

home separator has also become more common, and, if intelligently used, should give better results than the hand machine, as a more even speed can be obtained. Where the motive power is steam, turbine machines are most popular, and in good hands do very good work. With an oil-engine plant a hand-power machine, with fast-and-loose pulley attachment, a friction-clutch, or governor-pulley, is usually found, all of which are more or less satisfactory, but require careful watching to see that the belts or clutches are not slipping. It is absolutely necessary to try the speed of the machine at intervals during each separating. This can be easily done by counting the number of revolutions of the driving-shaft on the separator.

#### TREATMENT OF SEPARATOR.

Return the first two or three gallons of skim-milk to the feed-tank, as it has always a fairly large percentage of butter-fat left in it. While the best temperature for separating is the natural heat of the milk as it comes straight from the cow, good results will be obtained with fresh milk not colder than 86° Fahr. If the milk from one milking is left over till the next, it will be necessary to heat it to 96° Fahr. before separating, and it will be all the better if held at this temperature for a few minutes to ensure a thorough heating of the fat-globules. Cold milk will give less cream with a higher test, but will mean a very serious loss of fat in the skim-milk. This is caused by the increased viscosity, or stickiness, of the cold milk, which prevents a clean separation of the fat. The amount of milk fed into the bowl is regulated by a float, which will act well with the tank supplied with the machine; but if a larger tank is required the pressure on the float will be greater, and care must be taken not to feed the machine too fast, as this will result in a thin cream and loss in the skim-milk. Underfeeding is also to be avoided. An uneven feed will cause an accumulation of thick cream in the bowl, and a consequent loss in skimming. Maintain a uniform feed, speed, and temperature throughout the run, and flush out at the finish with a gallon of skim-milk or clean warm water, to force all the cream out of the bowl. Wash the separator *immediately* after separating is finished, and do not forget to keep the frame sweet and clean as well as the bowl and tinware. Set the machine to deliver a cream containing not less than 40 per cent. of butter-fat, but do not be surprised if the test should vary a few points either above or below that from time to time, without altering the cream-screw. The test will be higher if the machine is run overspeed, the milk too cold, the feed not sufficient or irregular, and the cows are going off in milk, &c. Thin cream will result from slow speed, overfeeding, fresh cows, cold