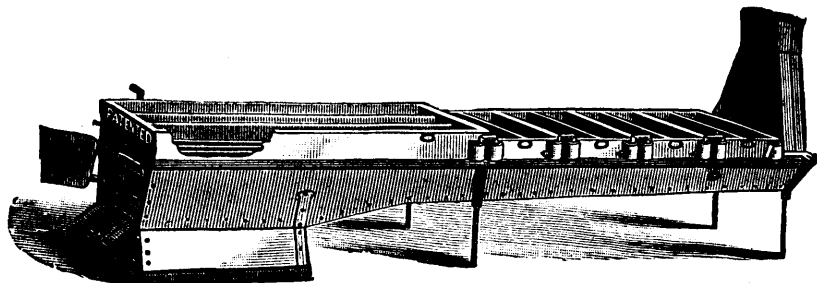


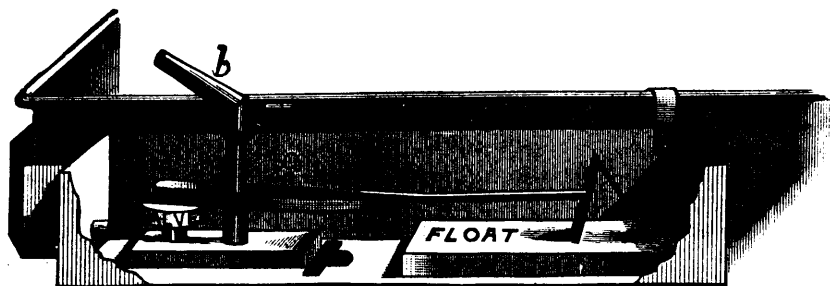
The Champion Evaporator shown in the accompanying cut, meets these requirements. It consists of a corrugated pan on the front of the arch, which increases the heating surface. The corrugations run lengthwise and give nearly twice as much heating surface as though the pan had a flat bottom. Back of this corrugated pan are three small pans, having flat



The Champion Evaporator.

bottoms. They are connected with each other and with the corrugated pans by siphons.

The sap enters the evaporator through a regulator which is placed in a small pan, hung on the outside of the corrugated pan, near the front end. This regulator is automatic, and keeps the sap at the required depth about one and a half to two inches in the corrugated pan. As long as there is sap in the storage tank, which is connected with the regulator by means of a one-inch hose, there is certain to be sap in the evaporator, and once in the evaporator it is carried from pan to pan by the syphons until it reaches the last pan next the chimney, where it is finished into syrup, and drawn off at the proper density, which is 13 pounds to the gallon, imperial measure. The operator is relieved of all dipping of the sap from the time it leaves the tank until it is finished into syrup and if a syrup thermometer is used, he can be absolutely certain that his syrup is the right density, and will neither sour nor crystalize in the bottom of the vessels it is stored in.



The Regulator.



The Siphon.

The siphons after being started the first time, do their work automatically, feeding the pans at the proper rate and keeping the liquid evenly distributed throughout all the pans. They clarify the sap, as they will not take up the scum or the sediment. The scum remains in the first section of the corrugated pan, and is removed with a skimmer, and the sediment remains in the bottom of the pockets in which the syphons rest. Another feature worthy of note is the interchangeability of the small pans. Each evaporator has three or more, which are all the same size. The pan used for syrup one day is placed next to the corrugated pan the following day, and whatever lime has collected upon it is removed by the thinner sap. Every sugar maker is familiar with the lime or nitre which is present in maple sap, and which deposits itself upon the bottom of the pan in which syrup is finished. This often becomes troublesome, by burning on the pans, but with this evaporator the difficulty is removed by changing the syrup pan daily.

~

"What's the difference between football and war?"  
 "Football is war without any humane object in view."  
 —Chicago Record.

## Managing Brood Mares\*

This can hardly be called a veterinary subject in every sense of the term, but as many of the large horse-breeding establishments employ veterinarians as superintendents, it may not be out of place to present a paper on the above subject. On the stock farm where the only revenue derived

from a mare consists in the production of a foal, it is necessary for the owner to use his best effort toward getting every one of his mares in foal each year. Then, after getting them in foal, the risk of accidents tending to produce abortion should be carefully considered and all the seemingly minor details of everyday management and feeding should be attended to with the utmost care and attention. As regards the ordinary causes of abortion (exclusive of contagious abortion and those that are a sequel to debili-

tating diseases, such as influenza, pneumonia, etc.) I have noticed cases that I am sure were produced by the following causes, as the abortion took place in a few hours after the apparent mishap had occurred:

1. Slipping on icy spots and either falling or producing a strain.
2. Fighting with other horses and getting kicked in the abdomen.
3. Getting pinched in box stall doors while entering stall (this is where the doors swing out).
4. Getting into deep snowdrifts or much holes, thereby producing strains.
5. Mares in searching for a place to rub, or as it seems to be with some of them from pure curiosity, will get into all kinds of traps, such as between windmill towers, or try to get through some opening that is about half wide enough, and I have seen them get into a feeding pen for sucking colts where they had to get on their knees to crawl under; of course when they come to get out they

usually get excited and try to jump over the top, get hung up and abortion follows.

6. Another cause is abuse from attendants. Some mares are very stubborn and aggravating about going into the barn at night and have to be driven in from the yard by force; then after getting them into the barn it is still harder to run them into their stall; finally when they do go into the right stall it is a very natural thing to strike them over the rump with a halter, board, or anything that comes handy just as they jump through the door. I saw this done once, causing the mare to fall; this took place while letting them in from the yards at evening and the mare lost her foal that night. Of course there are many other causes that produce abortion, and the foregoing are simply examples of a few of the minor accidents that have come under my notice and might happen at almost any time.

The remedy for this class of accidents is *prevention*; if there is ice in the yard and there is too much of it to be chopped up, ashes or manure may be spread over it and then wet down so that it will adhere and freeze to the ice

\*Paper read by Mr. J. P. Foster, at meeting of Veterinary Society, Ontario Veterinary College, Toronto.