(No Model.)

L. J. AUGUSTENBORG & R. HANSEN.

CENTRIFUGAL MILK TESTER.

No. 495,653. Patented Apr. 18, 1893.

Fig. 1.

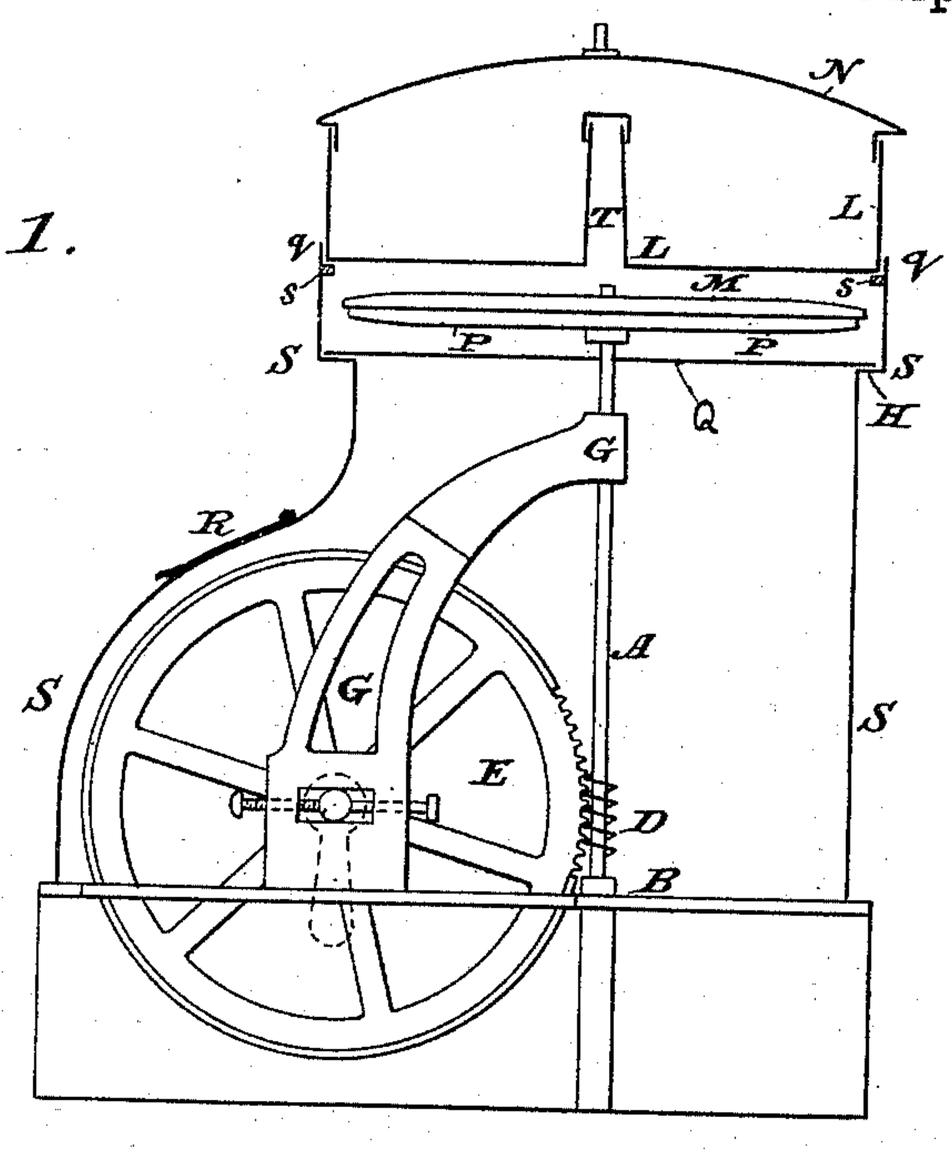


Fig. 2.

