

W. B. PENICK & H. T. KIRKLAND.

DISPENSING APPARATUS.

APPLICATION FILED FEB. 4, 1911.

998,389.

Patented July 18, 1911.

Fig. 1.

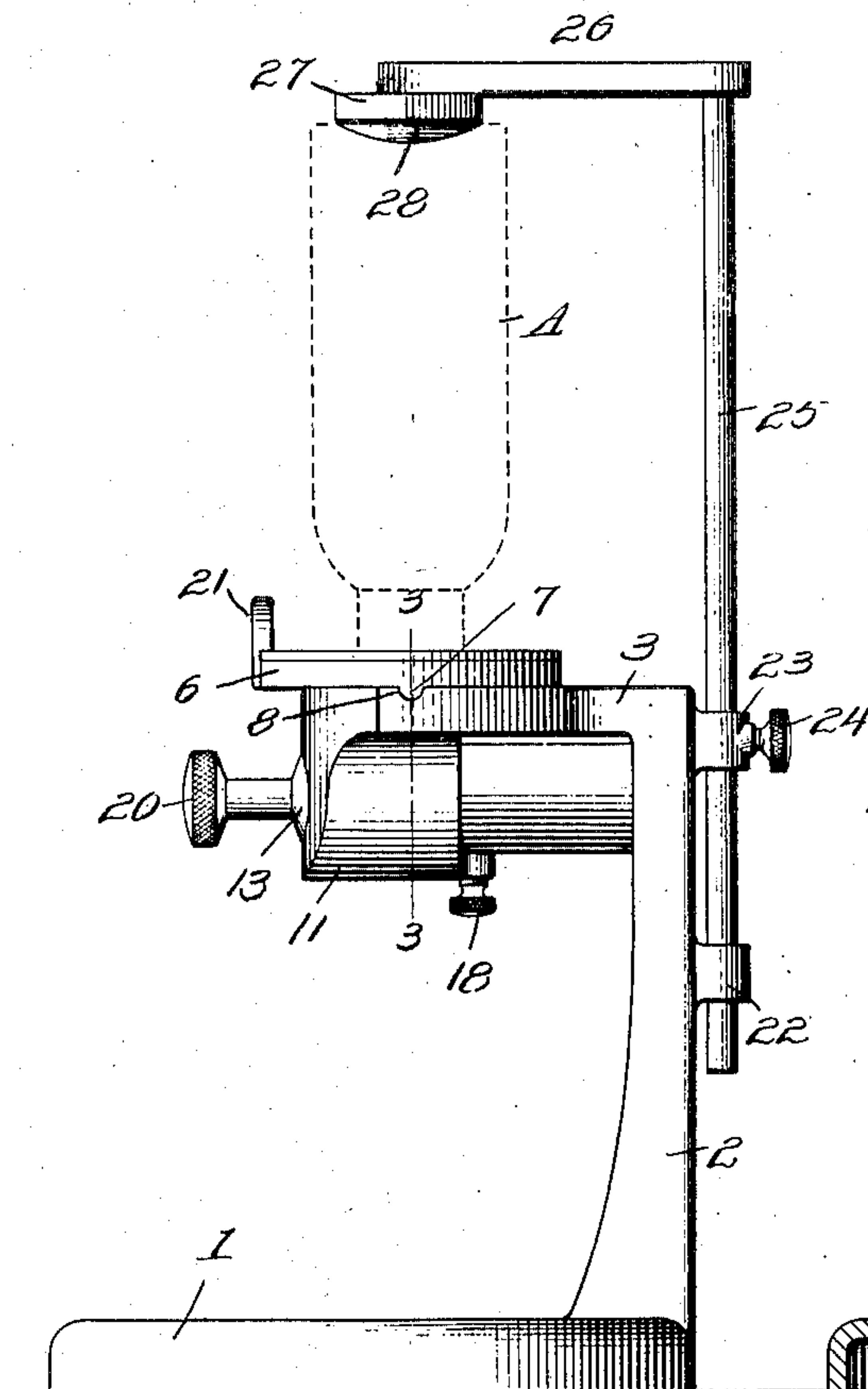


Fig. 2.

