(No Model.)

F. W. BOLDT & H. E. SCHRADER.

MACHINE FOR CORKING BOTTLES.

No. 263,676. Patented Sept. 5, 1882.

Fig. 2

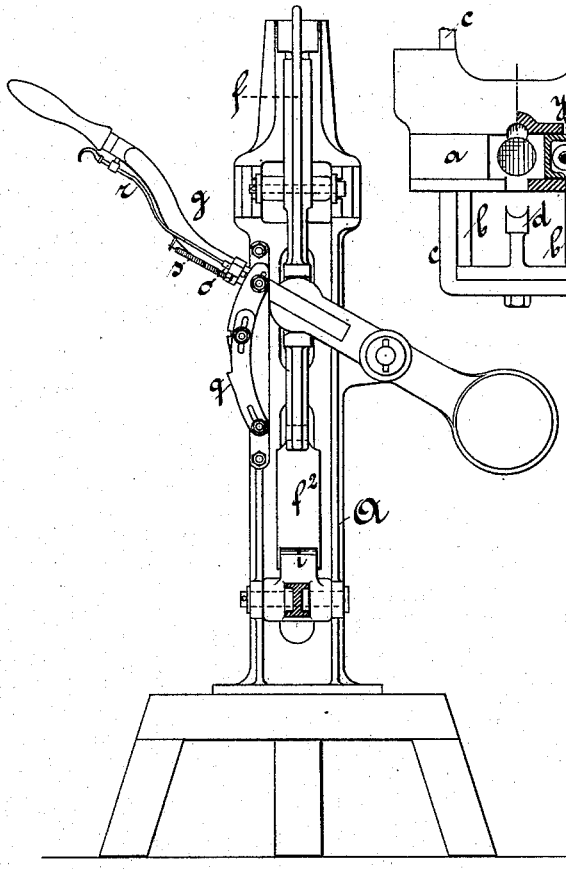


Fig. 3.

Fig. 1.

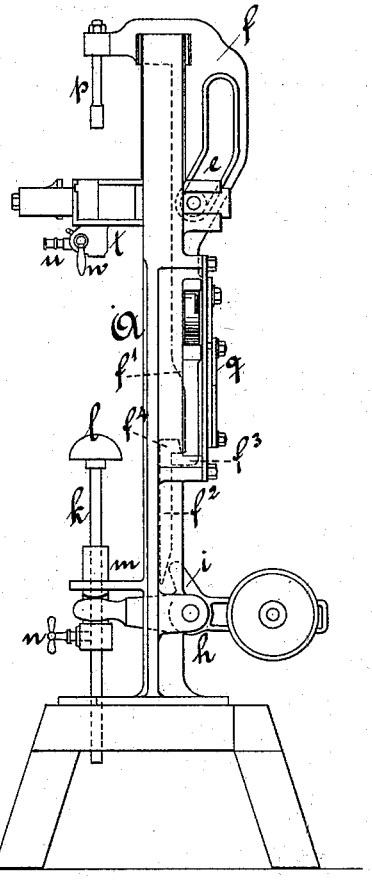


Fig. 4.

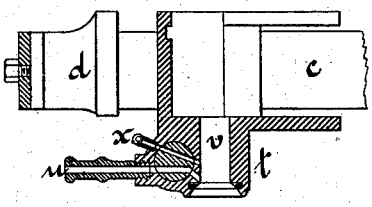


Fig. 6.

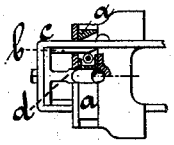


Fig. 5.

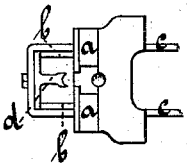
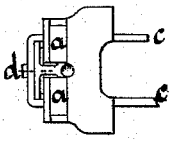


Fig. 7.



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UNITED STATES PATENT OFFICE

FRIEDERICH W. BOLDT AND HERMANN E. SCHRADER, OF HAMBURG, GERMANY, ASSIGNORS TO BOLDT & VOGEL, OF SAME PLACE.

MACHINE FOR CORKING BOTTLES.

SPECIFICATION forming part of Letters Patent No. 263,676, dated September 5, 1882.

Application filed March 22, 1882. (No model.) Patented in Germany April 2, 1880, No. 13,186.

To all whom it may concern:

Be it known that we, FRIEDERICH WILHELM BOLDT and HERMANN EMIL SCHRADER, both subjects of the Emperor of Germany, residing at Hamburg, in the German Empire, have invented certain new and useful Improvements in Machines for Corking Bottles, (for which we have obtained a patent in Germany, No. 13,186, bearing date April 2, 1880,) of which the following is a specification.

