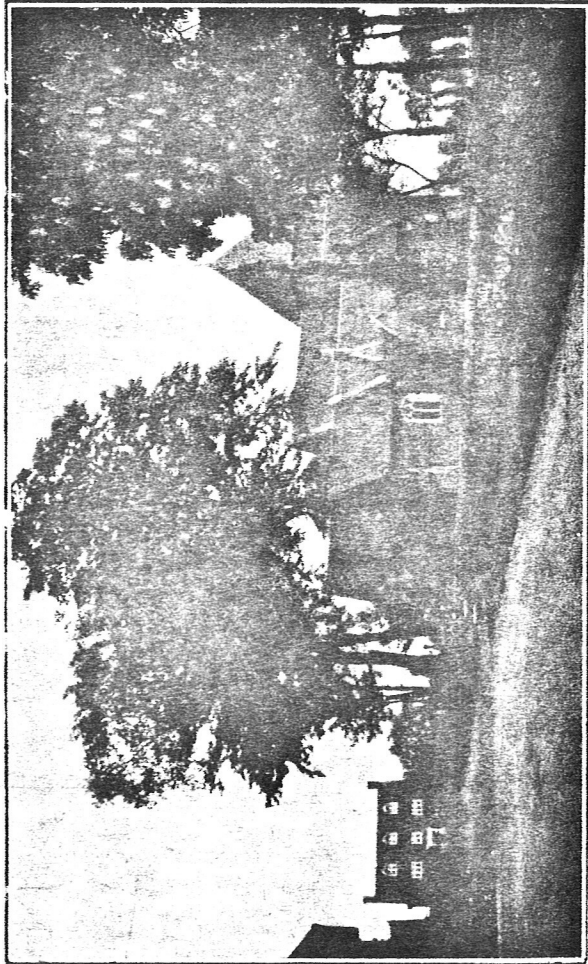
purchased in the autumn of 1896 are now covered by the long low buildings of the factory, adjoining the great gates of which stands the village—in some respects a model one—which the requirements of the workpeople called into existence. But with its isolation on the landward or northern side, Kynochtown combines the tremendous advantage of direct connection with the Thames, by which it is bounded on the south, and the creeks of Holehaven and Shellhaven lying east and west of it respectively. About two miles of the estate front on to the Thames, and



OIL MILL FARM.

something like three miles on to the two navigable creeks just named. From all of which it may be gathered that Kynochtown, factory of the most highly dangerous products that are known even to civilization, stands on a special and supremely suitable site. Isolated as it is and always must be, Kynochtown's chief connecting link with the world on the landward side consists of the Corringham Light Railway, which conveys the workpeople to and from the factory and Corringham several times a day, and connects Kynochtown with the little port of Thames Haven and the London, Tilbury, and Southend Railway on the south.

This little line, along which—when it can be induced to move—the tiny engine wanders, not too hurriedly, among the marshes and ditches, may be the smallest, but is certainly one of the



CORRINGHAM VILLAGE.

most profitable railways in the country. Its receipts last year amounted to £2,063 12s. 8d., and its expenses to £867 8s. 1d. Truly the battle is not always to the swift. The line was built by Kynochs, and opened six years ago—two years later, that is

to say, than the official naming of Kynochtown, which was performed by Miss Katherine Chamberlain (daughter of Mr. Arthur Chamberlain) when that lady visited the new village to lay the foundation of the schools there on November 18, 1899.

So much then for the site and origin of Kynochtown, the general aspect of which may be gathered from the view presented herewith—a view taken from the 'sea-wall,' which is formed of marsh clay, extracted so as to leave a drain on the land side. These sea-walls, many miles of which line the Essex shore of the Thames, are of vital importance to the dweller on the marshes, as the following extract from the parish register of Fobbing Church will indicate :—

