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Victor E. Marx, Secretary
1135 Fullerton Avenue
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PROPER HANDLING OF THE DOUGH DIVIDER By F. C. Reichert, Taggart Baking Company, Indianapolis, Indiana Copyright 1924 by the American Society of Bakery Engineers

The successful operation of a dough divider, like the successful operation piece of machinery, is dependent upon the care and use it receives. Baking machinery, however, differs from many other types of machinery, in that cleanliness is a prime factor in the operation, and the result of the finished product.

The dough divider is one of the principal machines used in the manufacture of bread, and its efficiency and operation are directly reflected in the finished loaf. There are certain points that must constantly be before us, and be considered in the operation divider:

1. Cleanliness.
2. Right condition of dough.
3. Lubrication.
4. Speed.
5. Careful operator.
6. Close supervision of foreman.

Cleanliness is the first point to be considered, for without cleanliness indifferent results must be the answer. Most dough dividers are constructed with pockets and plungers. The plungers are adjustable to change the space in the pocket to deliver the weight loaf desired. As these plungers fit very closely, the four sides of the pockets must be kept at all times perfectly clean so as to allow free action of the plungers. The dough, in passing through the pockets, will form a very fine skin on the walls of the pocket, and this is the most common cause for uneven weight. General cleanliness throughout a bakery makes it much easier to keep the machinery clean, and constant vigilance in keeping clean becomes a habit, and removes the problem of cleanliness from the care of machines.

Correct weight is the determining factor in the efficiency of the dough divider, and to get the correct weight it is of the utmost importance that all parts of the divider are properly lubricated, and especially those parts that come in contact with the dough. All vegetable and animal fats have a tendency to get sticky and gummy—some more than others—and they are therefore not good to use as lubricants on a dough divider. The best lubricant is refined mineral oil, without taste or odor.

The lubrication of the dough dividers, or any other machine that comes in contact with the dough, should receive undivided attention, just as we must consider our body to see that we supply ourselves with proper nourishment, for if we do not we soon discover which is but a complete machine, refuses to function properly. So it is with machinery, the various parts must be lubricated, must be nourished and kept in working order, so that when they are put to work every part will function properly. When you neglect to feed a machine its daily ration of lubricant the various parts of that machine begin to cry and squeal as if in pain, and just as the human body, when it stops functioning we relieve the pain with medicine, just so with machinery when it becomes “sick” and out of order we resort to lubricating the various parts that are calling out for lack of nourishment, and as a signal of trouble.

As I have said before, the best lubricant for dough dividers, according to food and machinery experts, is high grade

water white, tasteless, odorless, edible mineral oil. This character of mineral oil is the best known to bakery science, and these oils have a natural affinity for iron, preventing rust, and will keep the parts of the machinery that are not exposed from gumming, and being odorless and tasteless, no trace of the lubrication is left on the dough as it passes through the machine, and being edible the oil in no way affects the finished product.

In laying out a definite plan for the use of lubricants on dough dividers, I would say use only enough oil to keep all parts working smoothly, so they perform their work practically and uniformly. Care should be taken to have all oil cups filled and in working condition.

I am confident that if these suggestions are followed there will be less worry, and better results in the finished product, and the money invested in dough dividers and other machinery will earn a better percent, and the machines will last longer.

The condition of the dough has a great deal to do with obtaining the correct weights. Should the dough be too firm it may have a tendency to not fill the pockets therefore the loaves will be uneven. A dough that is too soft will accumulate gas very rapidly, and for this reason will not give even, or satisfactory, weights, for some pockets will have more gas than the others, and therefore less weight. A dough of medium firmness is the most satisfactory, and is productive of the best results. Punching the dough before going to the divider will give even better results in accurate weighing,

The speed of the dough divider is variable. Dividers are built to give the various speeds required by different shops, and they can be operated from five to twenty discharges per minute. It is not, however, a good policy to run a divider at its highest, or at its lowest speed. Too high a speed will have a tendency to give uneven weight, and ruin the machine in a short time. Too slow a speed will punish the dough, and therefore will show in the finished product. The best speed for ordinary running is between eight to fifteen discharges per minute, and is practical for ordinary conditions, both in shop operation product.

The careful operation of the dough divider is of greatest importance. The divider is the cash register of the shop, and therefore should be in charge of, and have supervision, of a reliable, intelligent, conscientious operator. He should, at a to get the required amount of loaves out of a certain number of pounds of dc receives from the mixing or fermenting room. This, like keeping a ship on it constant watching, and, more or less, constant adjustments. This operator must have constantly in mind that every loaf should be of a certain weight, and regardless o he may get what is thought to be the correct number of loaves out of the dough, if these are one ounce or more heavier, or lighter, he has failed to accomplish the proper results. Accuracy of the weight of each loaf is essential.

The dough divider is so important in the manufacture of bread that its care and supervision should not be left alone to the individual operator assigned to this work, but it should be the duty of the foreman in charge to give the dough dividers his persons checking often the operation of the machine and the weights of the dough as charged, and being constantly on the look-out for things that may change the changing the adjustment of the machine.

Like any other piece of machinery, the dough divider, to give best results, requires constant care, but unlike all other machinery in the bakery, the dough divider is by which the profit or loss in the operation of a shop is determined, and upon its accuracy in weight, and uniformity in operation, may depend the profit and loss of the business.