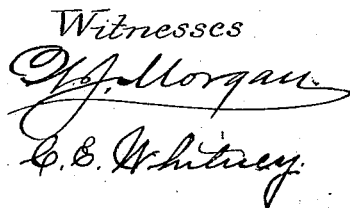


2 Sheets—Sheet 1.

No. 525,279.

Patented Aug. 28, 1894.



Inventor

Anders Andersen Pindstofte.

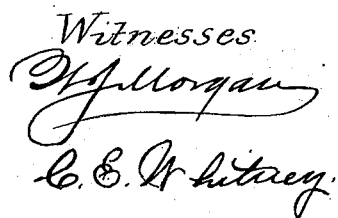
by A. P. Thayer.

Attorney

2 Sheets—Sheet 2.

No. 525,279.

Patented Aug. 28, 1894.



Inventor

Anders Andersen Pindstofte

by A. P. Thayer
Attorney

UNITED STATES PATENT OFFICE.

ANDERS ANDERSEN PINDSTOFTE, OF COPENHAGEN, DENMARK.

BOTTLE-CORKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 525,279, dated August 28, 1894.

Application filed May 11, 1893. Serial No. 473,887. (No model.)

To all whom it may concern:

Be it known that I, ANDERS ANDERSEN PINDSTOFTE, manufacturer, a subject of the King of Denmark, residing at Copenhagen, in the Kingdom of Denmark, have invented certain new and useful Improvements in Bottle-Corking Machines; and I 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.

My invention consists of improved and simple apparatus for holding the bottle while inserting the cork, compressing the cork before inserting it, and easily inserting the cork, and, finally, releasing the bottle without shocks and jars all as hereinafter fully described reference being made to the accompanying drawings, in which—

Figure 1, is a left hand side elevation of the machine with some parts in section. Fig. 2, is a front elevation. Fig. 3, is a plan view of the standard and part of the bottle holding apparatus, the standard being sectioned on line *y, y*, Fig. 2. Fig. 4, is a horizontal section on line *x x*, of Figs. 1 and 2, showing the cork compressing apparatus preparatory to compressing the cork. Fig. 5, is a like section showing the cork compressed preparatory to being forced into the bottle. Fig. 6, is a side elevation of the ram carrying slide showing the inclines for working the movable dies, and Fig. 7, is a front elevation of said slide.

A represents the bed frame of the machine, B the standard supported on said bed frame, and C the table supported on the top of the standard.

D represents the bottle holding table, it is fixed vertically adjustable in the standard F, by its stem *e*², set in a socket of the standard, and a set screw *d* for securing said stem at any desired height. The lower end *i* of the standard F has a seat *i'* in the lower cross bar of a yoke K pivoted at *e*³ to and suspended from the forked end of a lever E which has its fulcrum pivot *e* in the housings *e'*, projecting forward of the standard B at its base. The side *f'* of the standard F at its fronting the main standard B of the machine is wedge shaped and the front side of said standard F bears against the insides of the

cross bars H bolted on to the ends of arms *e*⁴ projecting from the front edges of housings *e'*.

The lever E has a counter-balance weight G, to overbalance the bottle holding table and press the bottles *x*, up against the elastic perforated pad attached to the under side of the table C and between which and the table D the bottles are to be confined while receiving the corks forced in by the ram *v*, the pad protects the bottles from breakage by the shocks.

The wedge F' having back support on lugs *f*², is made to press against the inclined side *f'* of standard F and grip said standard firmly against cross bars H for holding the bottles firmly against the thrust of the ram while forcing in the corks. The said wedge F' is connected by a rod L with the vertically moving slide N which works the ram V; the rod L is connected to the chambered head of the wedge in such manner that while the wedge takes effect on the standard F and comes to rest before the termination of the down movement of the slide N, the rod L may continue to move therewith without obstruction by sliding in the end of the wedge in a kind of slack joint, said end having the slot *e*⁵ adapted to admit the headed end of the rod and to retain it for raising the wedge.

