MARCH 1, 1807

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THE FARMER'S ADVOCATE

and entered upon a sheet along with a report of its condition, which affords both students and patrons object lessons in observing and detecting bad flavor, etc. A composite test is made of each patron's milk by placing one ounce in his bottle each day. It is preserved sweet two weeks by the addition of a small quantity of corrosive sublimate and bichromate of potash one to seven parts. The milk is all paid for by pounds of butter-fat. The milk then enters the heating vat, and is raised to the temperature of 95 degrees, when it is run through the separators, viz.: Russian, United States, Alpha, Alexandra, and Danish Weston. Mr. Mark Sprague has charge of the separating. A large quantity of the milk is run through each separator twice a week to illustrate factory work.

12 inches wide, 17 inches deep, and 5 feet long, surrounded by a water jacket of about 7 inches. This vat is repre-sented in the very foreground of the illustration. When cooled to 95 degrees, which takes about one hour, from 10 to 15 per cent. of pas-teurized skim milk starter is added. The cooling is con-tinued until the cream is down to 65 degrees, at which it is held until ripe. It is then further cooled to 52degrees, and churned the following morning, or 24 hours after being received from the patrons. Saturday's cream is ripened at a lower temperature and less starter added than on other days. In case we might forget later, we would mention just here, that everything in use that requires washing is thoroughly cleansed with steam.

The Butter. After the cream is churned on an avlook after each vat. One is put in charge one day, assisted by the other, and vice versa the following day. A detailed report is made out for each vat, giving the pounds of milk, condition, per cent. of fat, amount of coloring, time in ripening, etc. — some 25 different items in all—useful as a record, and for comparison in tracing up a possible defect in the finished product.

and bichromate of potash one to seven parts. The milk is all paid for by pounds of butters fat. The milk then enters the heating vat, and is raised to the temperature of 95 degrees, when it is run through the separators, viz.: Russian, United States, Alpha, Alexandra, and Danish Weston. Mr. Mark Sprague has charge of the separating. A large quantity of the milk is run through each separator twice a week to illustrate factory work. The skim milk is heated by steam to 160 degrees before being taken home by the patrons, in order to prevent its souring *Process* is comparatively new in this country, but Mr. Rodgers employs a simple process, by means of which many bad germs and bad flavors are killed and driven off. Even the turnip flavor, which is very prevalent in the milk received, is entirely eradicated. The cream after separated is placed in shotgun cars, or deep pails and set into a tank of boiling water. The cream is kept constantly stirred until it reaches a tempera-ture of 160 degrees, when the cans are lifted out and allowed to stand on the floor for twenty minutes. It is then poured into the cooling and ripening vat, 12 inches wide, 17 inches deep, and 5

subject declared that he believed better results subject declared that he believed better results would be obtained if no turnips were fed, and that they should, therefore, not be used. At the close of the discussion the following resolution was unanimously carried: "We, as patrons of the Thamesford cheese factory, pledge ourselves not to feed turnips to our cows while sending milk to the factory, and do authorize our directors to pass a by-law prohibiting the feeding of turnips to cows from which the milk is used for cheesemaking."

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The Makers' Convention.

The Makers' Convention. The Cheese and Butter Makers' convention to be held at the Dairy School, Guelph, Ont., on Fri-day, March 5th, referred to in last issue, promises to be a brilliant success. The programme which has been issued by Sec. J. W. Wheaten is made up of papers, addresses and discussions on the various phases of cheese and butter making. The after-noon session commences at 2 o'clock, and the eve-ning at 7.30. Among the speakers are such men as Hon. John Dryden, Pres. Mills, Prof. Shuttleworth, Messrs A. T. Bell, A. Wenger, Geo. H. Barr, and many others, besides the instuctors at the Guelph Dairy School.

Reply to Prof. H. H. Dean on the Question of Milk Fat and Cheese Yield.

To the Editor FARMER'S ADVOCATE :

Some of Prof. Dean's statements in a recent ssue of your paper are amazingly reckss, and it is n important that call attention to the alls into o devote much ention to his empted criticis 1st. He stands he old, exp t gre eave the can fu

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erage of 40 minutes in a box churn, the

[Photographed for the FARMER'S ADVOCATE by J. F. Clark, B. S. A., Ontario Agricultural College, Guelph, Ont.] SEPARATING AND BUTTERMAKING ROOM, GUELPH DAIRY SCHOOL.

of the merest trace of fat; for instance, in skim milk, whey or buttermilk. The students in this department learn, among other things, how to detect tampered milk by means of the tester and lactometer.

The Cheese Department, in charge of Mr. T. B. Millar, assisted by Mr. R. Stratton, is equipped with seven 300-pound vats, and all other necessary appliances, such as presses, tanks, etc. Two students

The dot of the market is collected in little granules. At times it is salted at the states of it to i oz. Per pound of butter.
The forme Dairy department, in charge of Mr. J. W. Miltschell, is equipped with various sorts of Babcock, it is encased of the revolving power.
The Testing Room, in charge of Mr. J. W. Miltschell, is equipped with various sorts of Babcock, it is encased of the revolving power.
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The Testing Room, in charge of Mr. J. W. Miltschell, is equipped with various sorts of Babcock. It is encased to there solids. What seemed to the souldents water being added to the samples massed around for each of the students to score. A uniform scale is adopted to the souldents to score. A uniform scale is adopted to the students to score. A uniform scale is adopted to the students to score. A uniform scale is adopted to the students to score. A uniform scale is adopted to the students to score. A uniform scale is adopted to the students to score. A uniform scale is adopted to the students to score. A uniform scale is adopted to the students to score. S the students of the students to score. S the score of the students to score. S the students to the score to the students to score

At the annual meeting of the Thamesford cheese factory patrons one of the most live subjects discussed was that of feeding turnips to cows, the milk from which was being made into cheese. There was a full meeting, and although a number of them had always been in the habit of feeding a few turnips to their cows in the fall, every man that expressed himself at all on the

thus quotes me as saying things I never said or even dreamed of saying. He asks me to harmonize state-ments which were never otherwise than harmonious except in his confused understanding. The only way to harmonize under such circumstances is for him to get a clear understanding of things which are comparatively simple to an ordinarily careful reader. Brd. Another one of Prof. Dean's marvellous statements is this : "The water found in cheese is different from the water which a man pumps from his weil?" and then he goes on to speak of the "*matu-ral* water of milk," "the *matural* water in roots and corn silage," etc. Will he kindly refer me to the work on chemistry which authorizes him to distinguish between different kinds of water in that I have not yet seen it in any chemical journal. Prof. Dean, in making such statements, clearly is out of his field, as no scientific man would for a moment put forward, in this offhand way, state-ments of such far-reaching importance without any shadow of foundation. So far as anybody knows, water has the same chemical composition wherever it is found, and there is absolutely no scientific jus-tification for such utterly misleading statements as he makes. We suggest that he consult the Prof-essor of Chemistry at Guelph, who will loan him some elementry text-book on chemistry for careful study before writing any more about "*natural*" water. water.

In reply to Prof. Dean's criticism as to incon-sistencies found in Bulletins No. 68 and 110, so far as they have not already been explained, I would say that the results contained in 110 represent work