

that might be reached. One record passed 46 lbs. in seven consecutive days; the cow and the whole process of making was in the hands of an intelligent committee. The World's Fair threw a great light over such records. Cows that had been credited with 30 lbs. and upwards, under most favorable conditions at that fair failed to make 20 lbs. of butter of 80 per cent fat in the ordinary period of seven consecutive days. It was a great surprise. The public lost all confidence in the great records that had been reported. If these tests had no other effect they were not altogether vain.

With view of finding out how some of those great records might have been made, I took a quantity of rich cream, properly ripened, and churned it at a low temperature until it reached the point described by the word "broke." If it had been chilled it would have been about as dry as snow. An enthusiastic record maker might have reasoned in this way, "It is not cream, it is not buttermilk, therefore it must be butter." I estimated its weight 46 lbs. and it contained 33 per cent fat. I added ice water and again started the churn. When it appeared as granules about the size of wheat, I drained off the buttermilk and let it stand draining several hours. No one not a practical butter maker would have had suspicion that it contained an excess of moisture. It weighed 18½ lbs. By chilling it still more it might have been salted without loss of weight. A thoroughly conscientious man, unfamiliar with butter making, might have readily endorsed this weight as the correct one of a merchantable product. I warmed it up, salted it, and found it produced 11 lbs. of merchantable butter. It would make all the difference in the world whether a cow had a record of 18½ lbs. or of 11 lbs., or double these figures, 37 lbs. in seven consecutive days, made one way, or 22 lbs. made another way. I do not pretend to know other ways, doubtless more fraudulent, by which great records may have been made. But I know butter by the churn is an indefinite quantity. In the light of the present we can put comparatively little value on records made by it.

The following letter recently received by our firm shows that there are some persons who are willing to instruct others in the mysteries of making large records by the churn:

"Toronto, January 9, 1899.

Messrs. A. & G. Rice:

"Dear Sirs.—We have fitted up the dairy of

Mr., of Toronto, with our new process of butter making. It is giving very satisfactory results. We can guarantee 25% better returns, a simpler process, more certain in results, better butter, a purer butter, less casein and water, and better keeping.

"We work from 25% to 30% above the Babcock test. These advantages are important to you. We invite investigation and can refer you to. . . , who has kindly consented to your making any test you like, with either his cream or your own, and we suggest that you bring one week's cream of any cow you prefer, and that you have made previous test of, and see what our process will turn out, or any other test you may wish. We use no chemicals or foreign material. We sell nothing, but work on royalty. Shall be pleased to give you any further information.

"Yours truly,

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At the same time we must not be too severe in our judgment of earlier churn records. Most of the cows are now dead and we have no other means of getting at their worth. Many of them were great cows. Just what records to discount and to what per cent can never be known. But the farce of making records of 30 lbs. and upwards is ended. The Babcock test is of wonderful accuracy yet simple in its operation. No valid objection can be raised against it. What shall we say then of those who would continue the old game of reporting churn tests? Be the records great or small, they are no longer worthy of attention, and it seems to me an insult to their readers for our papers to publish them. It is difficult to overvalue official records made with the Babcock test. Prof. Henry points out the reasons why in a single sentence: "By means of properly conducted official tests," he writes, "and the use of the Babcock test, the representatives of our various breeds of dairy cattle are in position to establish records which are reliable and in time will become immensely valuable, as the data accumulate and the effects of breeding and selection are realized."

GEORGE RICE.

Curries, Ont.

