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REDUCTION FLOUR MILLING.

By R. JAMES A. FRISVOLD.

MANY years ago it now seems, when roller milling was in its infancy, an effort was made to establish a short method of reduction flour milling on the three break basis by some that possessed the least knowledge of the business, but as the idea was not supported and encouraged by those having the most influence in the matter of developing flour making processes it was practically abandoned, and thereafter all effort took the one direction of lengthening and elaborating.

It does not now appear that the cause of failure was so much due to the use of only three breaks as in not knowing how to make the proper divisions of the material, after the breaking had been done, in order to secure a complete finish and avoid waste by allowing partly reduced flour making material to pass entirely through the mill and land in the feed bins at the tail end of it.

It was this waste of stock that caused the three break idea to be abandoned; so much was wasted in that way that no profits could be earned, although profits were much larger then than now.

There were some that put in pony burr mills to finish the waste material with, but the results were not generally satis-

factory, and the whole scheme had to be given up, more for the want of talent and inclination to develop it than for any other reason. This is conclusively proven by the fact that since then the three break system had been brought to a high state of perfection and is now in very common use.

Attention was a second time called to the three break system a few years ago, when the short system idea was sprung upon the fraternity, and so vigorously contended for by the writer and others.

Foreseeing that a further lengthening of the then very elaborate gradual reduction system would be out of the question and that shorter methods must surely follow, flour milling engineers came down from their lofty perches and began in genuine earnest to consider ways and means for shortening rather than for lengthening the already very long methods.

Those who had been so long accustomed to middlings making by the gradual reduction process were for the most part quite unwilling to abandon it and come down to direct flour making, as was being advocated by the short system people, and so turned their attention to the rehabilitating of the defunct three break system with the view of having both a short and at the same time a middlings making system.

When we speak of a middlings making system especial reference is had to patent flour making which had for many years been the rage among millers everywhere, and as they could not at once abandon patent flour making, neither could they give up middlings making, as they thought, because of middlings patent flour had

to be made. That, however, is true in part only, and depends somewhat on the locality and the kind of wheat used.

But, anyway, the three break system was again taken up by those possessing both the skill and the knowledge needed for its further development, and it now exists in a very perfect state, and can be safely adopted by all desiring no shorter method.

The writer does not believe that any middlings making or patent flour making system is really needed, as such anywhere, no matter what the conditions are, but as there are so many that do think so he is quite willing to accept the three break method as legal and a long stride in the direction of simplicity.

The miller that believes in making patent flour--and it may just as well be admitted that until a decided change in sentiment takes place patent flour must be

the hard wheat to flour in any very large proportion. Hard wheat is inclined to break into particles instead of being reduced to flour, and hence it is probably better to accommodate it by the use of three breaks with smooth corrugations. With the smooth corrugations the flour that is made direct should be white, when separated from the impurities, and when mingled with the middlings flour, ought to make, and will make, if the balance of the mill is arranged right, a high grade of flour. No short system mill from three breaks down to one should be arranged in a manner that will injure the break flour, as in the case of long system mills, because if so the object is already half defeated. The intention of short system milling is to preserve the break flour even though patent flour be the highest aim.

There is another method embodying three breaks that has for its chief object a thorough cleaning of the bran.

The results of such a system are much the same as in a two break system. The work of the first pair of rolls is a little higher than the first in the two break system, and the work of the second pair a little higher than the second in two break system, but the third pair get right down to the bran and the flour is fit for low grade only.

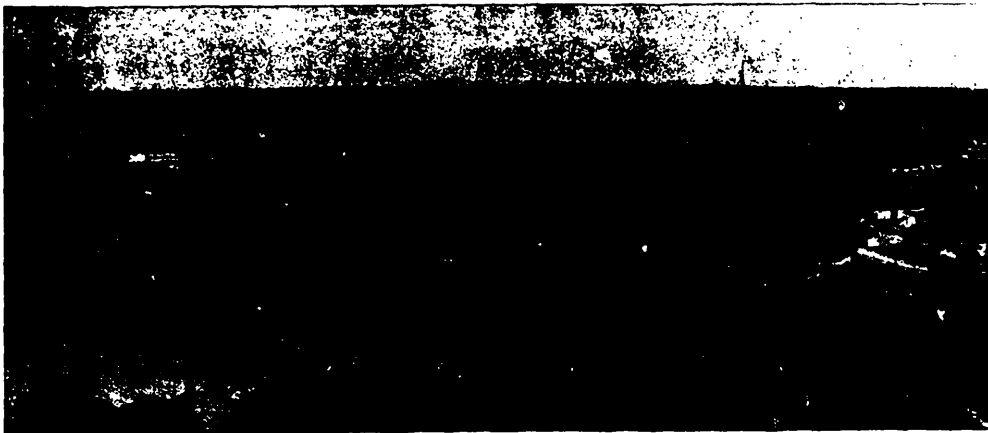
This method does not make

so many middlings as the other, and is more nearly akin to the regular two break method than to the regular three break.

SETTLEMENT OF BUSINESS DISPUTES BY ARBITRATION

In Winnipeg, says the Commercial, we have a system of arbitration established and carried out by a business organization, and the result is a hundred times more satisfactory than it would be if the law were called in to settle such disputes. We refer to the arbitration board in connection with the grain exchange. The system of arbitration established by the grain exchange is of course only by agreement of the members. It has no legal power nor force, and there are no means of enforcing decisions beyond the rules of the exchange. We believe there is room for a legally qualified board of arbitration in Winnipeg, before which business men could take their disputes for final settlement. Such an institution should be able to accomplish much good work, in the direction of settling trouble among business men and saving expense, as well as saving friendship. Arbitration is usually adopted in a friendly spirit, but who ever heard of the law being invoked in a friendly way.

A prominent merchant of Memphis, Ohio, is offering a reward of \$1000 in gold to the person who will invent a package or barrel weighing one pound and carrying 100 pounds of flour or meal. With such a barrel there will be an end of sealage.



KINGSTON, JAMAICA, KING STREET OVERLOOKING HARBOR. (See pages 4 and 5)

made--can with propriety and safety adopt the three-break system, because as compared with the gradual reduction system the cost is light enough to enable any miller with moderate means to put up a mill and proceed to business.

When arranged to make middlings in a modified form, that is, in not being an extreme in that direction, a three break mill can be used for making a very fine straight, in substantially the same manner as the two break system already referred to. If the breaking corrugators are not too sharp the break flour made in a three break mill may be brought up to a fairly high state of perfection in color and an excellent product result from the blending of the break and middlings flour.

If such mills are so arranged they can be worked both ways to advantage, and when demand requires a strictly middlings or patent flour it can be made, and, on the other hand, if a straight or 80 to 90 per cent. of the whole product of a very high order be required that also can be made.

In operating a mill of that kind a miller must be guided by conditions and circumstances, as in fact he would be in any other position. A three break mill properly arranged will make either straight or patent, as patent is usually made, and the miller can accommodate both himself and his customers, and be in a position to make money, if any money is to be made in the business. We might also call attention to the fact that where hard wheat is to be ground exclusively or even very largely, the three break system may be the best, all things considered; because of the difficulty in directly reducing