

DAIRY.

The Eastern Butter and Cheese Makers' Convention.

[Specially reported for the FARMER'S ADVOCATE.]

The second annual convention of the butter and cheese makers of Eastern Ontario, under the auspices of the Butter and Cheese Association, was held at the Kingston Dairy School buildings on March 9th. The building and equipment have been very much improved during the past year. The chair was occupied by Mr. D. Derbyshire, of Brockville. In his opening address he emphasized the need of an improved quality in Canadian cheese and butter. Principal Grant welcomed the delegates on behalf of Queen's University. He said: The dairy industry is on a sound foundation—not a rickety one requiring protection and special favors from the Government; nor is it an industry that can be destroyed by the breath of a Finance Minister. It is an industry natural to Canada and is bound to prosper. Dairy men, however, must not rest on past achievements, but must go ahead.

Prof. Dean, of the Guelph Dairy School, spoke on True Co-operation, or the Co-operative Share System, as applied to dairying. He claimed that many of the present evils may be remedied by the adoption of this system. Mr. Alexander, a cheese exporter from Montreal, did not believe in the theories advanced by the previous speaker. He urged the making of more butter and less cheese. According to his experiments, fresh, unsalted butter kept better in cold storage than salted butter, as the latter acquires a fishy flavor. The box is the best export package. Put 57 lbs. in each box.

Mr. Publow, Inspector for the Perth division, said that 60 per cent. of the rejected cheese last season was due to bad flavor. The causes for this off flavor were tainted milk, bad water, bad rennet, bad salt, dirty factories and surroundings, hot curing rooms, and cheese being shipped too green. Makers should not be held responsible for bad flavor due to milk. The other causes of bad flavor he is largely responsible for. Forty per cent. of the bad cheese was due to improper making—chiefly overripening the milk. Mr. Ruddick considered that 75 per cent. of the water used in factories is not fit for the purpose. A long discussion took place on the question of a pure water supply. Mr. Bissell considered that a maker is never justified in using bad water for setting the vats. Makers need to spend more time at the weigh stand. He favored wiping out small factories.

In the afternoon session Mr. Borbeau, of the St. Hyacinthe Dairy School, Quebec, gave a very instructive address regarding the work done in his Province. He said that they were going to give the air-duct system of ventilating curing rooms a thorough trial this season. They were aiming to equal Ontario. Instructors Kerr, Loury, Purvis, and Howey gave short addresses, which were followed by the question drawer. Mr. Zufeldt, of the Dairy School, read a paper on milk testing, in which he advocated the weekly composite test. The small dipper is accurate for sampling. Test carefully and accurately. Mr. Potter tests monthly, but keeps the monthly jars in a refrigerator. Samples are put daily into a weekly jar, and these are emptied into the monthly jars once a week. Mr. Whitton tests daily, and finds that the patrons are more interested in the test than in the weight of milk.

Prof. Dean spoke again on "The Points of a Cheese and Butter Maker." He emphasized cleanliness, activity and thought to be applied to the business of making cheese and butter. Dr. Connell gave some of the causes of tainted milk, among which he named dust, hair, manure particles, improperly cleaned cans, and dust from the road or dried pools near the factory. The remedy is cleanliness and prevention of dust from getting into the milk. Mr. Ruddick read a paper on practical buttermaking. At the close of the meeting the 5th dairy class presented Superintendent Ruddick and his staff of instructors with a nicely worded and engraved address. The meeting was very successful, over 200 delegates being present.

Points re Skim Milk Pipes.

SIR,—You will pardon me for using a little space in your valuable paper, the medium through which many farmers and others have received valuable information in tilling, seeding, breeding, feeding, dairying, gardening, and building. I read with much interest, in a late issue, of E. D. Tillson's new pigery; his plan and intentions are good. We all find experience to be the best teacher. I have had a good deal on this line, and we profit by others' experience. There is one question I would like to ask, and Mr. Tillson may be able to answer it satisfactorily. We built here a pigpen last summer to accommodate 100 hogs. Milked 75 cows, handled from 3,000 to 4,000 pounds of milk daily, making cheese and butter, and had a good deal of skim milk and whey to feed. How does Mr. Tillson get his skim milk through his 1½-inch pipe from his creamery to his pigpen 30 rods away? I had fixed a 2-inch iron pipe to run mine into tank of 200 gallons, and found this difficulty: Running my separator at about 6,000 revolutions per minute and milk at about 80°, in a short time the foam or froth of the skim milk would get so thick as to clog up the pipe and back out the milk over my dairy floor. I forced cold, then hot water and steam through it, but still it would clog and run over, so

