

No. 650,529.

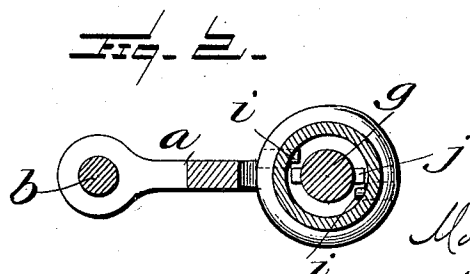
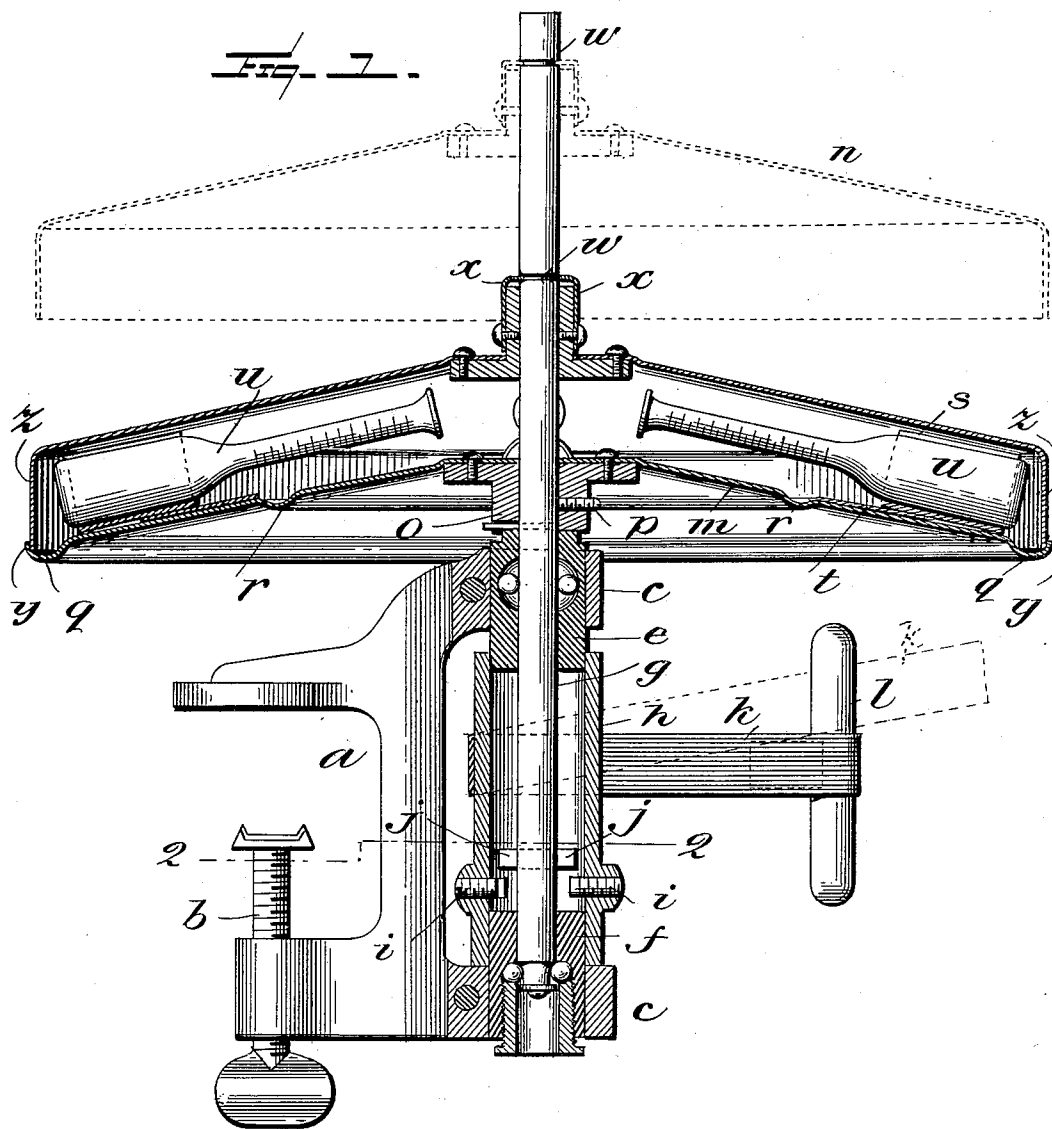
Patented May 29, 1900.