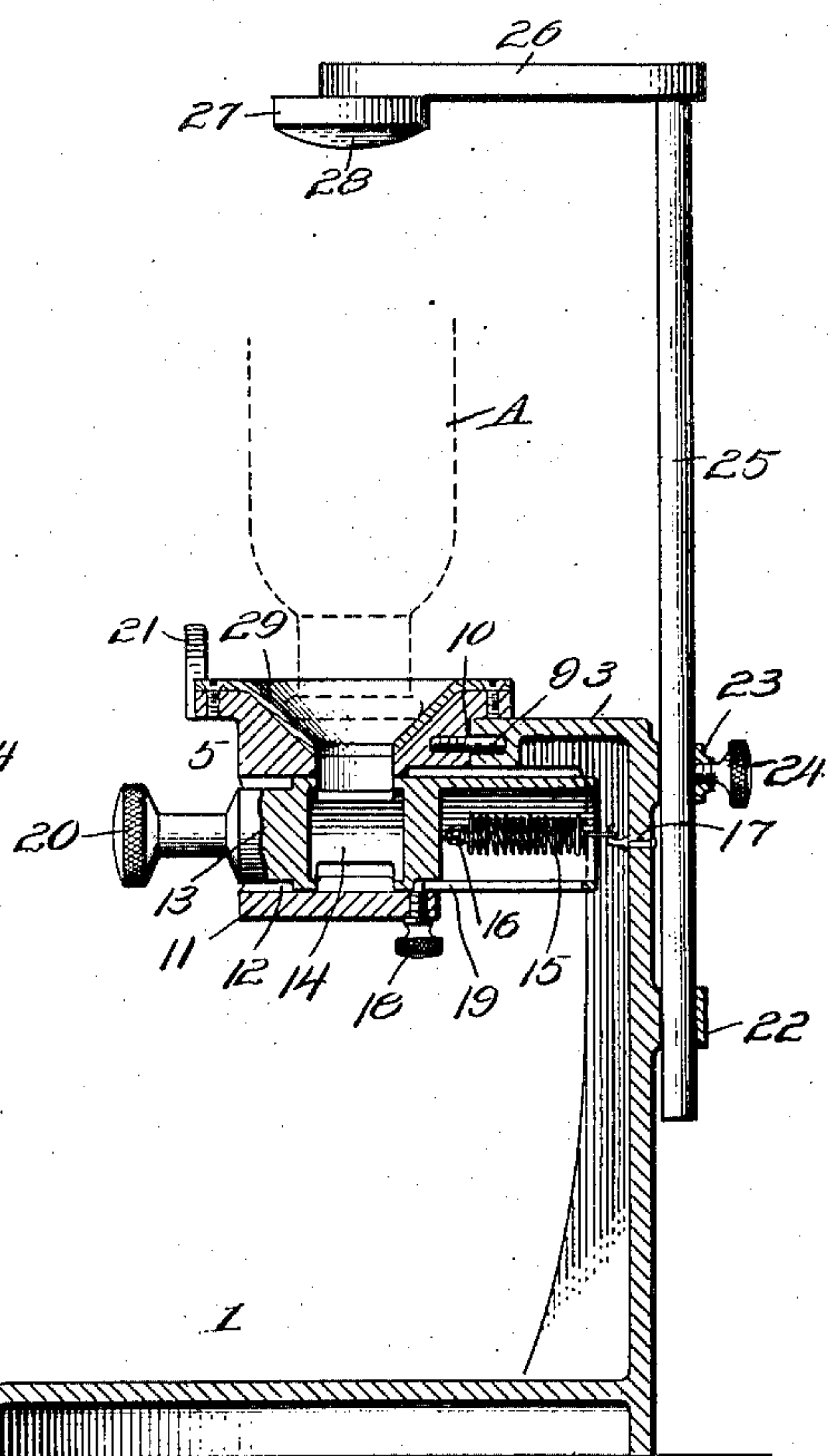


Fig. 3.

