

In another part of the loft are barrels and hog-heads of sugar, treacle, and other depositories containing the ingredients used in the making of the biscuits and cakes. In addition to which, thousands of gallons of milk are made use of, while the quantity of eggs and butter mixed up and blended with the dough and paste is truly astonishing, all to be blended with the pastry in course of preparation. The whole place is so perfectly clean, and the tables and floors so free from flour or refuse of any kind, that a stranger would scarcely imagine that here the mixing of immense quantities of dough and paste is constantly going on for the supply of the patent mixers (where the kneading is finally completed), while the air is quite free from those dusty particles with which we generally find the atmosphere impregnated in similar establishments where baking by the ordinary process is carried on, and which acts so injuriously on the lungs, producing disease, and consequent premature old age among the employees.

Descending from the preparatory mixing-loft, we enter the Fancy Biscuit Bakery, and passing through it, enter the bake-house, a spacious lofty building. On one side of the entrance stands a high pressure steam engine, of twenty horse power, worked by the boiler in its adjoining outside store. Some idea may be formed of the amount of capital involved in this undertaking, when it is stated that this engine with the boiler alone cost the firm several hundred pounds, though they form but a very small portion of the vast machinery in operation throughout the concern. By this engine a large wheel, about twelve feet in diameter, is set in motion, and from it proceed many hundred feet of line shafts worked by six sets of connections, by which the whole machinery throughout the factory is propelled.

On the left hand side as you enter is the railway oven (an invention of one of the firm), and which is so termed from the pans gliding in and out on rails. This curiously constructed oven, is heated at top and bottom, also by a new process, and has three mouths, through which the pans are constantly entering and returning, being laid on rails; each batch of cakes takes ten or twelve minutes in baking. On the right hand side of the room, and near the railway oven, are tables at which men are busily employed cutting and stamping into every variety of shape sheets of dough, from which are produced those beautiful cakes coloured by the rich ingredients of which they are composed, rendering them as pleasing to the palate as they are deservedly popular. From these tables they are transferred to the pans of the railway oven.

In the other parts of the bakehouse are many large patent double power reversing break rollers, cutting machines, and other large ovens, driven by cranks and rods, and heated by furnaces underneath, while the flues, like those of the other furnaces, are all underground, so that a stranger can scarcely conjecture how the smoke is got rid of; for though the ovens and furnaces are in full operation, no smoke is seen to issue. This is a great improvement, and a capital preservative against fire or other accident, while, in case of the least appearance of ignition, of which there is little danger, the water cistern on the roof is always in readiness. In fact from the present construction of the

building, ovens, and flues, as well as from the precautions taken it would appear that the circumstances of such an establishment being injured by fire is almost an impossibility. The consumption of fuel in such a factory, with furnaces in full blast, must as a matter of course, be very great, the firm have therefore taken the adjoining premises for the manufacture of the coke which is used in their concern.

Through other parts of the bakehouse are stands on which are piled in heaps what appear to the stranger at first view to be sheets of thick paste-board, but which, on examination turn out to be tough sheets of dough in course of preparation for the oven, while the cutting machines resemble so many printing presses, and the whole process is so different from the old system, that a person, unacquainted with machine baking would scarcely imagine that he was standing in the middle of a bakehouse where immense biscuit baking operations are carried on.

On the left hand side of the room commences the first part of the process in this department. Protruding through the wall a couple of feet from the floor, is the mouth of a large tube, communicating with the second loft, or preparatory mixing department already referred to, and through which the dough is sent down from the mixers, and is here received in lumps into a large square box, moving on castors, to the break rollers or cutting machines which these traveling boxes are constantly supplying, transferring to the iron plane of the press, and then by a curious process passing through different revolving rollers until it is kneaded into a proper consistency.

At one side of the room, and connected with the oven which it feeds, is one of those curious compound cutting machines where the dough is received on a metal plane which glides beneath a roller that reduces it to the proper thinness, and then passes over a large cylinder, which lifts the "scraps," that appear like a piece of perforated cloth; these, passing over the cylinder, drop into a receiver, while the cakes remain on the gliding plane, which takes them into the oven, and through which they slowly move and in about twenty minutes drop out of the aperture at the other end into a box or shallow drawers with grated bottoms in order to cool the cakes coming hot out of the oven. From this they are raised by a patent hoister to the packing room. Taking the ovens and cutting machines altogether they are a singular invention. Here the dough that you see at one end is kneaded, stamped, glides into the oven, and in a short time comes out in showers of cakes and biscuits at the other end, and all this without a hand being put to it.

Opposite to this, and at the other side of the room, is the large biscuit oven, also connected with a cutting machine, and worked in much the same manner as the one we have described, and which is capable of turning out an almost endless supply of biscuits.

At the same side of the room we observed a round boiler, into which a man was throwing a number of dough cakes just brought from the stamper, and after floating in the hot water awhile are removed to the baking pans, thence to the ovens, and come out in that hollow rounded shape peculiar to the "cracknell."