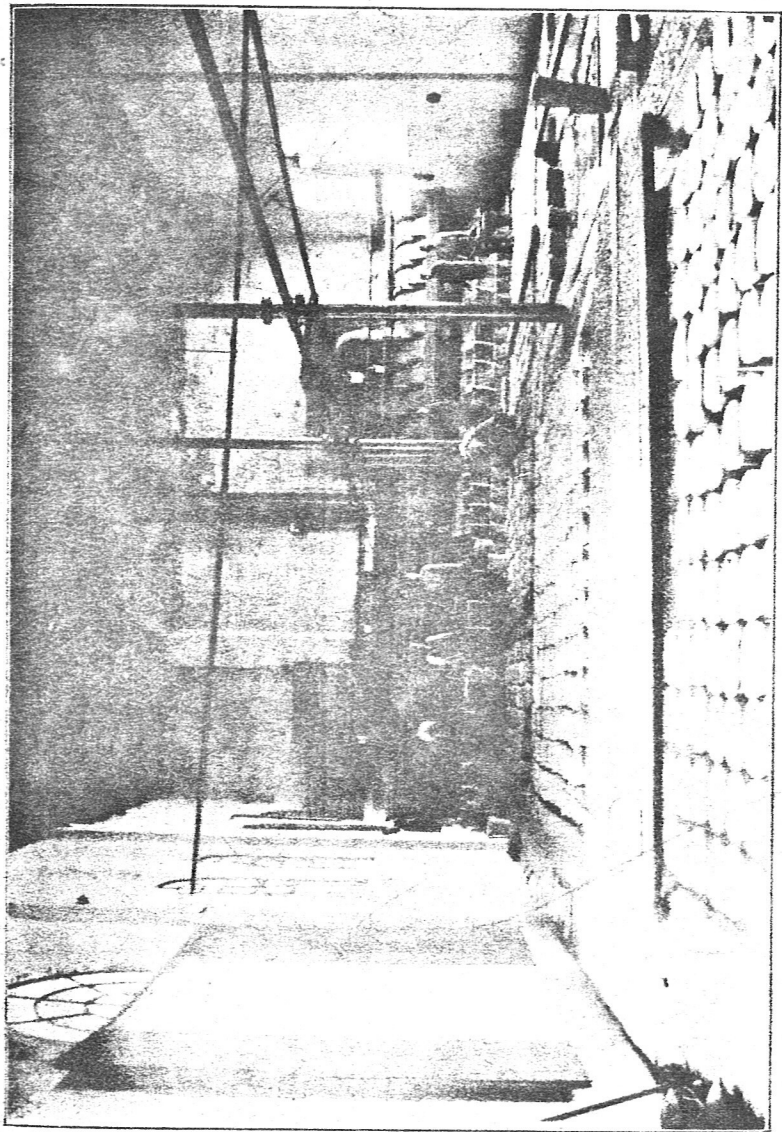
On Monday, the 16th day of February, 1735, about two o'clock in the afternoon, the wind being at north-west, there was the highest tide that was ever known, which overflowed all the sea-walls and laid the whole level several feet under water : it was computed to rise higher at London Bridge by eight inches than any tide yt had been in two hundred years before.

In recent days, in fact only a few months after the erection of the Kynoch factory, on November 29, 1897, a similar disaster occurred, a tidal wave bursting over the sea-walls, carrying all before it, and submerging the factory in three feet of water. The marshlands on either side of the river met a similar fate, but the factory buildings, having been placed sufficiently high to be above the floods, suffered but little damage, although the workpeople who were in them at the time of the flood had to remain until a rescue was effected by means of rafts. It would be interesting to know whether this latter-day flood was placed on record in the local church registers, as was that of 1735. Probably not. The sea-walls, or the management of them, is now vested in a permanent Commission, which has charge of a certain section or 'level,' Kynochtown lands forming part of the 'Fobbing levels.' While for spiritual purposes the new settlement is in Fobbing—that ancient forest village where Jack Straw's rising commenced in Essex—for civil purposes it forms part of Corringham, 'Home of the Corrs,' a village which is strangely ancient and modern, with its Norman-towered church, and its garish new cottages of red brick abutting on the 'terminus' of the Kynochtown railway.

And now as to Kynoch Factory, that great spreading range of mysterious, low-pitched buildings, which lies to the left of Kynochtown, and entrance to which can only be obtained

