The machine, consists of a round steel disc with a spindle like that of the De Laval Separator bowl, and of test-boxes of platina-plated brass provided with a graduated glass tube. The steel disc is in one piece with the spindle and is run in the usual frame of the De Laval Separator. The speed required is the same as that required for separating milk and no greater regularity of speed is needed. From a cavity at the top of the steel disc the test-boxes (see engraving) are put into cylindrical holes bored radically and almost level in the disc, and in this position the boxes are lying during the rotation. Up to twelve tests can be made simultaneously.

The method consists simply in addling some acetic acid to the milk, whereby the casein in the milk is dissolved, which makes it possible by heating the mixture and subsequent separating by centrifugal force to extract the butter-fat and read off the quantity in the graduated glass tube of the test-box.

A great many comparative analyses, as stated, prove this new method of ascertaining the butter-fat in milk to be perfectly reliable, and its result to be but little depending on the individual skill of the person making the tests, consequently this method can easily be used on every milk farm.

Bearing these facts in mind there should be no obstacle in the way of introducing this valuable apparatus also in this country wherever milk testing is required, as in towns for city analysis or police inspection; on farms for valuation of different systems of feeding and different butter-producing capacity of cows; in dairies, buying milk or cream from different patrons, for paying according to value; and at dairies for controling the work of the Separator by testing the skim-milk.

To give your readers an idea of what this machine has already accomplished, I will mention that at the Swedish fair already referred to before, the milk from about 800 cows was tested every day, at every milking. As it may perhaps interest also the Americans to see the average of the different breeds and crossings, I will here give a *resume* of the result.

SWEDISH BREEDS.

Highland	4 290
Herregards	4,188
Stromsholmk	3.648
Grades	3,878

LOWLAND BREEDS.

Dutch	4.023
East Friesland	3,420
Oldenburger	3,192
Angler	3,460

OTHER PURE FOREIGN BREEDS.

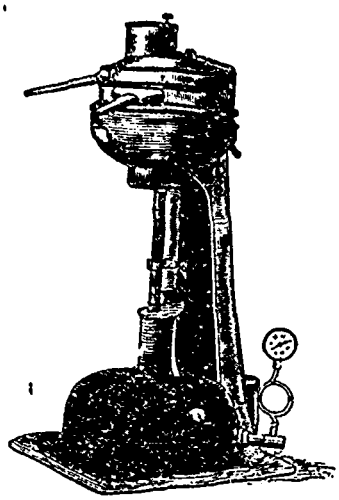
Ayrshire	3,889
Yorkshire	3,530
Algauer	3 3€4
Norwegian Mountain	4,503

CROSS BREEDS.

Stromholms (Swedish), 1-8 Short-horn, 1-8 Algauer	3,858
Herregards (Swedish), Yorkshire Short-horns.	3,423
Heregards (Swedish), Yorkshire Short-horns, East Friesland	3,185
Herregards (different herds)	2,968
Dutch and Herregards	3,545
Swedish and Dutch	3,562
Swedish and East Friesland	3 350
Oldenburger and 1-2 Ayrshire	3,778
Ayrshire (different herds)	3,760
Ayrshire and Swedish	3,460
Ayrshire and Short horn	3,787
Katrineholm (Swedish) and Ayrshire	3,328
3-4 Algauer	3,217
1-2 "	3,883
Grades	3,464

The Lactocrite is also constructed so that it can be run in the Vertical Hand Separator.

THE DE LAVAL TURBINE SEPARATOR.



This is certainly next to his Separator and Lactocrite, the most ingenious invention and greatest boon that even Dr. De Laval has ever offered to the dairy world. It does away with steam engines, shaftings, valves, gears, belts and machinists in dairies. The spindle carrying the centrifugal cylinder or disc is driven directly by a jet of steam without the intervention of either of these factors just mentioned, and by a very clever device the turbine is so constructed that the wear from friction renders the running bearing or joint more and more steam-tight, instead of causing it ever to leak. It can be applied to the churn, butter worker, etc., and the waste steam can be used for warming the milk and water, as well as several other purposes. It runs very smoothly and can be driven up to any height of speed. The consumption of steam is about the same per horse-power as when engines are used, but the saving in the first cost of establishing a factory and in the running expenses is so considerable as to save the cost of the turbine itself within a year or so. No mechanical knowledge is required for managing it, the speed being regulated by opening or closing a common steam cock, raising or lowering the steam pressure, which is indicated by a usual steam guage fixed at the inlet on the steam pipe close to the turbine. With no belts and shafting, it does not require a great deal of room, the bottom of this machine measuring only 3 x 2 feet and it can be placed in any corner, without any foundation whatever. The steam turbine can also be applied to churns, and there are already several turbine dairies of considerable extent erected in Sweden and the satisfaction is unanimous. The starting and stopping of the machine is done much easier, and especially in churning it will prove of great value, as it enables the attendant to stop the churn gradually and as slowly as desired, a fact of great importance in making good butter. The inventor has, with this machine, tried to meet the requirements of these who, aware of the profits that butter making with modern appliances offers to the farmer, still c anot venture into it for the reason that it costs too