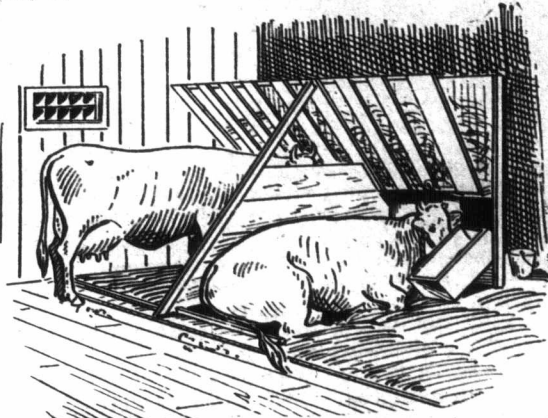
we took it away, and made an open trough, about 4 inches square, for the skim milk to run into, and sank a 200-gallon tank just outside the dairy, between the milk room and cheese room; purchased a rotary force pump for about \$25, placed it in the creamery, ran a belt from the main shaft to pump with 6-inch pulley, attached ½-inch pipe from pump into tank, also pipe from pump to pigpen, discharging into large tank there. I ran pump same time I was separating, forcing everything up into pigpen—milk, froth, whey, small pieces of curds, etc.—and had no more trouble after putting in rotary force pump. We got cast iron troughs made, oval bottoms. They answer well. No biting them to pieces or getting out of place.

I. LINTON,
Manager Silver Spring Creamery.

A Good Cow Stall—Ventilation, Etc.

SIR,—Every observing dairyman of experience knows that in order to be able to milk up to her full capacity a cow must, in this climate, be stabled very nearly if not all the time during winter. Any farmer with common sense and a little experience with stock must know that for health and satisfactory performance to permanently accompany continuous stabling the following things are, besides good feeding, absolutely essential: Plenty of light. That water, not ice cold, be given twice a day—better always before them. That the temperature does not vary unreasonably far from the best point, about 60 degrees. That ventilation be fairly good at least. That the cow be free enough to be able to lick herself to the tip of her tail. That the cow be kept clean.

If I met a farmer whose common sense could not show him how to make his stable sufficiently warm I would not trouble to tell him. But not so about ventilation. Fresh air should be admitted in front of the cattle, well up so as to avoid drafts striking the cattle. Bad air is carried off by means of a sufficiently large pipe set against the ceiling over the gutter. One end of it should penetrate the wall of the barn into the open air and then have an elbow built on it, running up the side of the barn and opening under the eaves. This pipe—the inside part—might be five feet shorter than the gutter. The end of it should be left about one-quarter open; then small openings on it a few feet apart, so that all the openings might equal the



total cross-section of the pipe. Of course there should be a regulator or "damper" put into it. But to have the cows tied so that they can lick themselves all over and yet be clean as in summer at grass—"that's the rub." With a few exceptional cows, tying with a long rope in a common stall will do it; but in the case of the many I believe there is but one way so far found out by which it can be done, and that is a properly constructed

HOARD STALL.

From my experience with it I cannot see how any sensible farmer having once seen a cow "enjoying life" in a good Hoard stall could regard the ordinary way but a miserable, old-fashioned affair that should be immediately superseded. A human criminal may very properly be put "in irons"; but a poor, harmless cow "in sticks" never, never; nor "chained to a post," nor condemned to lie in her own ordure. For most cases, however, a gutter 8 inches deep by 13 or 14 inches wide is better than the original way.

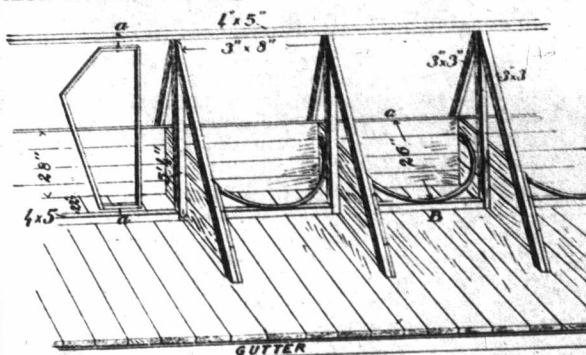
J. D. MCKINNON.
Cape Breton, N. S.