M. EGGEMAN.
CENTRIFUGAL TESTING MACHINE.

(Application filed Feb. 12, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:
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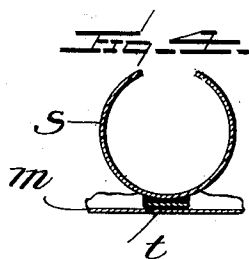
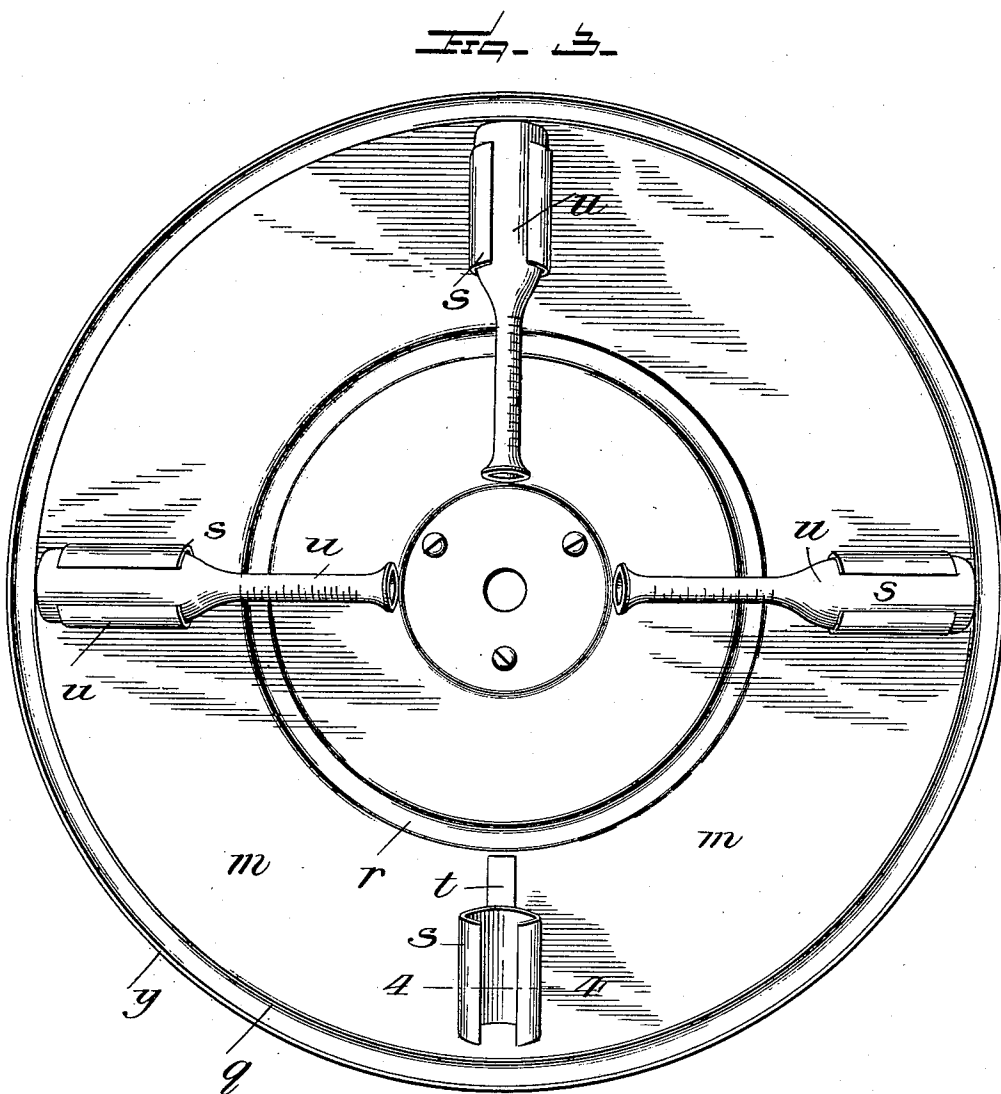
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

MORIZ EGGEMAN, OF NEW YORK, N. Y.

CENTRIFUGAL TESTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 650,529, dated May 29, 1900.

Application filed February 12, 1900. Serial No. 5,010. (No model.)

To all whom it may concern:

Be it known that I, MORIZ EGGEMAN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Centrifugal Testing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of centrifugal testing-machines which are adapted to be operated by hand-power and which are employed for testing milk and other liquids for scientific purposes, the present invention relating to an improvement on the testing-machine embraced by my application, Serial No. 734,548, filed October 23, 1899, and relating more particularly to the construction of the revolving disk or drum carrying the testing-vials.

In the accompanying drawings, Figure 1 is a vertical section of my improved machine, and Fig. 2 a detail horizontal section thereof on line 2 2 of Fig. 1. Fig. 3 is a plan view of the disk forming the lower part of the revolving drum, and Fig. 4 a detail section on line 4 4 of Fig. 3.

Referring to the drawings, *a* denotes a bracket provided with a clamping-screw *b*, by which it may be attached to a table, shelf, or other support, said bracket being provided with ears *c*, within which are clamped, by screws *d*, sleeves *e f*, preferably provided with ball-bearings for the rotating-drum-carrying shaft *g*. Surrounding the sleeves *f* is a driving-sleeve *h*, provided with pins *i*, projecting within its inner wall and adapted to engage a pin *j*, with which the shaft *g* is provided. The sleeve *h* has a limited vertical play between the ears *c* of the bracket *a* and is to be rotated by a strap *k*, provided at its ends with handles *l*.

