

J. L. MORISONS.
 AUTOMATIC LOCKING DEVICE.
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1,042,948.

Patented Oct. 29, 1912.

Fig.1.

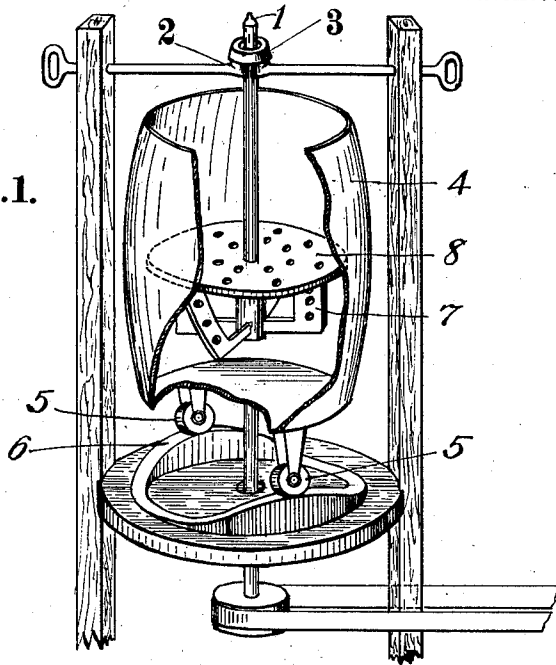


Fig.2.

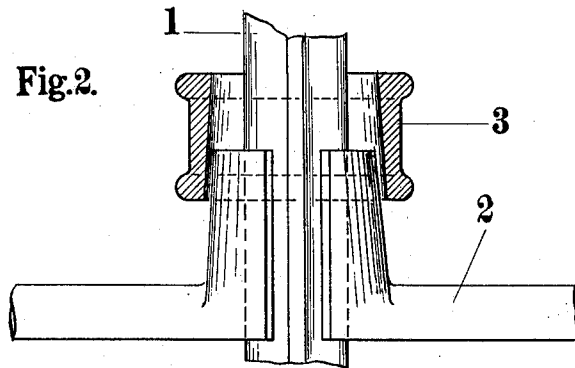
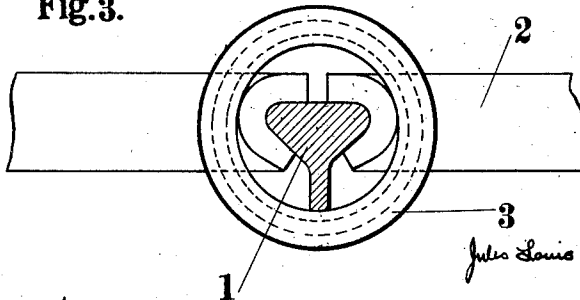


Fig.3.



Witnesses: George Ham,
 Harry William Blake

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UNITED STATES PATENT OFFICE.

JULES LOUIS MORISONS, OF ANVERS, BELGIUM.

AUTOMATIC LOCKING DEVICE.

1,042,948.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed March 27, 1909. Serial No. 486,235.

To all whom it may concern:

Be it known that I, JULES LOUIS MORISONS, manufacturer, a subject of the King of Belgium, residing at 109 Rue Dambrugge, Anvers, Belgium, have invented a certain new and useful Automatic Locking Device, of which the following is a specification.

This invention relates to locking devices adapted for securing movable jaws or the like to shafts and the like in a vertical position.

This locking device consists of a ring of any shape with an interior circular opening in the form of a truncated cone; that is to say, the lower opening is larger than the upper one. At the slightest movement of the jaws this ring descends automatically by its own weight and again secures the jaws in position upon the vertical shaft. The ring is arranged so as to come into contact with an edge of each of the two jaws which are to be secured, and a projecting ridge or ledge upon the vertical shaft to which they are to be secured, so as to grip the jaws continually and increasingly. The advantage of the circular opening in the ring is that it presses on three points or on three lines of points, on the jaws and the shaft while otherwise, the ring presses on a surface.

Figure 1 shows the device as applied for example to a churn, which is alternately rotated from left to right and from right to left the device being employed for holding the wood paddles in the required position. Fig. 2 shows a partly sectional view of the device to an enlarged scale. Fig. 3 shows a plan view of the device corresponding to Fig. 2.

As shown in the drawings, the churn consists of a barrel 4 mounted on two wheels 5. These wheels 5 ascend and descend on a suitable cam-surface 6. When the barrel 4 is rotated the wheels 5 ascend and descend, thus giving to the barrel 4 an ascending and descending movement at the same time that it rotates.

The perforated or non-perforated paddles 7 are arranged in a helix and are held in such a manner by the shaft 1 that they do not shift in spite of the fact that the milk which is set in motion by the barrel 4 tortions and strains them in different directions. The paddles 7 are surmounted by a

fixed perforated disk 8, on which the milk exercises pressure owing to the rise and fall of the barrel 4.

The vertical shaft 1, to which are secured the paddles 7 and which is to be held by the jaws 2 of the device is triangular in form, one side being in the form of a projecting ledge or ridge. The locking ring 3 Fig. 2 is adapted to slide on the jaws 2 without any need for hammering. The ring 3 descends on the jaws by its own weight and holds them rigidly to the shaft. In order to release the locking ring it is sufficient to give it a few upwardly directed blows. The edges of the jaws 2 diminish in thickness toward the top, and it is on these that the ring presses, the third point of contact being the ridge or ledge of the shaft 1.

During working the barrel 4 is rotated for 1, 2, 3, or more turns, in one direction, and then for 1, 2, 3 or more turns in the opposite direction. Since the wheels 5 always follow the cam-surface 6, the barrel 4 will rise and fall continually. The paddles 7 are held rigid by the locking ring 3 which obviates any slackness which might be produced in the jaws 2.

What I claim as my invention and desire to secure by Letters Patent is:—

1. An automatic locking device comprising a stationary vertical shaft of triangular section, two separate stationary jaws engaging with said shaft, and a ring adapted to engage simultaneously with the shaft and the two jaws, said ring by its weight producing the necessary pressure to insure engagement between the shaft and the jaws.

2. An automatic locking device comprising a stationary vertical shaft of triangular section, two separate stationary jaws, each having a conical outer surface and each engaging with an apex of the section of said shaft and a ring having a conical hole, said ring being adapted to engage simultaneously with the third apex of the section of the shaft and the two jaws, and by its weight producing the necessary pressure to insure engagement between the shaft and the jaws.

3. An automatic locking device comprising a stationary vertical shaft, a ledge between the jaws projecting from said shaft, two separate stationary jaws said jaws engaging with the shaft, and a ring adapted to engage simultaneously with the ledge and

the two jaws, the said ring by its weight producing the necessary pressure to insure engagement between the shaft and the jaws.

4. An automatic locking device comprising a stationary vertical shaft, a ledge projecting longitudinally from said shaft, two separate stationary jaws, said jaws engaging with the shaft, each jaw having a conical outer surface, and a ring having a conical hole said ring being adapted to engage simultaneously with the ledge and the two

jaws, and by its weight producing the necessary pressure to insure engagement between the shaft and the jaws.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

JULES LOUIS MORISONS.

Witnesses:

ALEX. HANSSENS,
G. DE LERSY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
