(No Model.)

K. F. C. PETERSEN.

MACHINE FOR CORKING BOTTLES.

No. 263,721. Patented Sept. 5, 1882.

Fig. 1.

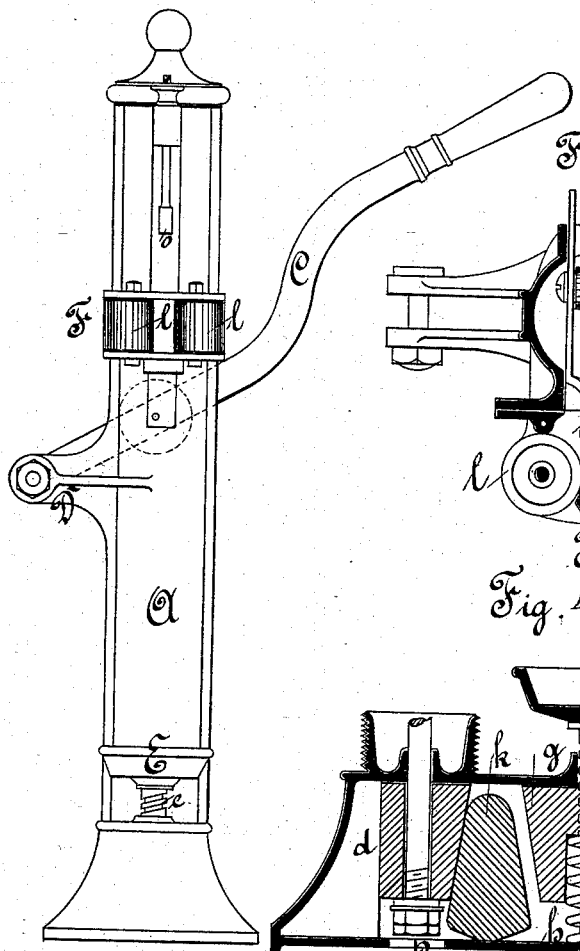


Fig. 2.

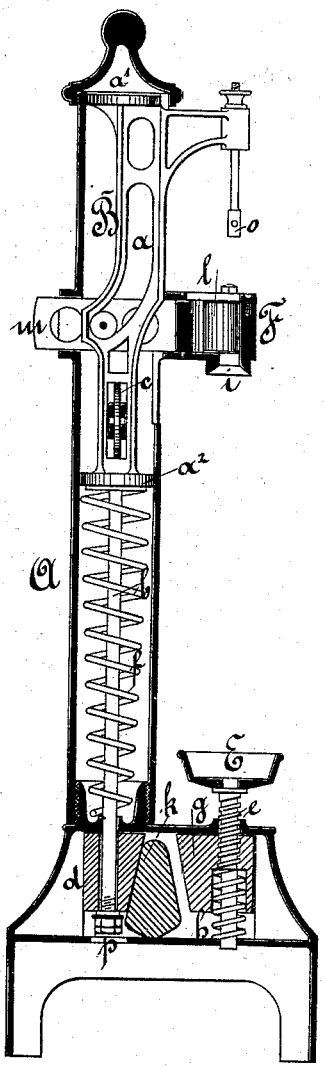
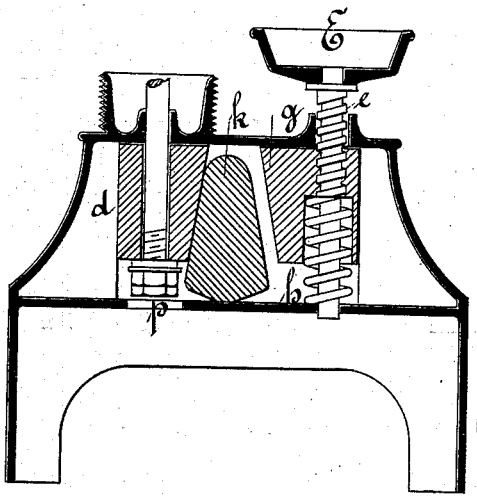


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

KARL F. C. PETERSEN, OF HAMBURG, GERMANY.

MACHINE FOR CORKING BOTTLES.

SPECIFICATION forming part of Letters Patent No. 263,721, dated September 5, 1882.