[NOTE.—The "Hoard" stall illustrated above represents one row of cows facing another row in single stall 3½ feet wide. A closely-boarded partition four feet high forms the front of stall. The feeding rack is for two purposes: 1st, to contain hay or roughage; 2nd, to force the cow when standing to place her hind feet in the rear of the cross bar seen just forward of the standing cow. By virtue of this bar the animal has always a dry, clean bed to lie in, thus keeping her clean from manure. In placing the bar across the stall bring the cow's head squarely up against the feeding rack, then just forward of her hind feet fasten down a two by three inch scantling. This will hold the bedding dry and clean.

The grain and ensilage box is placed on that side of the stall opposite where she usually lies. If placed sufficiently slanting the feed will easily work down to the end next the cow, so that she will not need to bring her hind feet into her bedding while feeding. The cow should be fastened with a halter to a ring in the center of the stall. The cut shows no gutter, which Mr. McKinnon recommends. It should be just back of where the cow stands while feeding.—ED.]

A Model Cow Tie.

The accompanying illustration represents the arrangement of the cow ties in the stable of the Nova Scotia Provincial Farm. The bows are of 1½ inch wooden carriage rims and are attached, as

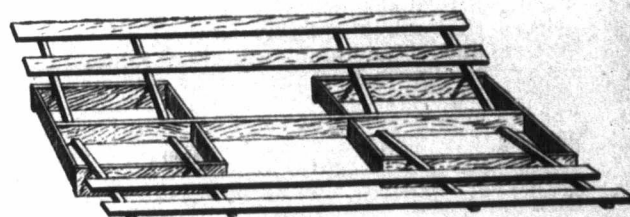


COW STALL, SHOWING MODEL TIE.

shown, to the partitions between the stalls, 2½ feet up from the floor and nearly opposite the front board of the manger, or the side next the feed alley (see cut). Each bow is fitted at the ends with iron eyes through which bolts pass to fasten them to the partitions; ends of two bows in joining stalls are thus held by one bolt. The ends of the bows are prevented from splitting by being bound at the ends with light bands held on by small bolts; these may be attached to the eyes. The bows are fastened just far enough forward so that their centers rest on the 4 x 5 inch back of the manger when left to themselves. This manger-back, as shown in cut, is 4 x 5 inches. Each cow wears a wide neck strap to which is fastened a snap with a swivel. The cow is fastened to the bow by snapping her neck strap into a ring which plays on the bow. The ring has about eighteen inches play on the center of the bow between screws. This, Mr. Fuller, farm manager, has found to give better satisfaction than greater liberty. The bow is very light, and rises and falls with the motions of the cow. Mr. Fuller has found from long experience this tie to be very satisfactory in allowing the cow plenty of freedom, and in keeping her clean. The latter result is obtained by reason of the bow rising and holding the cow back while she is standing, and when she lies down the falling of the bow tends to draw her forward on the clean bedding or floor. This tie requires single stalls, which in the case of those on the Nova Scotia farm are 3 feet 8 inches wide. The bottom of the manger is on a level with the floor where the cow stands. As shown on the left of the illustration, the same sort of stalls are used for the swinging stanchion. These, however, can be easily taken out by removing the pins A.A., and the bow can be fitted in as in the other stalls. Mr. Fuller claims to have found an advantage in spiking a 2 by 4 inch piece on the top of the 4 by 5 stanchion sill, which forms the rear of manger, just where the bow rests when the cow is lying down. This serves the two-fold purpose of preventing the cow from throwing her feed under her feet, and holding the bow a little higher when she is resting. One of our staff saw these ties in use in a very large herd in the U. S., which were as clean as cattle on pasture, besides appearing to be just as comfortable, bedded with planing mill shavings.

THE HELPING HAND.

A Handy Hay Rack.



D. C. B., Middlesex Co., Ont.:—"I enclose you a cut for a hay rack which will be suitable especially for the wide-tire wagon, which is much harder to turn with than the narrow tire. Take a 2½ inch thick by 8 or 10 inch wide soft maple or elm plank, any desired length. Then get two short sides for front, same width as center sill, only two inches thick; same for hind wheels, only they are to be longer. In them mortise two holes in (do not fasten them until the side pieces are marked out); now get your 2 x 4 inch pieces for the side pieces, lay them on each side of wheels so as not to touch; now mark center plank for holes 2 x 4 for the pieces to go into to hold the lower end; one from each side will go in same hole; make it about two inches from bottom of center sill. By having the wagon near by one can make it correct. All wheels are not the same width, nor the same height; but the main thing is to have the front short enough so the wheels will turn without touching. Any smart man should be able to make a rack with the help of cut and what I have written for the best agricultural paper, I am bold to say, in America.