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Attention is called to the "Wants" column. All are invited to use it in soliciting information or seeking new positions. The name and address of applicants should be given in full, so that answers will go direct to them. The "Exchange" column is likewise open.

THE PREPARATION OF MACARONI IN ITALY.

MACARONI is the *semoule*, or flour of wheat, moistened with water, kneaded until it assumes the requisite consistency, cut or pressed into the desired shape, and thoroughly dried. When wheaten flour is agitated in a large quantity of water, the starchy substances are dissolved, leaving a tough fibrous mass, which is gluten. Gluten contains nitrogen, while starch does not; hence the *semoule* or flour that contains the most gluten is the most nutritious. As compared with gluten, starch has but little strength; hence macaroni that is rich in gluten is not only the most nutritious, but is stronger, thereby preserving its shape while being dried and cooked.

The United States Consul-General at Rome says that for the best macaroni, the hard, semi-translucent varieties of wheat grown in warm countries, which contain a large proportion of gluten, are used in the form of *semoule;* for the cheaper grades common flour is used. Any intermediate grade can be made by mixing the two in various proportions. There are no statistics giving the quantity of macaroni made in Italy; but, as it constitutes one of the chief articles of food, the quantity must be exceedingly great. There are many large establishments manufacturing it by steam-power, and probably many thousands worked entirely by hand-power, and employing from three to five or six hands each. It is also an article of daily household production in a large proportion of Italian families. In the household the appliances are exceedingly simple — a smooth board, a piece of marble for kneading, and a common rolling-pin. One pound of flour is mixed with four or five eggs, moistened with hot water, kneaded a few minutes, and then rolled out very thin with the rolling-pin. After drying on the kneading-board for fifteen or twenty minutes, until the surface loses its adhesiveness, it is rolled up tightly, and thin slices are cut from the ends. The slices falling apart constitute strings of macaroni, and are ready for use. The macaroni factory which is worked by hand often consists of but one room, exclusive of the drying-rooms. The proprietor, with one or two workmen, makes the macaroni, and the wife sells it. The machinery is inexpensive, and the hired labor costs but little.

Artificial heat is seldom employed for drying, but the manufacture is often carried on in connection with the baking business. In this case, the drying-rooms would be above the ovens, and warmed somewhat by the waste heat. The result is, that these small establishments can successfully compete with the larger factories that are worked by steam-power. Their machinery generally consists of a mixer, a kneader, and a press. The mixer may be described as a semi-circular trough, having a hinged cover. Through the trough runs an iron shaft, having a number of projecting arms, with a crank on one end. About one hundred pounds of *semoule* or flour, or a mixture of both, according to the quality of the macaroni desired to be produced, is placed in wooden troughs, that stand in front of the mixer. To this is added a sufficient quantity of water, at about 160° F., containing in solution a small quantity of saffron, to give the macaroni the desired color. It is then mixed by hand for a few minutes, in order to fairly distribute the water, after which it is put into the mixer. The lid being closed, a workman turns the crank for about twenty minutes, when the contents are found to be converted by the action of the arms attached to the crank shaft, into a stiff dough.

From the mixer the dough is taken to the kneading-table. This is made in a number of ways. One of the most common in the neighborhood of Rome consists of a kneading-plank about forty inches long, thirty-two inches wide at the inner end, and forty inches at the outer end, with sides to keep the dough from falling out. It is solidly made of hard wood two and a half to three inches thick, and firmly attached to the floor and wall. The kneading is generally done by two or three men with a long bar attached by a swivel joint to the wall at the back of the table. This bar is about sixteen feet long, ten inches deep next to the wall, and three inches at the other end. The part next to the dough is bevelled to the shape of a blunt wedge with a rounded edge. The bar is worked up and down on the dough, and being fastened at the end exerts a tremendous and crushing force. Being made of a tough, elastic wood, it both readily sustains the full weight of the men when pressed down, and springs back above the dough sufficiently to allow it to be moved a little, and brought down on another part. This kneading continues for about twenty-five minutes, when the dough is ready for the press.

In some places the table is a straight plank about eight to ten feet long and fifteen inches wide, with sides to hold the dough in position The kneading is done by means of a drum about four feet in diameter, and the width of the plank. It is worked backwards and forwards by means of an upright capstan, about twelve inches in diameter, with a rope coiled round it and around suitable mechanism on the drum.

As soon as the dough is in a suitable condition, it is taken to the press, which consists chiefly of a cylinder about eight to ten inches in diameter, and twenty to twenty-four inches long, a plunger that fits the interior accurately, and a die plate that rests on a shoulder cast on the lower portion. The plunger is forced down by a screw, which is suitably connected, by working with a crank by hand. While one man mixes the dough, another turns the crank to press it, and the third takes the macaroni as it leaves the dies, cuts it into suitable lengths, and hangs it on light cane or bamboo sticks about five or six feet in length, ready to be carried to the drying-room. The press is heated to about 160° F. by means of a small pot of live coals, which is placed inside the cylinder a few minutes before pressing begins. From the presses the long macaroni is carried on light bamboo sticks to the drying-rooms. The small and fancy shapes are dried on screens. These are wooden frames about two feet by six, covered with a coarse cloth, so as to allow the air to freely circulate. A brace across the middle of the frame serves as a handle. The small and fancy macaroni is made in horizontal presses. Cutters revolving more or less rapidly near the face of the die, according to the length required, cut it into any desired length. The speed of the cutters is regulated by a pair of cone pulleys.

The drying of the macaroni is the most difficult and delicate part of the manufacture, and depends much upon the state of the atmosphere. It is first dried in the open air, the time in the sun or shade depending on the temperature and dryness of the atmosphere, from half an hour to three hours; the time also depends to some extent on the size of the macaroni. It is then carried to a close damp room, where it remains about twenty-four hours. If the room is not sufficiently damp it must be kept so by artificial