Our invention relates to improvements in corking-machines in which the cork after being compressed is pushed in the neck of the bottle by a reciprocating piston; and the objects of our improvements are, first, to provide anti-friction rollers to the cork-compressing jaws; second, to afford facilities in filling bottles with aerated liquids; third, to regulate the motion of the main lever by the action of a click to a toothed segment; and, fourth, to apply a combination of wedges for arresting the bottle-stand while the cork is driven into the bottle. We attain the objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the complete machine, and Fig. 2 a back view thereof. Fig. 3 is plan of the cork-compressor, partly in section. Fig. 4 is a sectional side elevation of the filling apparatus for aerated liquids, and Figs. 5, 6, and 7 show three consequent positions of the cork-compressor.

The compressing-jaws *a*, which press the cork in an oblong form, are operated by two wedge-shaped projections, *b*, on the sliding frame *c* of the die *d*. Motion is communicated to the horizontal sliding frame *c* by means of the inclined slit *e* of the vertical sliding frame *f*, the raising and lowering of which are effected by the main lever *g*. After the cork has been brought into an oblong shape by the action of the jaws *a*, then the die *d* compresses it to a cylindrical form, corresponding exactly with the diameter of the channel *v* of the mouth-piece *t*. To facilitate the motion of the jaws *a* they are provided with anti-friction-rollers *y*, whereon the projections *b* slide. The part *f'* of the vertical sliding frame *f* forms a wedge, and is provided at its lower end with a projection, f^3. Another wedge, f^2, sliding loosely within the column A, and provided with a projection, f^4, which rests on the projection f^3, serves to hold the lever *h* immovably by means of the finger *i* when the piston *p*, attached to the sliding frame *f*, commences to drive the cork in the bottle. The lever *h* is forked at its front part, and surrounds with this fork the narrow part of the adjustable collar *m* of the guiding-rod *k*, which bears the bottle-support *l*. The collar *m* may be lowered or raised, according to the height of bottle, and fastened by the set-screw *n*. The main lever *g* is provided with a click, *o*, which gears in a toothed segment, *q*, in order to arrest the main lever *g* in any position desired. This click *o* is actuated by a connecting-rod, *r*, and drawn toward the segment *q* by a spring, *s*.

For bottling aerated liquids—champagne, seltzer-water, or other similar drinks—a cock, *w*, is connected with the mouth-piece *t*. The cone of the cock *w* contains two openings, which serve to provide a communication of the channel *v* respectively with the air and the apparatus wherefrom the liquid is drawn. Therefore the said openings correspond with the bores *x* and *u* of the mouth-piece *t*. Through the bore *u* the liquid passes to the bottle. When the cock *w* is opened the second bore, *x*, allows the air to escape from the bottle. During the filling the upper part of the channel *v* is closed by the cork, to which effect the lever *g* is arrested in its proper position by the combined action of the click *o* and the toothed segment *q*.

The operation of the machine is as follows: When the handle of the lever *g* is pressed down therewith also the sliding frame *f* is lowered. This motion causes the horizontal sliding frame *c* to be drawn by means of the inclined slit *e* toward the cork lying just above the channel *v*. Thereby the jaws *a* are moved toward one another in consequence of the rollers *y* sliding at the wedge-shaped projection *b*, and so the cork at first is brought in an oblong shape, Fig. 6, and afterward in a cylindrical one, when the roller of the sliding frame *c* has reached the crossing of the vertical slit with the incline *e*, Fig. 7. At the same time the incline *f'* of the vertical sliding frame *f* has pushed the wedge f^2 down-

ward, the pointed end of which, penetrating between the front of the stand A and the finger *i* of the lever *h*, causes the bottle-stand *l* to be kept immovably, because the lever *h* is hindered from swinging downward, while the distance between the bottle-stand *l* and the mouthpiece *t* is fixed by the height of the bottle to be corked. Before the handle of lever *g* is lowered entirely the latter may be arrested by means of the click *o* and the segment *q* in order to allow the filling of the bottle before corking.

Having thus fully described our invention, what we desire to claim, and secure by Letters Patent, is—

1. In machines for corking bottles, the combination of the sliding jaws *a* with the sliding frame *c* and the wedge-shaped projections *b*, substantially as set forth.

2. In machines for corking bottles, the combination of the sliding jaws *a* and anti-friction rollers *y* with the sliding frame *c* and the wedge-shaped projections *b*, substantially as set forth.

3. In machines for corking bottles, the combination of the main lever *g* with the click *o*, the connecting-rod *r*, the spring *s*, and the toothed segment *q*, substantially as specified.

4. In machines for corking bottles, the combination of the sliding frame *f*, provided with the wedge *f'* and projection f^3, the loose wedge f^2, having a projection, f^4, with the lever *h*, the finger *i*, the bottle-support *l*, the guiding-rod *k*, and the collar *m*, substantially as described.

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