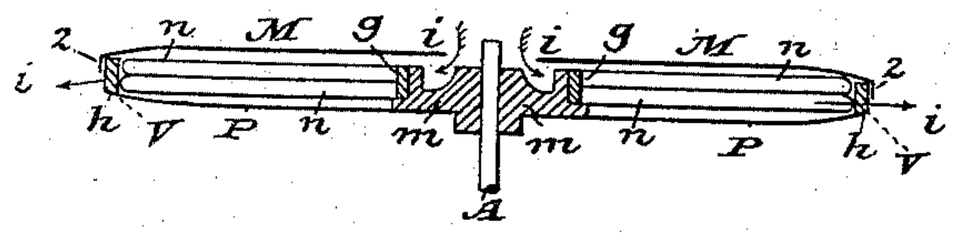
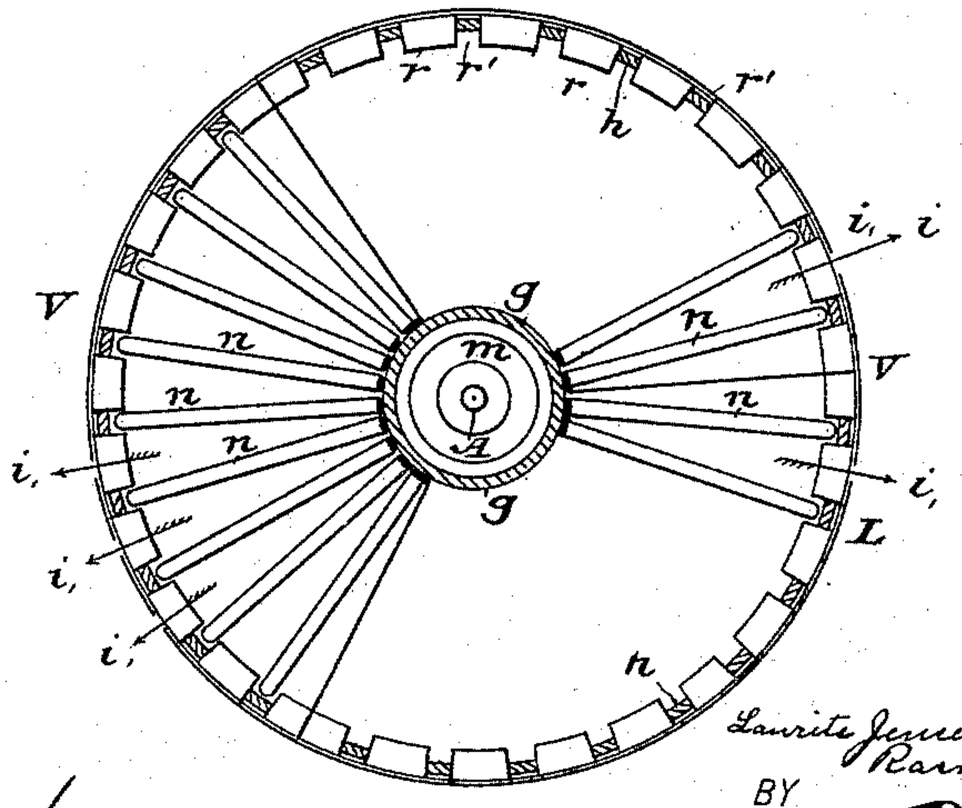


Fig. 3.



WITNESSES:

E. B. Bolton

E. K. Sturtevant.

INVENTORS.

Laurits Jensen Augustenborg
Rasmus Hansen

BY Richards & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

LAURITS JENSEN AUGUSTENBORG AND RASMUS HANSEN, OF KOLDING, DENMARK.

CENTRIFUGAL MILK-TESTER.

SPECIFICATION forming part of Letters Patent No. 495,653, dated April 18, 1893.

Application filed October 24, 1891. Serial No. 409,755. (No model.)

To all whom it may concern:

Be it known that we, LAURITS JENSEN AUGUSTENBORG and RASMUS HANSEN, citizens of Denmark, residing at Kolding, Jutland, Denmark, have invented certain new and useful Improvements in Centrifugal Milk-Testers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention includes a revoluble disk carrying the trial glasses, means for heating the air about the said disk or carrier, and the peculiar construction of the carrier, whereby the trial glasses are arranged with space between them, and the air is caused to circulate around the trial glasses when the carrier is revolved.

In the drawings, Figure 1— is a vertical section through the apparatus; Fig. 2— a separate view in section of the trial glass-disk, and Fig. 3— a sectional plan view of the same.

The trial glasses *n* Figs. 2 and 3 are arranged radially about the hub *m* of the disk P, said hub having a rubber ring *g* against which the inner ends of the glasses are seated and the disk P having an outer flange V to the inner side of which the angular metal pieces *r* are fixed so as to form sockets *r'* between them, into which the outer ends of the trial glasses fit. A suitable rubber piece *h* is placed in each recess to afford a yielding bearing or seat for the glasses. The disk has a cover M having a flange *z* fitting down over the flange V of the disk P and said cover is also provided with a central opening or openings to provide inlet passage *i* for the surrounding air to pass into the disk and around among the glasses to finally escape through the openings *i'* in the flange V. The disk with its hub, flange and cover constitutes the carrier for the trial glasses and it is carried by a shaft A stepped in a bearing B and supported at its upper end by the bearing C of a frame or standard G, which frame has journaled therein a shaft carrying a cog wheel E meshing with a worm D on the shaft A, the wheel being turned by a handle K on the shaft of the wheel E. The parts described are contained within a casing S having a shoulder H and a flange *q* extending upwardly therefrom. The closure for the casing consists of a water chamber L resting on an interior rib *s* of the flange *q*, said chamber having a cover N. The trial glass carrier is located just below the water chamber and below the disk P a plate Q extends across the casing and rests upon the shoulder H. This plate with the water chamber and the flanges *q*, forms a space within which the trial glass carrier may revolve, when driven by the described connections, viz. the shaft A, the worm and the cog wheel with its handle. When so driven the air is drawn into the carrier and among the trial glasses being expelled at the periphery of the carrier through the openings *i'*. The water chamber is filled with hot water in order to heat the air about the carrier and thus the warm air circulating among the trial glasses in which the liquid is subjected to centrifugal action produces the desired effect.

We claim as our invention—

In a centrifugal milk tester, the combination with the shaft A and means for revolving the same, of the carrier comprising the disk on the said shaft, having a flange around its outer edge and having radially arranged seats for the trial glasses, the cover for the disk forming therewith a receptacle for the trial glasses, said cover having a central opening for the admission of air and the flange of the disk having openings, whereby the air is directed among the trial glasses to circulate from the center to the periphery.

In testimony whereof we have affixed our signatures in presence of two witnesses.

LAURITS JENSEN AUGUSTENBORG.
RASMUS HANSEN.

Witnesses:
N. SCHIORRING,
M. NILLSEN.