The rotating drum consists of a vial-carrying disk *m* and a cover *n*, the said disk *m* being attached to the shaft *g* by means of a hub *o* and a set-screw *p*. The disk *m* is formed of sheet metal, and to properly stiffen the same it is provided with an annular peripheral bead *q*, the upper edge of the circumferential upwardly-projecting lip or flange *y* of which is about on a line with the body of

the said disk, the latter being also preferably provided with an intermediate bead *r*.

The vial-holders consist of sleeves *s*, preferably attached to the disk *m* by being soldered directly thereto or to straps *t*, soldered to said disk, or by being soldered to said straps at their inner parts and at their outer parts directly to said disk. These sleeves *s* are preferably formed open, as shown, so as to elastically clasp the testing-vials *u*, which are adapted to be inserted into and withdrawn from said sleeves by an endwise movement of said vials.

The shaft *g* is provided with small notches or annular grooves *w*, adapted to be engaged by spring-catches *x*, with which the cover *n* is provided, so that the cover may be held in its operative position (denoted in full lines in Fig. 1) or may be lifted to an inoperative position, (denoted by dotted lines in Fig. 1,) in which latter position it will be retained by said spring-catches *x*. When the cover is thus lifted to its raised position, vials may be inserted into or withdrawn from the vial-holders by endwise movements, this operation being much more convenient than where it is necessary to entirely remove the cover from the machine when the vials are to be inserted or removed. The spring-catches *x* may be disengaged from said grooves or notches *w* simply by lifting or pressing down on the cover *n* with a gentle force.

The upwardly-projecting lip or flange *y* of the peripheral bead *q* of the disk *m* encircles the downwardly-projecting flange *z* on the cover *n* when the latter is in its operative position, and thus, in cooperation with the spring-catches *x*, serves to hold the said cover securely in place. In other words, the annular concave channel in the upper side of the peripheral stiffening-bead *q* serves as a receptacle for the annular flange *z* of the cover *n* when said cover is in its operative position, and the annular flange *y* of the said peripheral bead is about on a line with the inclined body of the disk *m*, so that the said flange *y* offers no obstruction to the vials *u* when the same are being inserted or removed endwise from the sleeves or holders *s*, which are rigidly attached to the said disk.

In the operation of the machine the attend-

ant takes hold of the handles l , with which the driving-strap k is provided, and by pulling upward on the strap, as denoted by the dotted lines in Fig. 1, the sleeve h is lifted so that its pins i will engage with the pin j of the drum-carrying shaft, and thus cause the latter to be rotated with said sleeve. The pins i and j are disengaged from each other at the return movement of the strap either by slackening the latter so that the sleeve h will fall by gravity or by pulling downward on said strap to cause the sleeve to descend far enough to disengage the driving-pins from each other.

From the foregoing it will be apparent that I provide a centrifugal testing-machine with a vial-carrying drum from which the vials may be removed or into which they may be inserted without entirely removing the cover from the machine and without necessitating the lifting of the vial-holding clips to clear the vials from the peripheral flange of the vial-carrying disk or drum when the vials are to be inserted or removed, this operation of inserting or removing the vials being therefore more convenient than in my former construction. Moreover, the disk m , provided with the stiffening circumferential bead, is stable, cheap to make, and convenient in use, the upper edge of the upwardly-projecting flange at the outer edge of said bead being about on a line with the body of the disk, so that the vials may be readily slipped in and out without interference with said flange and without entirely removing the cover n from the machine.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a centrifugal testing-machine, the combination with a rotating sheet-metal disk

provided with a series of vial-holders rigidly connected therewith, said disk having a peripheral stiffening-bead disposed with its hollow side upward and having a circumferential, upturned lip, of a cover provided with an annular downturned lip or flange adapted to be received within the annular channel afforded by said bead.

2. In a centrifugal testing-machine, the combination with a rotating sheet-metal disk provided with a series of vial-holders rigidly connected therewith, said disk having a peripheral stiffening-bead disposed with its hollow side upward and having a circumferential upturned lip, of a cover provided with an annular downturned lip or flange adapted to be received within the annular channel afforded by said bead, and means for retaining the said cover in its operative position and for holding it in a raised or inoperative position when the vials are to be inserted or removed.

3. In a centrifugal testing-machine, the combination with the vial-carrying disk m having the annular stiffening-bead q disposed with its hollow side upward and having the peripheral upturned flange y , of the cover n provided with the annular downturned flange z adapted to be received in the annular channel afforded by said bead, said cover being also provided with one or more spring-catches x , of the rotating-drum-carrying shaft g having the grooves or notches w to be engaged by said catches to permit the said cover to be retained either in an operative or an inoperative position.

In testimony whereof I affix my signature in the presence of two witnesses.

MORIZ EGGEMAN.

Witnesses:

AUGUSTUS F. PRAATZ,
MAURICE HEYWARD.