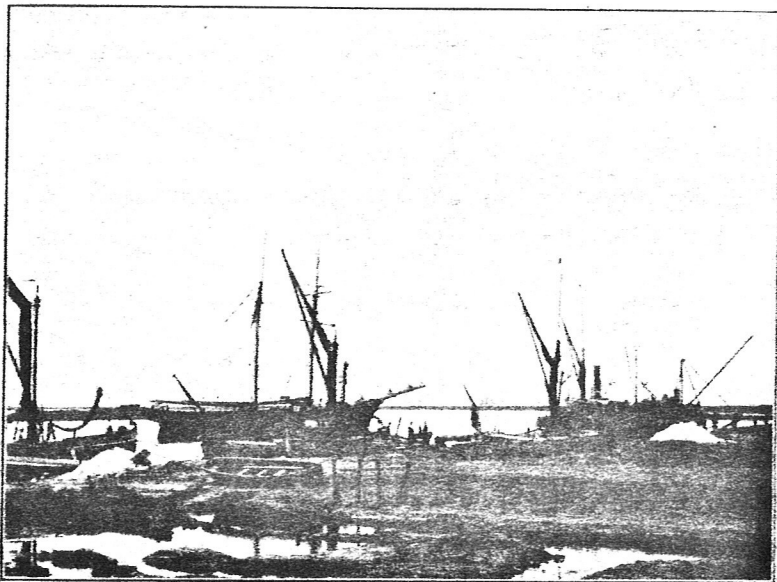
through the great gates, impressive in their size, and guarded by the 'Kynoch' Lions carved in stone. From the moment of entry the visitor cannot help feeling that he is in unwonted and possibly perilous surroundings. The searching query with which he is met by the patrol at the gates, as to whether he has any matches or other combustibles upon him, serves to impress his mind at once with the magnitude of the explosive forces which exist on every side, forces which are merely hidden, but could in no way be confined within the lightly constructed buildings which, in the main, make up the factory. And in the second place the remarkable stillness of the place is profoundly impressive. The workers are there, all around us, varying in number, when the factory is in full operation, from three or four hundred up to six hundred; but the various buildings are so detached, and the whole factory covers such an extensive area, that the silence of the place is only broken by the plaintive cry of the marsh birds, or the sighing of the wind, which, whatever the season of the year may be, seems ever to blow over these lowlands. The silence and the space exercise an undeniably solemnizing effect on the visitor unused to the place—an impression that would probably be lessened as the result of more familiar acquaintance with it—and prepare him for that extreme caution and implicit obedience to directions which must be observed by any who are fortunate enough to be permitted to examine closely the various departments of which the factory is made up.

Kynochtown factory is occupied in the manufacture of ammunition, chemicals, and every variety of explosives. Elsewhere, in other factories belonging to the same company, various kindred work is going on. At Arklow, of recent Parliamentary fame, for instance; at Wassborough Dale, Yorkshire, the home of black gunpowder; and at Witton, the company's principal works, probably seven or eight thousand people are, in all, employed. Kynochtown factory is divided into two distinct areas—the danger area, and that containing the chemical portion of the works and sundry workshops, offices, etc. A main road, which leads to the landing stage in Holehaven Creek, constitutes the boundary of the danger zone, which is divided into sections, devoted respectively to the manufacture of gun-cotton, black gunpowder, smokeless powder, cordite, nitro-glycerine, and 303 cartridges. In either section there is much that is of the utmost



CUN-COTTON DIPPING HOUSE.

interest to see, and a great deal that can be, to some extent at least, appreciated even by the layman who is so unlearned that he may not know a moderant from a solvent, or distinguish Troisdorf from Plastomenite powder. In a brief and entirely non-technical paper like this only a general impression can be given. And just as on entering the factory its intense silence strikes the mind, so, on closer examination, the admirable discipline of the place becomes a marked feature. Take, for example, our visit to the cordite range—a long line of low



KYNOCH STEAMERS DISCHARGING AT KYNOCHTOWN.

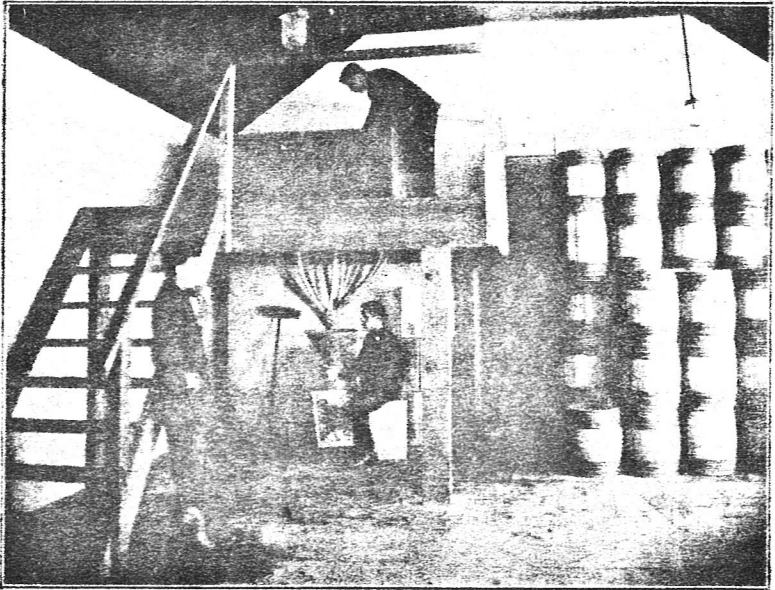
houses, with the square tower of the accumulator rising in the midst. Before entering any of the houses, or, indeed, being permitted to step across a certain line along the gangway which runs outside them, rubber overshoes have to be put on, in order to avoid the danger of friction being set up by the contact of ordinary walking shoes or boots with the floor within.

