No. 781,788. PATENTED FEB. 7, 1905.

H. ROBINSON.

CORKING MACHINE.

APPLICATION FILED APR. 15, 1904.

2 SHEETS—SHEET 1.

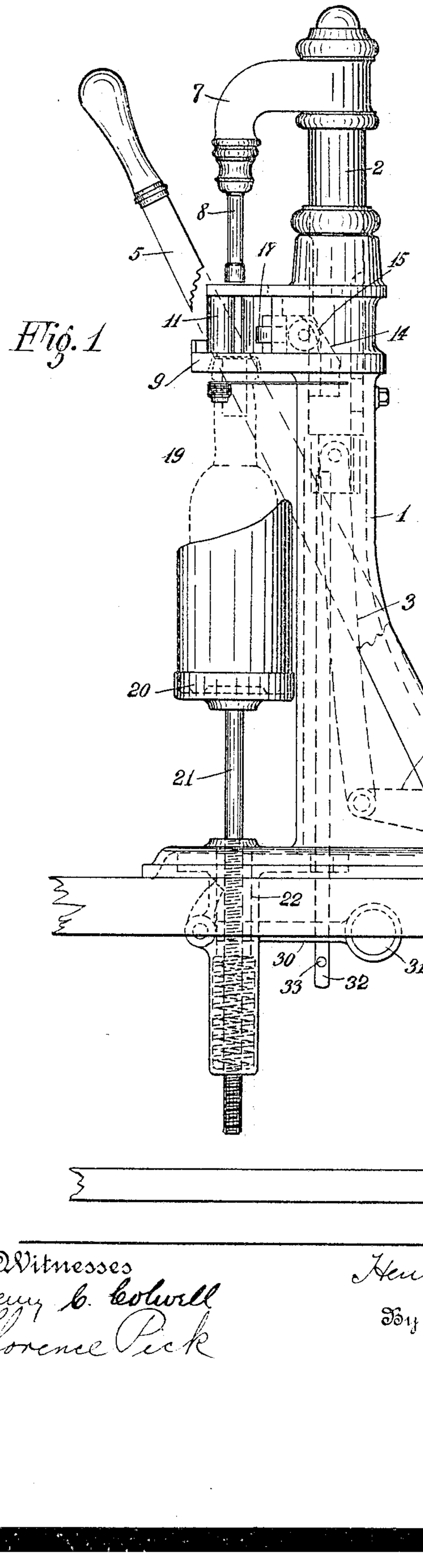

Fig. 1

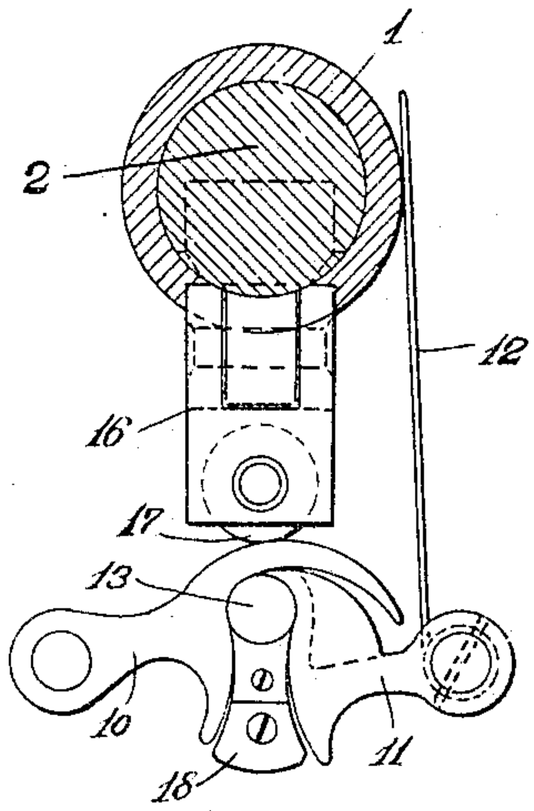

Fig. 2

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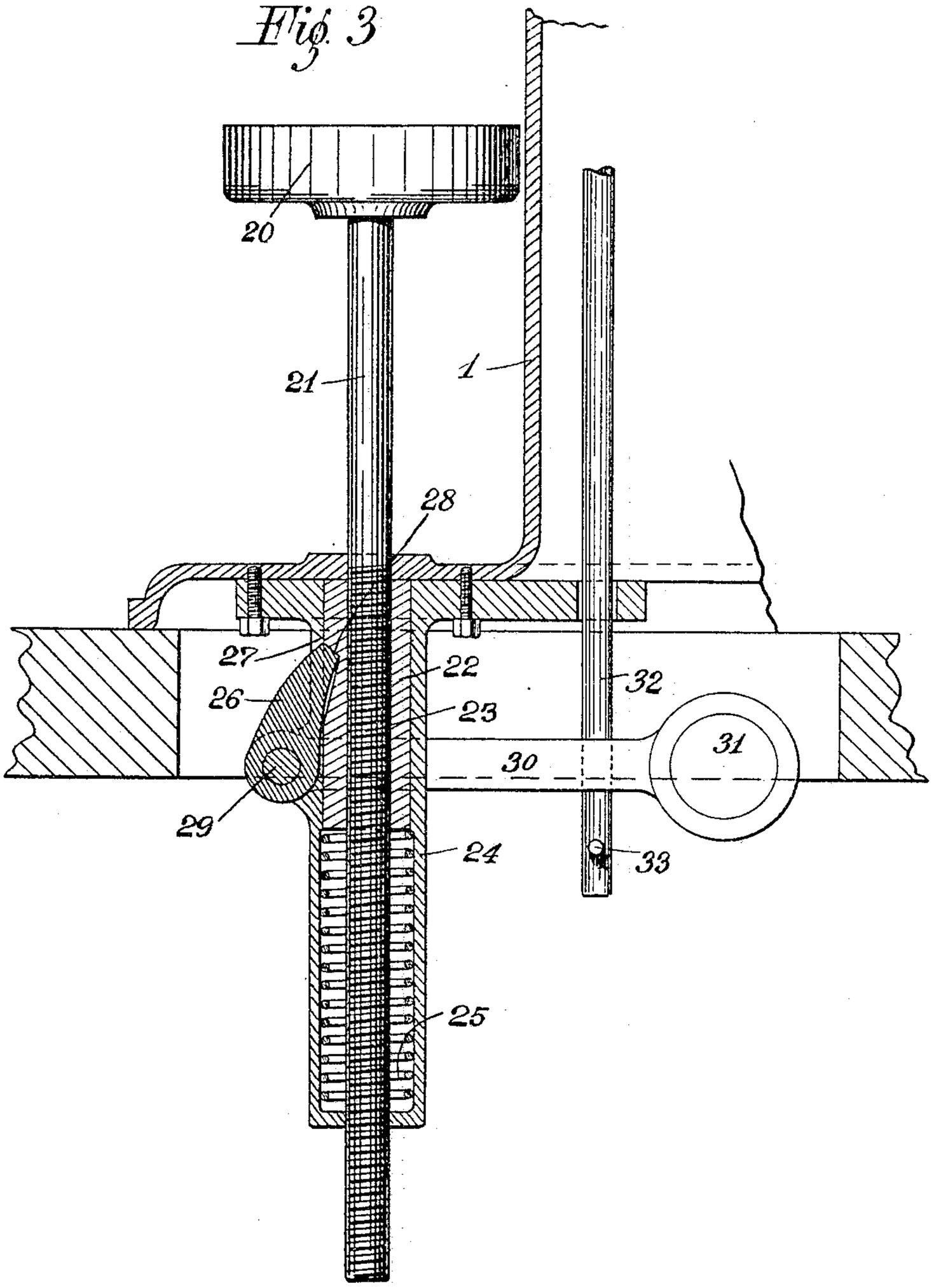
Fig. 3



Witnesses
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Florence Peck

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No. 781,788. Patented February 7, 1905.

UNITED STATES PATENT OFFICE.

HENRY ROBINSON, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF TO OSCAR HEYMAN, OF NEW YORK, N. Y.

CORKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 781,788, dated February 7, 1905.

Application filed April 15, 1904. Serial No. 203,290.

To all whom it may concern:

Be it known that I, HENRY ROBINSON, a resident of Newark, county of Essex, State of New Jersey, have invented a certain new and useful Improvement in Corking-Machines, of which the following is a specification.

The object of the present invention is the provision of a simple and inexpensive machine for the rapid insertion of corks into bottles; and the present improvement has particular relation to an improved means of great simplicity and always reliable in action for facilitating removal of the bottles after insertion of the corks, while at the same time insuring a perfectly firm and immovable support for the bottles during the corking operation.

My invention is shown in a preferred form in the accompanying drawings, wherein—

Figure 1 is a side view of the bottling device; Fig. 2, a top view of the upper portion of the same, showing the action of the compressing devices; and Fig. 3 is an enlarged sectional view of the bottle supporting and releasing mechanism.

In Fig. 1 the main supporting-frame of the machine is shown at 1. Within the frame the main plunger 2 is guided for vertical movement, said plunger being operated by means of a link 3, (shown in dotted lines,) which link is pivoted to the end of the short lever 4, operated by the handle 5. The weight 6 tends constantly to turn the handle 5 toward the right in Fig. 1, and thus raise the main plunger 2 after each operation of the device. At the top of the plunger 2 a stout curved offset piece 7 is provided, the end of which turns downward and carries a vertical rod 8, the function of which is to force the corks downward into the bottles after the cork is compressed. Below the rod 8 and on a level with the top of the bottles when in place a platform 9 is provided, which is carried on the main frame 1. To this platform are pivoted the compression-fingers 10 and 11, and the spring 12, one end of which bears on the main frame 1, tends to keep the compression-fingers open. The cork is shown in Fig. 2 at 13, and its compression at the proper time is accomplished by the following means:

