

Bowl Balancing Room.

Making the Cream Separator

A representative of THE FARMING WORLD recently had the pleasure of inspecting the new factory of the De Laval Manufacturing Company, at Montreal. The neatness everywhere in evidence, the systematic arrangement of the different departments, the modern equipment for lighting, heating, fire protection, ventilation, etc., presents a striking contrast to the heterogeneous disorder so much in evidence in many factories. The first thought that strikes one is that employees having such advantages, will naturally devote themselves to their work with a great deal more heartiness than they otherwise would. A sketch of the steps of the manufacture of the De Laval cream separator, performed under such favorable conditions will be of general interest to the readers of this paper, and to users of cream separators, present and prospective.

The factory building is of brick, with the saw-tooth style of roof, which admits of more light than any other style. For night work, the light is furnished by an elaborate arrangement of electric lights, arc and incandescent, which make the place practically as light as day. The entire factory is heated by steam radiators. The floor space is 30,000 square feet, giving room for three hundred workers at one time. The power used is electric, and supplied by several large motors, whose musical hum blends with that of the separators. The manager's office, from which a good deal of the

work department can be seen, and which is connected with all parts by telephone, is large and well appointed. And the manager himself is sufficiently up-to-date to believe in making all departments as comfortable and convenient as possible. The most systematic order prevailed everywhere.

In the supply branch, all parts are so kept as to be accessible at a moment's notice, and when it is remembered that there are fifteen different sizes of machines, the perfection of arrangement that makes this possible is apparent. In the show room are to be seen standing in order rows after rows of the finished product, from the little "Humming-Bird" up to the big dairy turbine, ranging in capacity from 250 lbs. to 1,000 lbs. per hour. They presented a handsome appearance, and the writer appreciated the fine attraction which the De Laval "Babies" have for the farmers and the farmers' wives.

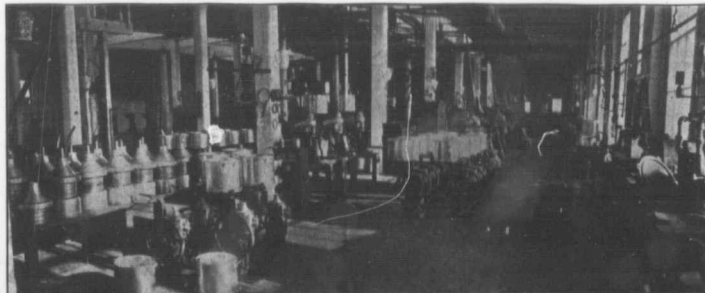
The first part of the shop visited was that for the manufacture of that characteristic feature of the De Laval, the disc. It was explained, however, that Dr. De Laval was not the inventor of all, that of separating cream from milk by centrifugal force and applying the invention in the old type of hollow bowl. It was some years after this that Baron Von Bechtolsheim, of Germany, conceived the idea of separating the milk body into thin sheets, thus making prac-

tically as many separators as there were divisions, which would greatly increase the capacity, efficiency, and at the same time prevent the harmful effects on the butter fat when subjected to a hollow bowl preparation. This was all accomplished by the introduction of the disc into the bowl. The discs are made from the best English steel, and in explaining this the manager threw one on the floor and tramped on it without injuring it. The discs have no perforations or corrugations, and the method of washing them on the disc transfer was also explained.

Everything in the machine shop shows the great care given to the manufacturing and assembling together of the various parts—great lathes, capable of swinging the heavy bodies of the Alpha power machine frames, worked away with a dignity that their size and power lent them; energetic punching machines hammered away, forming and transforming parts; shapers, planers, grinders and drills were all going as if they understood the importance of the parts they played, and the work they had to do. The assembling and testing rooms were next visited, and the rigorous test that is given to each machine and each part is itself evidence that no De Laval machine leaves the works without having proven its ability to do what is required of it in actual service.

In testing the finished machines, they are placed on a long bench and turned by hand in order that the mechanic may get the "feel" of the machine. Here, too, is where the separator bowl is given a final "check." After being balanced and run in the balancing room, it is placed in the machine in which it belongs, and there run up to speed to insure everything being right. The next department to this is the bowl-balancing room. Here is where the most expert assistance is called for. The bowls are brought here with tubular shafts, discs and covers, are placed in the balancing frames, and if any part carries an unequal distribution of weight the worker's pencil will show it. It is placed over the gas blowpipes and the necessary weight added until it "runs true and balances perfectly." Next is the timing room, with its smell of acid and its cauldrons of melting tin. Then comes the painting room, where the frames, after being filled and painted are placed on trucks and run into the baking and enamelling oven whence they emerge with a surface glossy and hard.

The packing room receives the machines from the testing-room, where the polished surfaces are coated with heavy oil, so that until they are used they will not tarnish on tin or enamel. The packer also carefully checks up the parts of each machine so that no mistakes will



Assembling and Testing Room.