Cordite is the smokeless powder which has been used by the British service these sixteen years past, and is composed of nitro-glycerine and gun-cotton gelatinized by means of a solvent,

to which a certain proportion of a mineral hydrocarbon is added as a moderant. The principal stages in its manufacture consist of drying the gun-cotton; mixing it with nitro-glycerine; incorporating, pressing and reeling, or cutting; drying and blending and packing. A great deal might be said in explanation of these processes. In each stage or process and in every separate house, there is apparent that subdued air of discipline which, more, perhaps, than aught else, convinces the visitor of the underlying sense of danger, and necessity for absolute care, with which even the most thoughtless employee is impressed while engaged on his or her work. For at Kynochtown, and in kindred factories, the workpeople are of either sex. Probably of the whole something like ten per cent. are women or girls, whose deft touch and quickness of hand render them specially fitted to deal with such branches as the blending of the cordite and other stages in the process of its manufacture. Passing from room to room, one sees the lines of women and girls quietly and busily employed, all uniformly clothed in scarlet dresses, the colour denoting that they are employed within the danger zone, and emphasizing the necessity for the utmost care on the part of the wearer. They know the necessity full well, and are aware of the awful results that might ensue from the slightest act of forgetfulness. Moreover, the Company, rightly and wisely, strengthens this sense of responsibility by the infliction of the severest penalties on any employee detected transgressing rules which are essential for the safety of the whole place. Mere statistics are unimpressive, but when the vast power of this propellant and the danger of its constituent parts is realized, few words are necessary to emphasize the extreme necessity of care in handling it at every stage. There is danger everywhere, from the drying of the gun-cotton onward, and the immunity from serious disaster which has happily attended Kynochtown since its commencement is the best testimony as to the care with which the regulations have been observed. The comparatively recent disaster at Woolwich, which caused damage to houses in Corringham, many miles distant across the river, serves as an object lesson in this direction.

As to the appearance of cordite, after the earlier stage, in which it is paste, it is passed through machines from which it emerges in strands of varying size which are cut to the

required length, for all the world like strips of seaweed, brown, and of a gelatinous character. The blending follows after it is dried, and the nicety of this operation may be inferred from the fact that some sixty separate strands, of varying thickness, go to make up one cartridge. The size of the strand may vary from the thickness of a single hair to a quite considerable diameter. The packing of cordite is done into wooden boxes, holding 50lbs. or more, according to the cordite. Alongside of all these processes, or succeeding them, there are, of course, tests—the



SMOKELESS POWDER BLENDING HOUSE.

moisture test, the heat test for stability, and so on, some carried out in the laboratories by accomplished chemists, and others on the ranges, where the actual velocities and pressures have to come within certain defined limits. In every stage there is danger, unless certain rules are observed. Acetone, the solvent used in cordite, is poisonous; gun-cotton or nitro-glycerine are extremely sensitive and dangerous to handle; the finished product is an explosive of the most powerful character known to man. Small wonder then that throughout the works young and old

have learnt to put carelessness and heedlessness aside, and to exercise that constant caution which alone tends to ensure safety to all concerned in this dangerous occupation.

We cannot now speak at any length of the smokeless sporting powder, black gunpowder, and those other products which go out into all the world from this Thames-side factory. Sportsmen everywhere know the former product, the awards for which make a brave show in the factory office—itsself a wooden building which was originally erected in Hyde Park to accommodate the troops encamped therein during the Jubilee of 1887. The processes by which either product is made in its present perfection involve such nicety and attention to infinitesimal detail as to the lay mind seem scarcely comprehensible. And about it all there is that element of possible danger, the thought of which can never be far removed from the minds of those to whom is entrusted the delicate and responsible task of handling daily vast quantities of the most destructive products that man has yet discovered, or is ever likely to invent. With the Peace Conference at the Hague even now in sitting, a visit to the factory of Kynoch, Limited, gives rise to some interesting speculations. But that is another story.

[The writer wishes to express his indebtedness to Kynochs, Limited, and especially to Mr. W. Helcké, manager at Kynochtown, for the photographs which illustrate this article, and for information courteously given in its preparation.]

THE VOICE FROM THE NIGHT.

BY A. S. CRIPPS.

IT was a bitter nightfall, with the rain falling and a north wind blowing. John Skene was not sure of his road. He looked for the light of a farmhouse when he had travelled half-an-hour, but he did not find it; so he harked back, and now he felt he had lost his bearings as he wandered aimlessly on and on. The rain had turned to sleet and stung his face; his hands were perished, carrying bundles; his feet grew very numb. At last he came into a deep lane between hedges. One might think that he had wandered out of Essex into Devonshire, such was the steepness of the enclosing banks.

Here it was ever so much warmer, and, joy and mystery! in the very lap of the hollow burnt red and dim the relics of a great