The main plunger 2 is provided with an appropriately-placed inclined bearing-surface 14, and against this surface there constantly bears a small roller 15, which turns in a carriage 16, adapted to slide back and forth on the platform 9. The carriage 16 is provided with a horizontal bearing-roller 17 or equivalent device, which acts upon the convex surfaces of the compression-fingers 10 and 11 when the carriage 16 moves outward. It is obvious that on depression of the main plunger 2 by means of the handle 5 the inclined surface 14, bearing on the roller 15, forces the carriage 16 outward and causes the compression-fingers 10 and 11 to squeeze the cork 13 against the abutment 18, as shown in Fig. 2. Further downward movement of the plunger 2 carries the rod 8 downward and forces the compressed cork into the neck of the bottle 19, which is placed just under the cork and is carried on the platform 20.

The constructions thus far described are already known in the art and form no part of my present invention. They have been described in order to make clear the relation of my improved bottle-supporting means to the rest of the device.

In my improved construction the platform 20 is supported by a vertical stem 21, which is carried by a hollow plunger 22, into which it is preferably threaded, as clearly shown at 23 in Fig. 3. The plunger 22 is guided in its vertical movement by the casing 24, in the bottom of which there is placed a spring 25, which supports the plunger 22, and with it the stem 21, and therefore the platform 20 and the bottle 19. The threading of the stem 21 into the plunger 22 is for the purpose of facilitating adjustment of the height of the platform 20 so as to accommodate bottles of different height. It is clear that when the plunger 22 is free the stem 21 and the bottle are supported by the spring 25 only.

Pivoted to the side of the casing 24 I pro-

vide a catch 26, which is so placed as to project through the slot 27 in the casing 25 to permit it to fall under the shoulder 28 on the plunger 22. The catch 26 turns on a shaft 29 and is made in one piece with the lever 30, which is held normally in the position shown in Fig. 3 by the weight 31 or an equivalent device. When the lever 30 is raised, it turns the catch 26 outward or to the left in Fig. 3, thus releasing the plunger 22. Opposite movement of the lever 30 brings the catch 26 into the position shown in Fig. 3, where it prevents downward movement of the plunger 22.

Fixed on the lower end of the main plunger 2 there is placed a downwardly-extending rod 32, which passes the lever 30 just behind the same and which carries the pin 33, which extends forward under the lever 30.

The operation of the device is as follows: When the handle 5 is pulled forward for carrying on the corking operation, the rod 32 and pin 33 are depressed and the lever 30 is allowed to assume the position shown in Fig. 3. The plunger 22 is thus locked and the bottle 19 is firmly held against the downward effort of the operating-rod 8 and the cork 13. As soon as the corking operation is concluded and the handle 5 is raised the rod 32 rises and the pin 33 lifts the lever 30, causing the catch 26 to be removed from the shoulder 28 and leaving the bottle to be supported only by the spring 25. Under these circumstances the operator has only to press the bottle downward and compress the spring 25 in order to liberate the neck of the bottle from its socket under the platform 9, whereby it was confined during the corking operation. The bottle being then removed, the spring 25 is again compressed for the placing of another bottle in the machine.

By means of the devices above described the bottle-support is made absolutely firm and unyielding during operation and is automatically placed in condition for substitution of an uncorked for a corked bottle by the hand of the operator.

Various changes can be made in my device without avoiding the scope of my invention, and I am not to be limited to the details herein shown and described.

What I claim is—

1. In a corking-machine of the class described having a reciprocating main plunger, a platform for the bottle, a vertical stem under said platform, a plunger having a shoulder and fitting around said stem, a spring under said plunger, a fixed support for said spring, a guide for said plunger, a movable catch pivoted below and positively engaging under said shoulder on said plunger when in one position and means depending from the main plunger of the corking-machine and adapted to withdraw said catch from engagement with said shoulder when said main plunger is raised, substantially as described.

2. In a corking-machine of the class described, a platform for the bottle, a screw-threaded vertical stem depending therefrom, a threaded plunger screwing onto said stem and provided with a shoulder, a spring under said plunger, a fixed support for said spring, a guide for said plunger and movable catch pivoted below and positively engaging under said shoulder on said plunger when in one position and means connected to the corking mechanism for removing said catch from engagement with said shoulder after each operation of the machine, substantially as described.

3. In a corking-machine of the class described, a platform for the bottle, a vertical stem depending therefrom, a plunger having a shoulder and fitting said stem, a spring under said plunger, a fixed support for said spring, a pivoted lever having a weight at one end and a catch at the other and so placed that the catch tends to fall under said shoulder on the plunger when the weighted lever is free and means connected to the corking mechanism for lifting said weighted lever and thus removing the catch after each operation of the machine, substantially as described.

HENRY ROBINSON.

Witnesses:
H. S. MacKaye,
Florence Pick.