

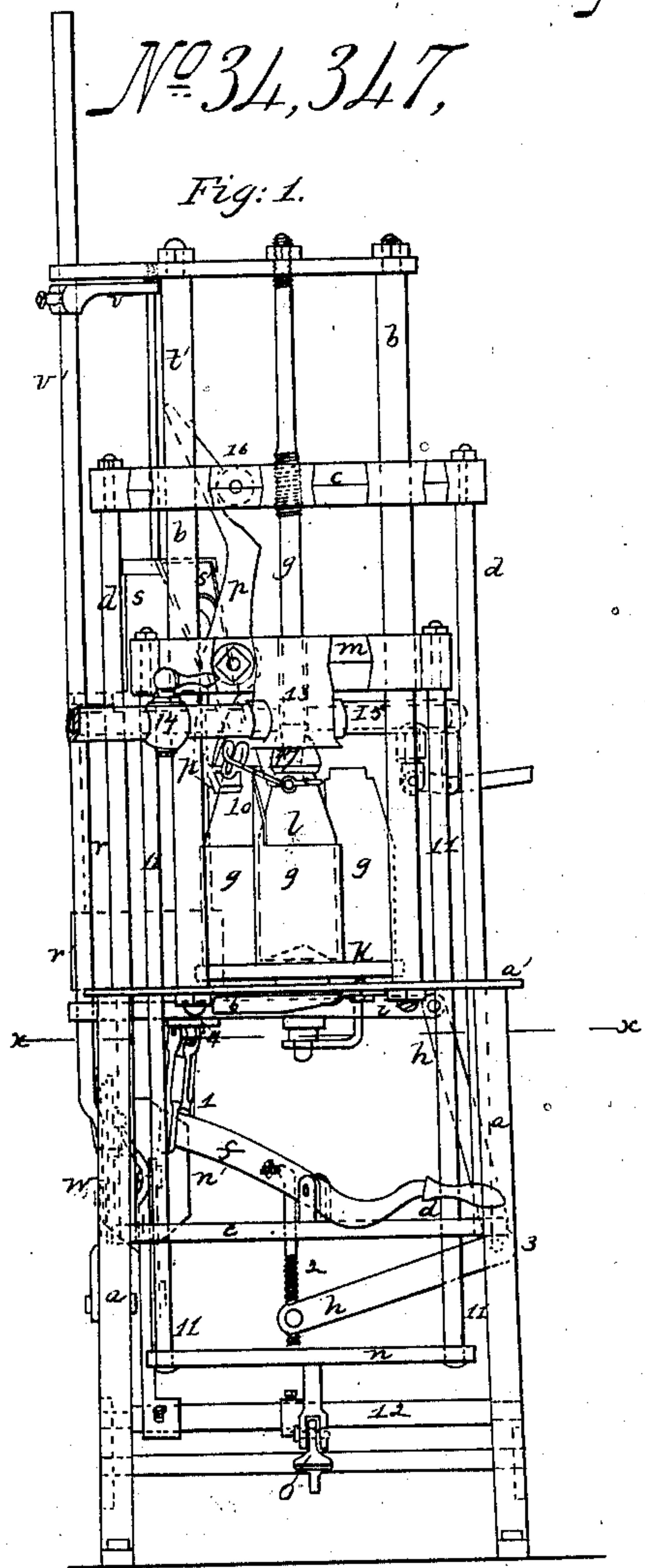
*J. Busser,*

*Filling and Corking Bottles,*

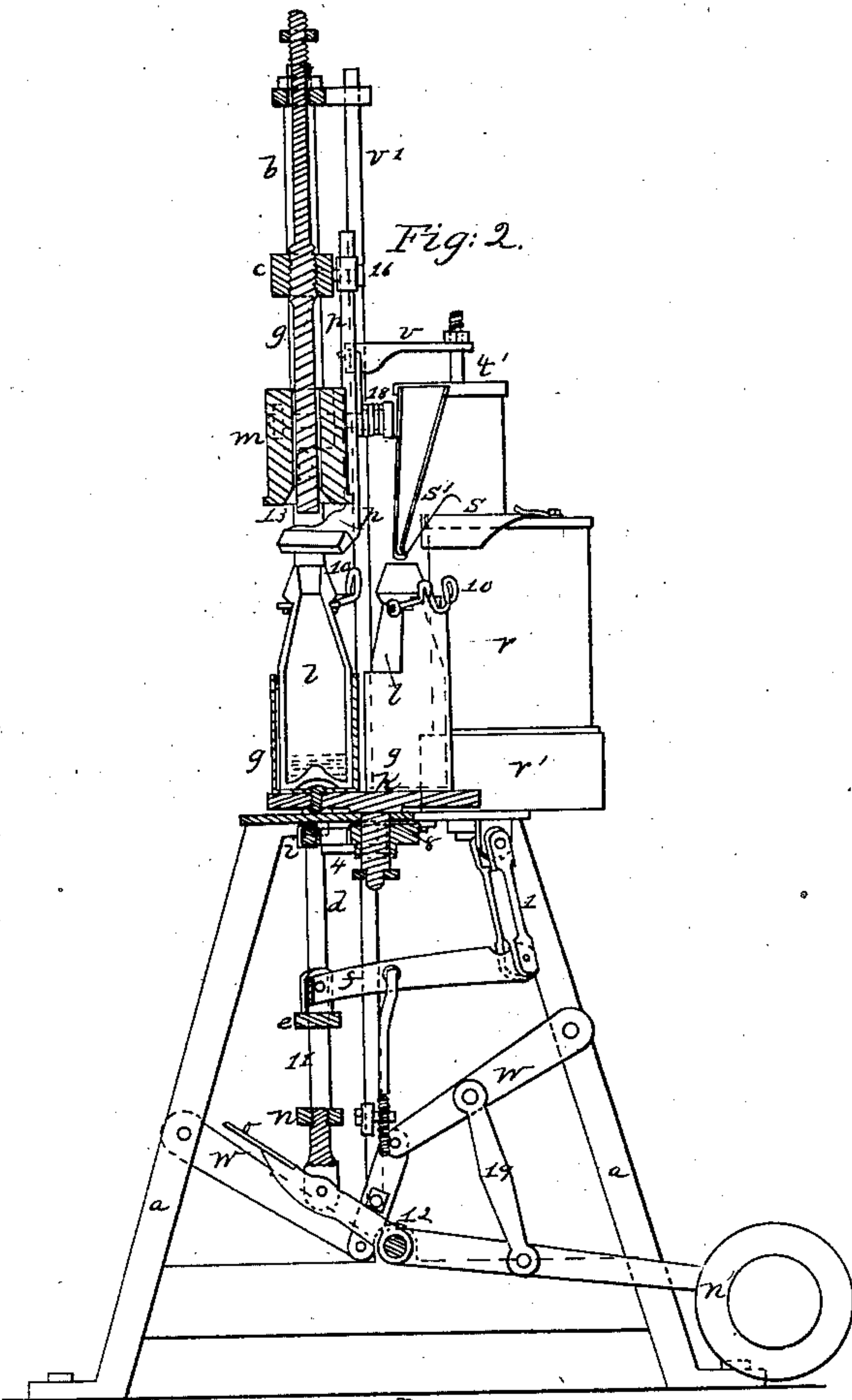
*Patented Feb. 11, 1862.*

*No 34,347,*

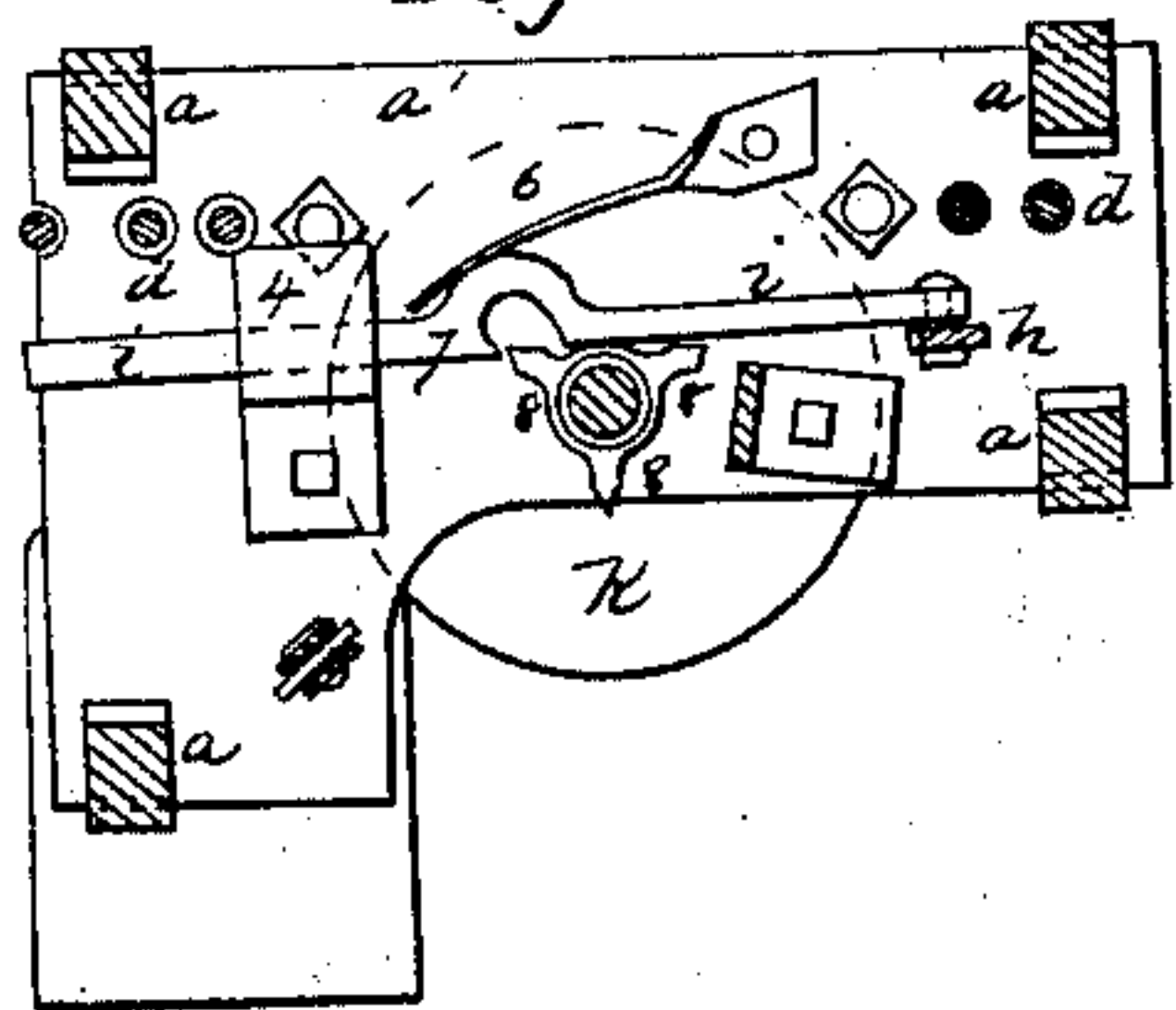
*Fig: 1.*



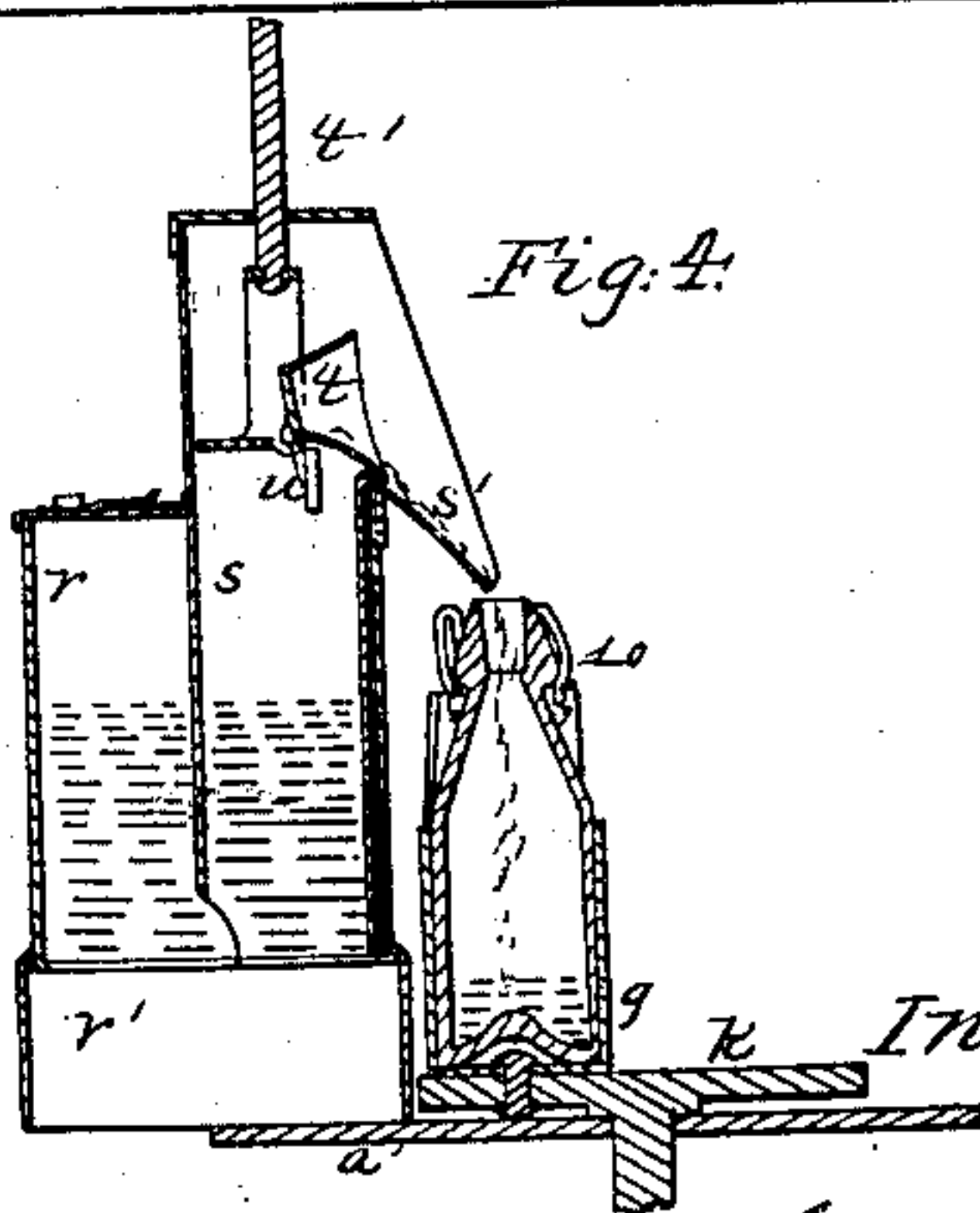
*Fig: 2.*



*Fig: 3.*



*Fig: 4.*



*Witnesses.*

*Sho Geo. Kewold*

*Inventor.*

*John Busser*



# UNITED STATES PATENT OFFICE.

JOHN BUSER, OF NEW YORK, N. Y.

## IMPROVEMENT IN BOTTLING APPARATUS.

Specification forming part of Letters Patent No. 34,347, dated February 11, 1862.

*To all whom it may concern:*

Be it known that I, JOHN BUSER, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Bottling Machinery; and I do hereby declare that the following is a full, clear, and exact description of my said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a front elevation of my machine. Fig. 2 is a vertical section, and Fig. 3 is an inverted plan at the line  $x\ x$ .

