(No Model.)

J. D. FREDERIKSEN & P. RASCH.

CENTRIFUGAL MACHINE FOR TESTING MILK AND CREAM.

No. 330,779. Patented Nov. 17, 1885.

Fig. 1

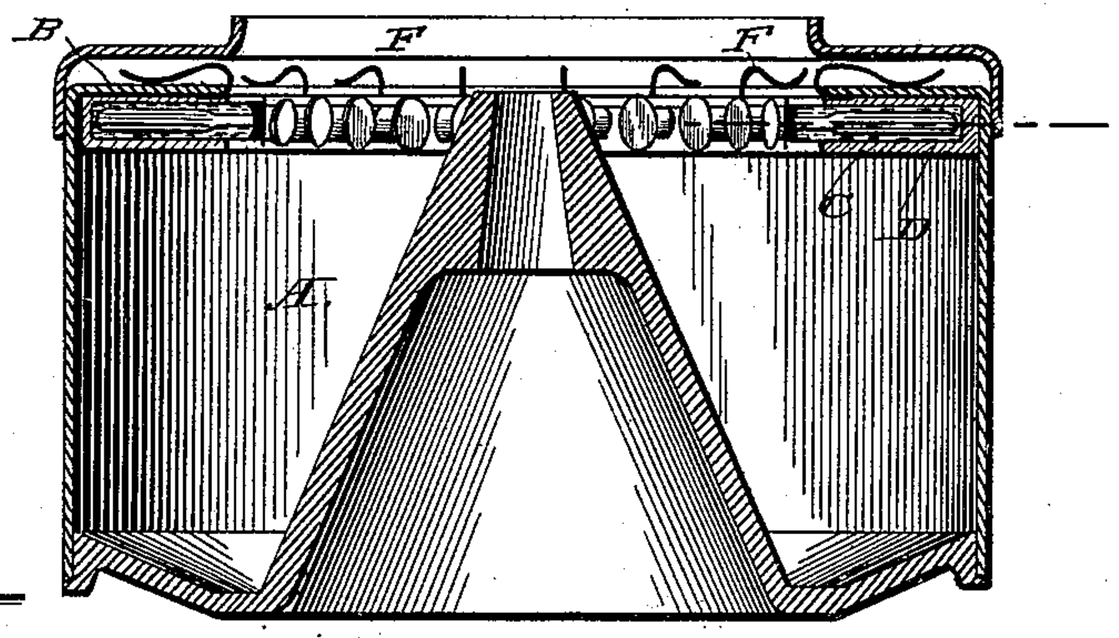


Fig. 5

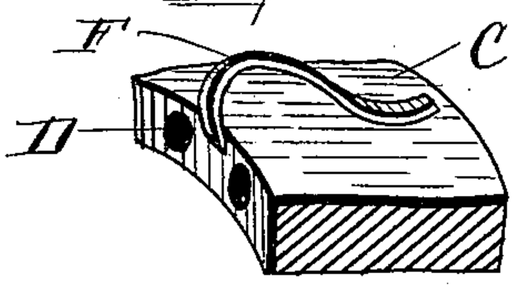


Fig. 2

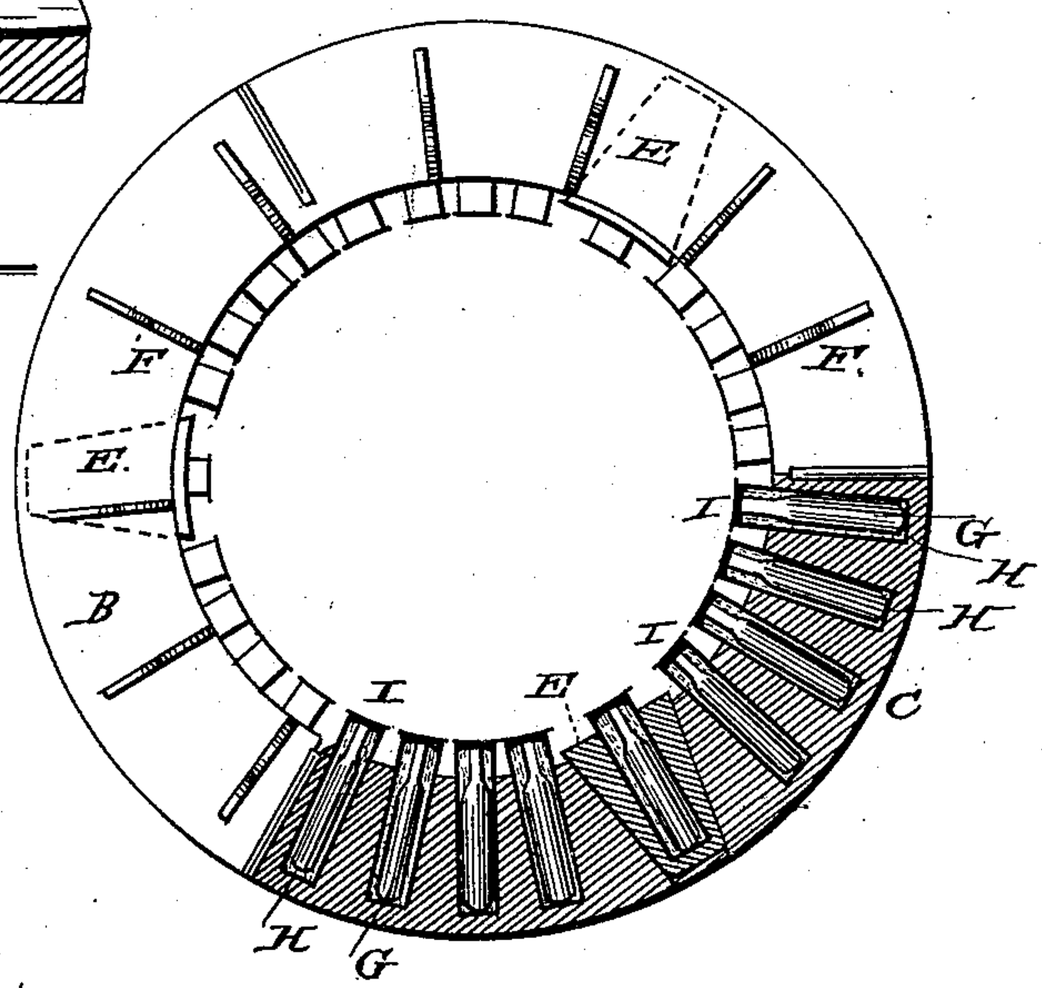


Fig. 3

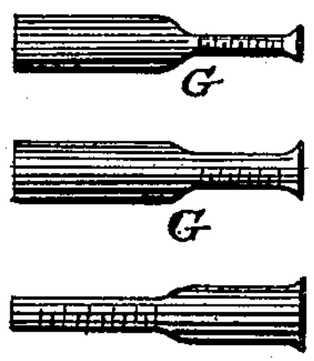
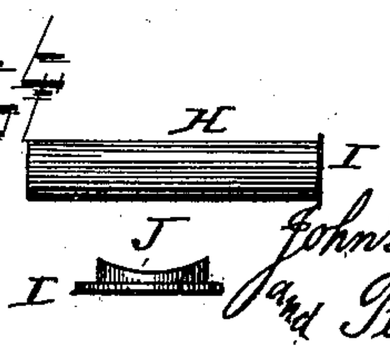


Fig. 4



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CENTRIFUGAL MACHINE FOR TESTING MILK AND CREAM.

SPECIFICATION forming part of Letters Patent No. 330,779, dated November 17, 1885.

Application filed July 19, 1884. Serial No. 138,191. (No model.)

To all whom it may concern:

Be it known that we, JOHN D. FREDERIKSEN, of Little Falls, in the county of Herkimer and State of New York, and PETER RASCH, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Testing Milk and Cream; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a vertical sectional view of the cylinder of a centrifugal creamer, showing our improved apparatus for testing milk in position. Fig. 2 is a top view of the same with the cover removed, showing a portion of the apparatus in horizontal section; and Figs. 3 and 4 are detail views of the test tubes or bottles and of the metallic casing for the same, and the stopper for both tube and casing; and Fig. 5 is a perspective detail view of a portion of one of the segmental blocks.

Similar letters of reference indicate corresponding parts in all the figures.

Our invention has relation to apparatus for testing the richness of milk or fluids constituting milk, such as skimmed milk, buttermilk, whey, or cream, and it contemplates certain improvements upon the apparatus shown and described in an application filed by us this day; and it consists, to that end, in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the cylinder of a centrifugal creamer of any desired construction, which cylinder has an inwardly-projecting flange, B, near its upper end. A number of segmental blocks, C, of the same construction as the blocks shown and described in our other application, and provided with radiating bores or recesses D in the same manner, are placed under the flange and secured by means of wedge-shaped blocks E in the same manner as the blocks in our other application; but for the purpose of further securing the blocks and preventing them from falling down, the blocks are provided upon their upper sides, at the inner edges, with springs F, having their ends doubled outward and bearing against the upper side of the flange, thus clamping the flange and securing the blocks.