Application filed February 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, KARL FERDINAND CHRISTIAN PETERSEN, a subject of the Emperor of Germany, residing at Hamburg, in the German Empire, have invented a new and useful Machine for Corking Bottles, of which the following is a specification.

My invention relates to improvements in bottle-corking machines in which the cork, before entering the bottle, is compressed by means of a horizontal guided die; and the objects of my improvements are, first, to arrange the main moving parts within a hollow column; second, to keep the bottle to be corked tightly in its proper position; third, to reduce the weight of the machine by employing springs instead of the generally-used counter-weights; and, fourth, to compress the cork and to drive the same without injury into the bottle-neck. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the entire machine, and Fig. 2 a sectional side elevation thereof. Fig. 3 is a horizontal section of the cork-compressor, and Fig. 4 a vertical section of the foot of the machine.

Similar letters refer to similar parts throughout the several views.

A is a hollow column, wherein the sliding piece B, provided with two pistons, a' and a^2, at the top and at the bottom, can be moved up and down by means of the lever C. The latter, which has its fulcrum at the bracket D, is provided at that part which reciprocates inside of the column A with a roller, *c*, for which a slit is arranged in the sliding piece B. This sliding piece B is connected with the wedge-shaped block *d* in the foot of the machine, by means of the connecting-rod *b*, which is surrounded by the spiral spring *f*. The latter serves to raise the sliding piece B when no power is applied to the lever C.

The bottle-stand E is screwed in the wedge *g*. The lower part of the screw-bolt *e* serves as a guide for the spring *h*, which raises the block *g*.

Between the two mentioned blocks *d* and *g* is arranged the loose wedge *k* in the foot of the machine, which can be moved horizontally.

A bottle, when placed at the stand E, is raised at first only by the tension of the spring *h* against the mouth *i* of the cork-compressor F. By pressing down the handle of lever C the sliding piece B is lowered, and therewith the block *d*, which pushes the wedge *k* toward the block *g* and causes the stand E to be kept in the proper position corresponding with the height of the bottle.

The cork-compressor F is composed of the nearly-semicircular die m', the two vertical rollers *l*, and the die m^2, fastened to the sliding piece *m*, which is pushed toward the compressing-rollers *l* by means of the vertical sliding piece B. The latter is provided for this purpose with a curved slit, *a*, which guides the roller *n*, attached to the horizontal sliding piece *m*. Heretofore such guiding-slits formed an inclined straight line, by which arrangement the compressing-die is pushed forward with an equal speed. I attain by my construction that the velocity of the progress of the cork is diminished according to the increase of its compression.

The nuts *p* at the lowest end of the connecting-rod *b* serve to adjust the position of the horizontal sliding piece *m* by raising or lowering the vertical sliding piece B.

The operation of the machine is as follows: When the bottle to be corked has been placed at the stand E the handle of lever C is pressed down, which motion causes the advancing of the die m^2 toward the rollers *l*, because the roller *n* of the horizontal sliding piece *m* slides inside the curved slit *a* of the vertical sliding piece B, the latter being connected with the lever C by means of the roller *c*. When the rod *b*, attached to the sliding piece B, is lowered far enough, the wedge *d* slides down and pushes the wedge *k* toward the wedge *g*, the latter being arrested therewith in its proper position, in so far as not to allow any more lowering of the bottle-stand E. In consequence the bottle is fixed in the right position for receiving the cork, which, after being compressed, as above described, is pushed in the bottle's neck by means of the stamp *o*, attached to the vertical sliding piece B.

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

1. In a corking-machine, the combination of the column A, containing the main movable parts of the machine, with the sliding piece

B, provided with the pistons a' and a^2, substantially as described.

2. In corking-machines, the combination of the lever C, the sliding piece B, and the rod b with the spiral spring f, substantially as set forth.

3. In corking-machines, the combination of the bottle-stand E with the wedges d, k, and g, the rod b, with nuts p, the sliding piece B, and the lever C, substantially as and for the purpose specified.

4. In corking-machines, the combination of the rollers l with the dies m' and m^2, substantially as described.

5. In corking-machines, the combination of the horizontal sliding piece m with the vertical sliding piece B, reciprocating inside the hollow column A, and provided with a curved slit, a, substantially as and for the purpose specified.

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