Similar marks of reference denote the same parts.

Machines have heretofore been made for bottling soda and mineral waters, ale, porter, &c., in which the liquid is supplied through a pipe connected to a hollow cap setting over the mouth of the bottle, and through which the cork is forced into said bottle and there held while being tied; or a wire yoke has been employed for holding the cork in the bottle.

The nature of my said invention consists in a revolving bottle-holder actuated by automatic mechanism for presenting the bottles placed therein for the reception of the sirup or other material, then to the device for supplying the liquid under pressure and for introducing the cork, after which the filled and corked bottle is removed from said revolving holder and an empty one introduced. I employ a device that turns up the wire yoke before the pressure is relieved from the cork, so that all the operations are automatically performed with great rapidity and much time is saved in the introduction and removal of the bottles.

In the drawings,  $a$  is the frame or table with the bed  $a'$ .

$b\ b$  are fixed slides carrying the cross-head  $c$ , from which slings  $d\ d$  pass to the lower cross-head  $e$ . These are moved up and down by the lever  $f$  on the fulcrum 1 to force in the cork by the rod  $g$ , as now usual. From the lever  $f$  a link 2 connects with the bent lever  $h$  on a fulcrum 3, and to the upper end of this lever  $h$  a sliding bar  $i$  is attached. 4 is a guide for this bar  $i$ , and 6 is a spring keeping the talon 7 toward the three-armed pinion 8, that is on the axis of the revolving bottle-holder  $k$  above the bed  $a'$ . It will be seen

that every time the lever  $f$  is given a full motion the bar  $i$  gives a third revolution to the bottle-holder, for as the lever  $f$  is depressed the talon 7 passes beyond one of the arms of the pinion 8 and the spring 6 throws the same back, so that on raising the lever  $f$  the bottle-holder is turned and then held by the flat part of the bar  $i$  against the ends of the two arms 8 until the next movement is given.

The revolving bottle-holder  $k$  is formed with as many receptacles 9 9 as there are arms to the pinion 8, and an attendant at the back of the machine at each pause of the holder takes out a full bottle and puts in an empty one. The yokes 10 of the bottles  $l$  are turned back and rest upon a prolongation at one side of each receptacle 9.