The slide N has guide ways O provided through the table C and on the vertical guide rods P supported on table C; at the upper end said slide has the arm *p'*, supporting the ram V in due relation to the perforated pad *c'* and a corresponding hole *c* through table C for forcing the corks into the bottles. The slide N is connected to the hand lever M for working it up and down, said lever being pivoted at *m'* to a bracket of the standard B, and it has a counterbalance weight S, hung on the link R pivoted to the end of the short arm of said lever and coupled by link T with a fixed pivot *t*, so that when the lever is thrust down quickly in forcing in the cork the limit of the thrust of the ram on the cork will be controlled by the links without shocks, and the slide N will be thereafter quickly raised by the weight. The dotted lines *m*² in Fig. 2, show the positions of the lever and links when the links take effect in stopping the action of the ram on the cork by a quick motion of the

lever, from which positions the weight S quickly returns the parts to the normal positions after the release of the lever by the operator.

5 The connection of the lever M with the slide N is made by a roll n' pivoted to the lever and working between the shoulders n^2 of a notch in the side of the slide for an anti-friction device and to compensate for the lateral
10 play of the pivot center relatively to the bar of the slide due to the arc in which said center swings.

The slide N has an incline n^3 to work a cork compressing jaw v'' pivoted at v^3 , on the table C, said incline acting on the anti-friction
15 roll r , in the long arm of said pivoted jaw, said slide N also has another incline n^4 , to work the sliding cork compressing jaw v' by acting on the anti-friction roll r' in the sliding stock s' carrying said jaw v' ; with this
20 incline n' there is also a counter incline n^5 to effect the reverse movement of jaw v' ; the spring t' effects the reverse movement of jaw v'' . With these movable jaws there is also
25 a stationary jaw v between which and the movable jaws the corks applied as in Fig. 4, when the jaws are open, are compressed over the orifice c through the table and under the ram v preparatory to being forced into the
30 bottles.

Figs. 4 and 5 illustrate the jaws and mode of operation. When the ram carrying slide is raised the jaws open as in Fig. 4, a cork l is then dropped between the jaws as seen in
35 Fig. 4, jaw v'' is then closed compressing the cork sidewise between stationary jaw v and sliding jaw v' , the latter then moves forward compressing the cork in the other direction and at the same time placing it over the hole
40 c , through the table and under the ram which then descends and forces the cork into the bottle.

I claim—

1. The combination of the cork compressing
45 jaws, consisting of a fixed jaw, a sliding jaw provided with a roll and a pivoted jaw also provided with a roll, with the cork inserting ram, the slide to which said ram is attached, said slide provided with inclines against

which said rolls take, a bottle holding table, 50 an elastic cushion for the top of the bottle, and actuating mechanism substantially as described.

2. The combination of the cork compressing jaws, consisting of the fixed jaw, sliding jaw, 55 and the pivoted jaw with the cork inserting ram, bottle holding table, elastic cushion for the top of the bottle, the slide carrying the ram, inclines on the slide for actuating the compressing jaws, and the lever for actuating 60 the slide substantially as described.

3. The combination of the counter weighted vertically moving bottle supporting table, the ram, the slide carrying the ram, the bottle, 65 the wedge adapted to clamp the table support, and provided with a chamber, and a rod connecting said slide and wedge, said rod having a head fitting in said chamber of the wedge and adapted to lift the wedge and release the 70 table, and to permit the slide to over-run the wedge after it jams the table support substantially as described.

4. The combination of the bottle holding table, the vertically adjustable support of said table, the yoke supporting the standard, the 75 counter-weighted lever supporting the yoke, the standard clamping wedge, the ram carrying slide, and the rod connecting the said slide and wedge, said wedge provided with a chamber, and said rod having a head fitting in said 80 chamber of the wedge and adapted to lift the wedge and release the table, and to permit the slide to over-run the wedge after it jams the table support substantially as described.

5. The combination of the ram carrying 85 slide, the lever for working the slide, the extension arm of the lever, the links coupling said extension arm of the lever with a fixed pivot, and the counter-weight, said counter-weight mounted on the link pendent from 90 the extension arm substantially as described.

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

ANDERS ANDERSEN PINDSTOFTE.

Witnesses:

LAURITZ NIELSEN,
CHRISTIAN LARSEN.