For the purpose of preventing the test bottles or tubes from breaking, (the said tubes being shown at G in the drawings, and being of the same construction as in our former application,) we inclose the tubes in cylindrical casings H, of metal, which are of a diameter somewhat larger than the tubes, and are filled with water or similar fluid surrounding the tubes, which fluid cushions the test-tubes.

For the purpose of preventing the water and the contents of the test-tubes from flowing out when the tubes are placed in their horizontal position, the casings are provided with flanged stoppers, I, which stoppers are provided upon their inner sides with suitable soft packing, J, closing the mouths of the test-bottles and preventing the contents of the said tubes and the casings from becoming mixed or flowing out.

Having thus described our invention, the operation of which is similar to the operation of the machine or apparatus described in our other application, we claim and desire to secure by Letters Patent of the United States—

1. The combination of the cylinder of a centrifugal creamer provided at its upper end with an annular inwardly-projecting flange, an annular frame composed of blocks having radiating recesses for the reception of test-tubes, and doubled clamping-springs secured to the upper inner edges of the blocks and clamping the flange of the cylinder, as and for the purpose shown and set forth.

2. The combination, in an apparatus for testing milk, of the described annular frame having radiating recesses or bores opening in the inner side of the frame, the said frame

fitting within the cylinder of a centrifugal creamer, a number of metallic casings fitting in the bores or recesses, a number of test tubes or bottles of a diameter somewhat smaller than the diameter of the casings, and flanged stoppers fitting over the mouths of the casings and having soft packings closing the mouths of the bottles, as and for the purpose shown and set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

JOHN DITLER FREDERIKSEN.
PETER RASCH.

Witnesses:
J. P. HAUSEN,
F. REINAU,
ROBT. DAWSON,
WM. THOS. DAWSON.