$m$  is a second cross-head sliding on the slides  $b\ b$ , connected by the slings 11 11 to the lower cross-head  $n$ , and  $o$  is a lever on a fulcrum 12, by which the cross-head  $m$  is brought down, as now usual, to cause the hollow cap 13 of said cross-head  $m$  to set tightly over the bottle while the liquid under pressure is introduced through the pipe 14, a cork having first been introduced in the cap 13 above the point at which the pipe 14 is introduced, and 15 is the pipe for the escape of air from the bottle, with a safety-valve, as usual.

$n'$  is a counterpoise on the cross-shaft 12, forming the fulcrum of the lever  $o$ , to keep the cross-head  $m$  and parts attached elevated except when drawn down by the lever  $o$ .

On the cross-head  $m$  is a lever  $p$ , that stands sufficiently high, as in Fig. 2, for the bottles to pass beneath the same. However, as the cross-head  $m$  is brought down, as in Fig. 1, the lower end of this lever  $p$  passes below the yoke 10. The cross-head  $c$  being brought down for pressing in the cork is held in that position by the lever  $f$  while in the act of allowing the cross-head  $m$  to ascend. The lever  $p$  is carried up and a crook in said lever, coming in contact with the roller 16 on  $c$ , throws out the upper end of said lever  $p$  and causes a lip on the lower end of said lever  $p$  to lift and press the yoke 10 over the cork 17 as held in the bottle  $l$  by the rod  $g$ , and as this rod  $g$  and cross-head  $c$  are raised the lever  $p$  is returned to its former position by the spring 18, Fig. 2.

Heretofore the sirup has been put in the



bottles separately, and they were left exposed for flies to be attracted into the bottles. I am enabled by the use of my revolving bottle-holder to supply the sirup during the pause in the movement of the holder. For this purpose I employ the vessel *r*. (Shown separately in section, Fig. 4.) This sets on the stand *r'* and may be changed according to the character of liquid or sirup to be put into the bottles *l*, the vessel *r* being guided to its position by small ribs on the stand *r'*.

*s* is a small cylinder introduced into the vessel *r*, having a spout *s'* to come down to the mouth of the bottle at the pause in the movement of the revolving holder. This spout may have a cover, so as entirely to exclude flies, as only a small opening is required for the sirup to run out into the bottle.

In the cylinder *s* is a tipping dipper *t*, set in slings from the rod *t'*, said dipper having a cross-axis and a crank-arm *u*, that takes a fixed stop, so that the dipper *t*, when drawn up the entire height by the rod *t'*, is tipped to pour its contents through the spout *s'* into the bottle, and this rod *t'* is actuated by the arm *v* and bar *v'* to the parallel motion-bars *w* and a connection 19 to the arm of the counterpoise *n'*.

It will be seen that the successive operations take place in the following order: first, an empty bottle is placed in the revolving holder; second, the holder moves forward, pauses; third, the sirup or other liquid is poured in; fourth, the holder moves forward again and the bottle comes under the supplying-cap; fifth, bottle is filled; sixth, cork is pressed down; seventh, the filling-cap raises and yoke is turned over cork; eighth, revolving holder

moves the third time and pauses; ninth, the full bottle is removed and an empty one substituted, and this being done as each holder presents itself the operations are constantly performed and act on the successive bottles as presented.

In bottling porter or ale the tipping dipper *t* may be employed to fill the bottles, being made of sufficient size.

What I claim, and desire to secure by Letters Patent, is—

1. The revolving holder *k*, with the receptacles 9 for the bottles, in combination with the cross-head *m* and parts attached for filling and corking said bottles as presented by the said revolving holder *k*, as set forth.

2. The arrangement of the sliding bar *i*, talon 7, spring 6, and lever *h*, when combined with the revolving holder *k* for giving motion to the said holder and presenting the bottles to be filled in unison with the other movements of the machine, as specified.

3. The lever *p*, in combination with the cross-heads *m* and *c*, and acting in the manner specified to turn the yoke 10 over the cork as the cross-head *m* is raised, as specified.

4. The vessel *r*, spout *s*, and tipping dipper *t*, in combination with the revolving holder *k* and corking apparatus for supplying sirup or other liquid to the bottles in said holder *k* immediately prior to the corking, as set forth.

In witness whereof I have hereto set my signature this 19th day of December, 1861.

JOHN BUSER.

Witnesses:

LEMUEL W. SERRELL,  
THOS. GEO. HAROLD.