

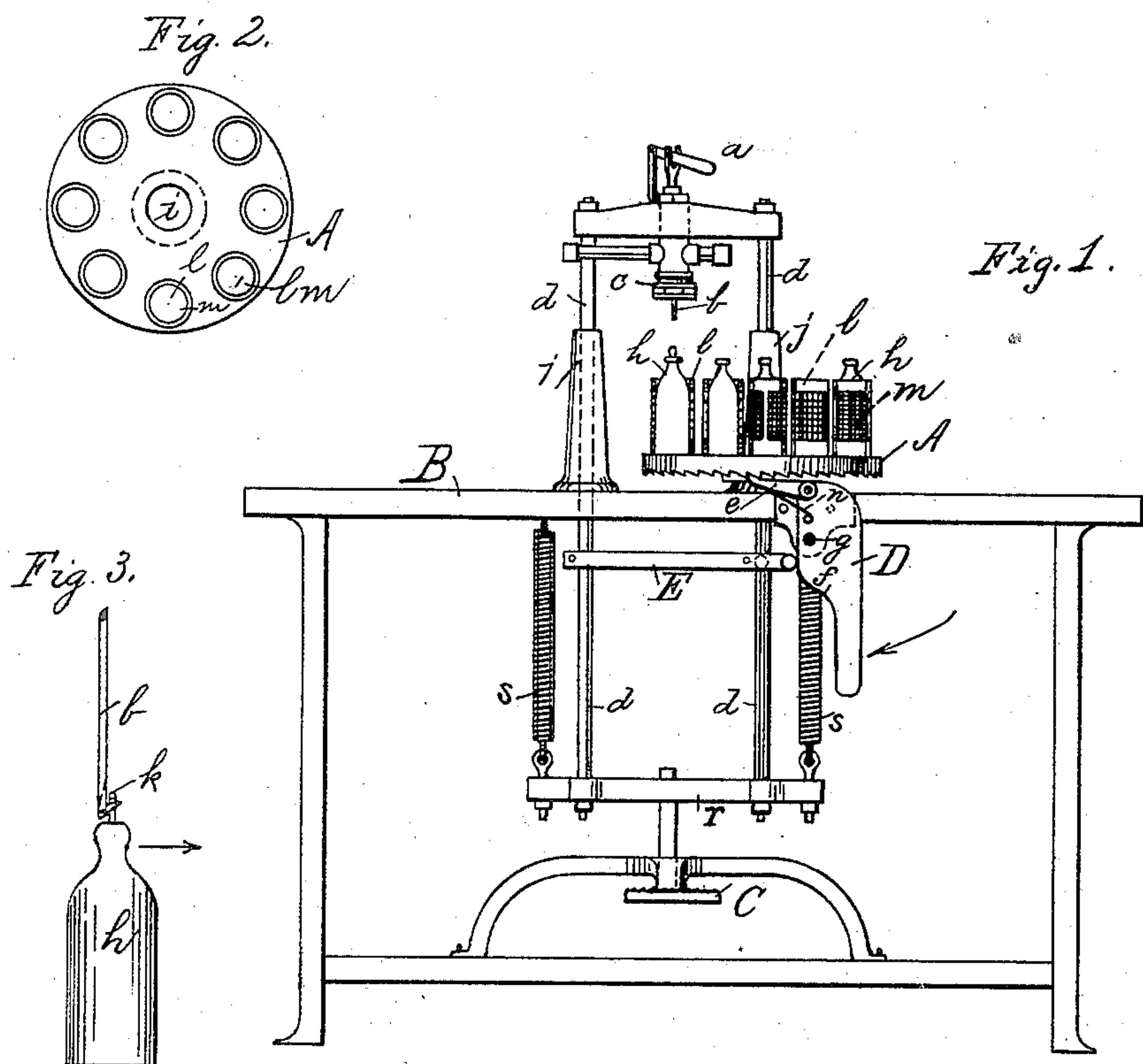
(No Model.)

W. HAFNER & S. GEER.

BOTTLE FILLING MACHINE.

No. 309,455.

Patented Dec. 16, 1884.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM HAFNER AND SHUBAEL GEER, OF CHICAGO, ILLINOIS.

BOTTLE-FILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 309,455, dated December 16, 1884.

Application filed September 17, 1883. (No model.)

To all whom it may concern:

Be it known that we, WM. HAFNER and SHUBAEL GEER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have jointly invented new and useful Improvements in Bottle-Filling Machines, of which the following is a specification.

Our invention relates to improvements in bottle-filling machines in which the bottle is incased in a cup of suitable material perforated to prevent the hands from being cut should the bottle break from extreme pressure in filling it; and, furthermore, it consists in a revolving disk having these metal cups or bottle-holders fastened to this holder and revolving around a vertical axis into the proper position for each bottle to be successively filled. A plain cam and ratchet-pawl actuated by foot-lever motion move this disk from bottle to bottle and bring them properly under the filling-head.

Figure 1 is a front elevation of the machine. Fig. 2 is a plan of the disk removed. Fig. 3 is an enlarged view of the bottle, the internal stopper, and the rod that pulls up the stopper.

The table B, foot-lever C, springs S S, filling-head e, yoke r, and vertical rods d d, sliding through guides j j, together with the automatic hook b, are not new nor claimed in this invention, except as this automatic disk is connected with it. The automatic disk A is made with a central hole or bearing, i, to fit on the ordinary standard, j, about which it revolves. The cups or bottle-holders are shown as constructed partly of perforated metal m and metallic rings l at the top and bottom. These are securely fastened to the disk A, as shown in both Figs. 1 and 2. These

cups prevent the hands of the operator from being severely cut, as the bottle is often broken while being filled at a high pressure. It also facilitates placing the bottles exactly under the filling-head e, as will be seen from the fact that each one is the same distance from the center of revolution and from each other. The ratchet-teeth on the under side of this disk are acted upon by the pawl e, which is moved by the oscillating cam D and sustained by the spring m. By foot-power the charging-head e and the rods d d are raised and lowered at the filling of each bottle. To these rods d d is fastened the bar E, which at F actuates the cam D about the pin or stud g, and through the pawl causes the disk to revolve one-eighth of a turn. This movement is completed in the upward stroke and begins just as the charging-head e is sufficiently raised to allow the eye k of the stopper to slide off of the hooked rod b, as shown in Fig. 3; and on the downward movement of the foot and bar E the cam D swings back by its own gravity in the direction of the arrow, and allows the pawl e to travel back and get a new hold for the forward movement. The revolving disk can also be moved by the hand alone.

We claim the same as follows:

1. The combination, in a bottle-filling machine, of the revolving disk holding one or more bottle-cups, cam D, pawl e, bar E, and means for operating the same.
2. The combination of filling-head e, bar E, disk A, standard j, cups l m, pawl e, cam D, and means for operating the same.

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