

lastly, again, let the manufacturers of genuine butter deal only with those commission merchants who refuse to deal in butterine, and touch not the "unholy thing."

Milk as a Medium of Infection.

A recent epidemic of enteric fever which spread to a considerable extent in London (England), is another proof of how disease may be communicated by means of milk. It had previously been demonstrated that scarlet fever and diphtheria were disseminated by the same agency. The "Popular Science News" relates a series of experiments conducted by Dr. Dougall, in which he proved that of all natural bodies water had the greatest solvent power, first absorbing and then condensing more gases than any other fluid, and as milk contained 88 per cent. of water, the former fluid had naturally the same power. Having detailed the process by which milk became acid, curdled and putrid, he tested its infectious properties by enclosing in a jar a portion of certain substances which gave off emanations, together with a uniform quantity of milk, for a period of eight hours. The following table shows the substances used and how the infected milk operated on the sense of smell:—

1. Coal gas.....	Smell in milk—distinct.
2. Paraffine oil...	" " strong.
3. Turpentine...	" " very strong.
4. Onions.....	" " very strong.
5. Tobacco smoke	" " very strong.
6. Ammonia.....	" " moderate.
7. Musk.....	" " faint.
8. Asafoetida...	" " distinct.
9. Stale urine...	" " faint.
10. Creosote.....	" " strong.
11. Cheese (stale)..	" " distinct.
12. Chloroform...	" " moderate.
13. Putrid fish....	" " very bad.
14. Camphor.....	" " moderate.
15. Decayed cabbage	" " distinct.

Several other substances showed not only a strong smell, but also precipitates were observed, proving that chemical action had taken place. Similar offensive odors were produced in experiments with cream. A knowledge of these facts is necessary in order to guard farmers against keeping their milk stored near chambers occupied by sick persons, or letting it stand in the stables for any length of time, while milking. If any suspicion arises as to cleanliness of the apartments in which milk or cream has been kept, the safest plan is to boil the milk, and thus destroy all the germs of infection. Some hygienists even go so far as to say that all milk should be boiled before used. These experiments should also serve as a warning against allowing stagnant pools to exist around the premises.

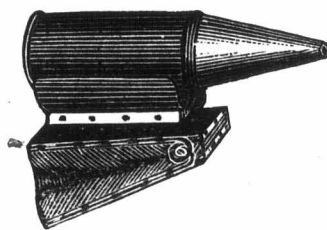
At a recent meeting of the North-western Dairymen's Association, a statement was made to the effect that one-third of the cows were milked at a loss, one-third at neither a profit nor a loss, and the other third had not only to make up for the losses of the former, but to determine the profits of the whole dairy industry. These facts, though perhaps not absolutely correct, have great force, and may also be applied to the cows of the Dominion. This defect may be attributed partly to bad stock, and partly to a bad system of feeding and management. The argument that labor costs nothing and feed costs very little, is too absurd for consideration. All the profits lie in extra labor, food and management.

The Apiary.

The Benefit of Smoke.

The Indiana Farmer says:—The use of smoke for controlling bees runs back as far as the domestication of the bees themselves, but the modern application far succeeds the old style "smudge." The belief in some minds that bees have a special spite against any one person more than another is not verified by experience. That some will be stung much oftener than others is easily accounted for by the difference in temperament and disposition. We give below the cut of a smoker, which is one of the most necessary articles in the management of bees.

The great secret charm by which bees may be controlled can be summed up in the one little word "smoke." Yet by the abuse of this mighty charm the object to be gained may be defeated. A too vigorous application of the remedy may precipitate the catastrophe which it is calculated to avert. The object of the smoke is to cause the bees to fill themselves with honey, as while in this condition they are less likely to sting. A little smoke at the entrance will cause the bees to rush to the honey and fill themselves; or it may be applied at the top of the frames with the like result. But if persisted in, before the bees have time to fill



up, many of them will be forced to leave the combs. It is the bees in the air, or a few who may be sitting farthest from the stores, from which you may expect the stings, and from which they will come nineteen times out of twenty. It is always best while handling bees to at least have the smoker burning, although you may not need it at all times, especially during the honey harvest. With beginners, it is best they should use smoke, until they acquire that confidence that they may resist the desire to drop a frame, or jerk a hand every time a bee sees fit to make the hand a resting place.

The first thing before disturbing the hive in any way, puff a few whiffs of smoke in at the entrance; this will generally drive in the sentinels, and also prevent any from coming out. If they are Italians, this will almost always be sufficient; but if they are the crosser kinds, it had better be repeated a few times. This will frighten and excite them, and they will at once fill themselves with honey. After waiting a few minutes, the lid or cover to the hive may be raised, but do it gently; in fact, always do everything gently about them, as all quick motions or jars of the hive tend to exasperate them.

As soon as you raise the lid a little, send in more smoke, and enough, if necessary, to drive them down and out of the way; then proceed to put on or take off boxes, or do all the work necessary. If they begin to come up or to dispute your right, use more smoke, to convince them you are master of the situation. But

from the very start just make up your mind that you can and will, and that is half of the battle. With Italians, after the first few puffs of smoke, they can often be handled for an hour or two without any more smoke, but with blacks or hybrids it may be necessary to repeat the dose every few minutes. Smoke does not injure them at all.

[These smokers can be had from E. L. Goold & Co., Brantford, Ont.]

Various Bee Notes.

At the winter meeting of the Champlain Valley Bee-Keepers' Association of Vermont, some interesting facts were elicited. One member said his Italian colonies had given an average of thirty-two pounds more of honey and as many swarms as his black bees. Italian bees die in wintering while black bees lived. J. E. Crane's 300 colonies yielded, in 1883, 25,500 pounds of combed honey and 1,000 pounds of extracted honey. L. C. Thompson's fifty-eight colonies yielded 5,000 pounds, one colony alone giving 250 pounds. The best reported yield from one colony was 273 pounds. The yield of H. P. Isham's ten colonies sold for \$151. G. S. Brown reported he had not been successful in doubling weak colonies in spring. He had found it better to take a comb of brood from a strong colony and give it to a weak one. H. B. Isham preferred to let the strong ones alone and take from the weak. Edson Smith takes two medium colonies, feeds them and then takes brood from these to help every weak colony. J. D. Brooks has lined bees for five miles, yet he lost many of his bees in crossing Lake Champlain, his apiary being located on the east shore and the distance across being three fourths of a mile. H. L. Leonard thought large apiaries should be located at least four miles apart.

PROFIT IN BEES.—That bee-keeping pays is no longer a question of doubt, says the Indiana Farmer. It pays and pays well, for all money and time invested, but it is not all play and no work. Bees require care and attention, as do all other kinds of God's creatures which man has subjugated for his own benefit. They need probably less care than fowls or farm stock, but what needs to be done must be done at the proper time, and those who cannot or will not do this will make but poor success in this industry.

Almost every one who keeps bees has more or less old combs to be made into wax. The easiest way to do this is to make a bag of the necessary size out of some loose cloth, like an inside coffee sack. Pack your comb in this, and sew or tie it up tightly; then put the bag into a boiler of hot water, and with something press it well down into the water. As the wax melts it will escape through the meshes of the bag and rise to the surface of the water, while the dead bee and other impurities will remain in the bag. Skim off the wax, re-melt, and work it into any shape you like.

A fine dressing of pulverized muck or of wood ashes applied in spring will benefit orchards. Wood pile scrapings are also good. If you have none of these use commercial manures, but fertilize them in some way. Barnyard manure is preferable for autumn use.