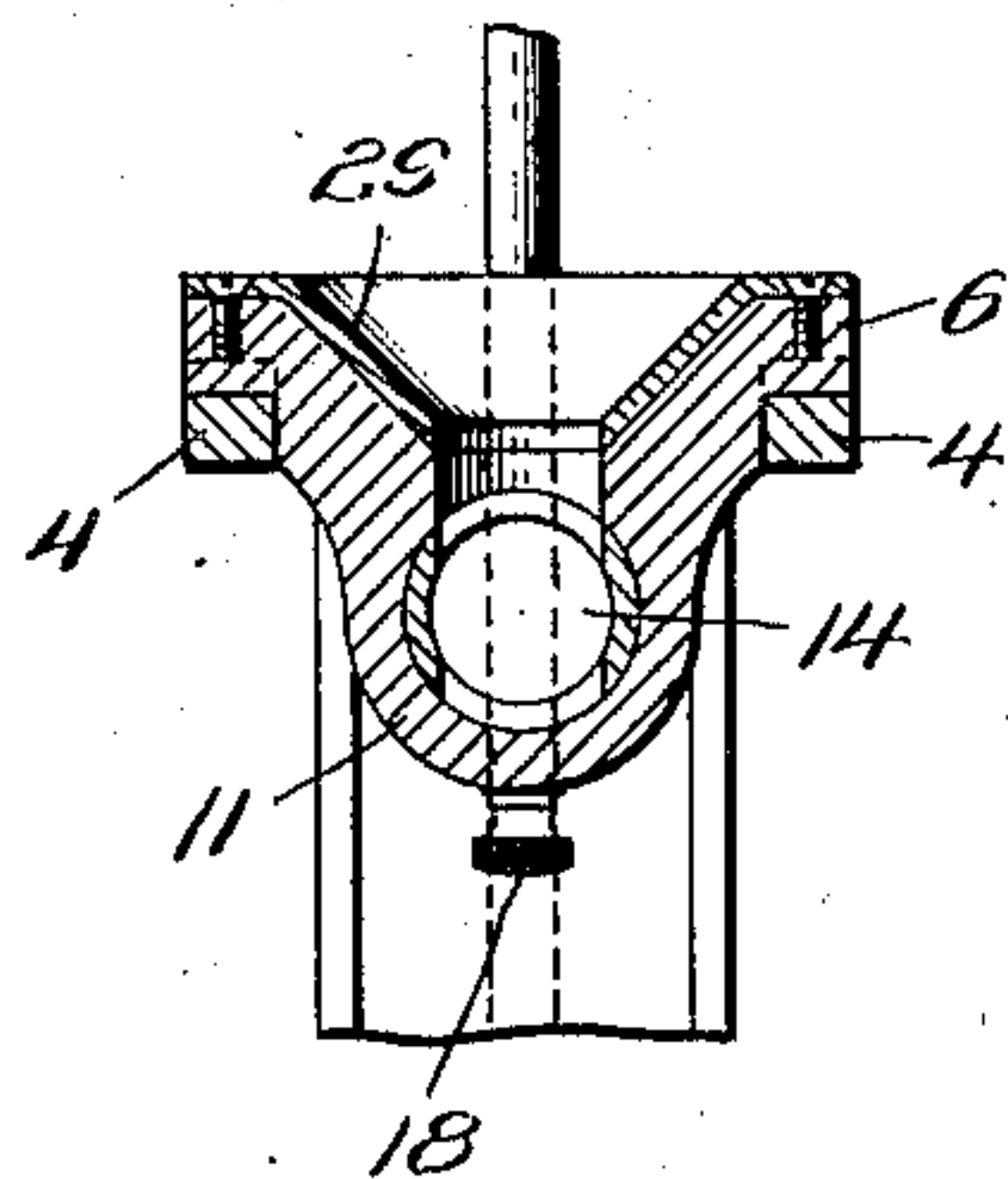
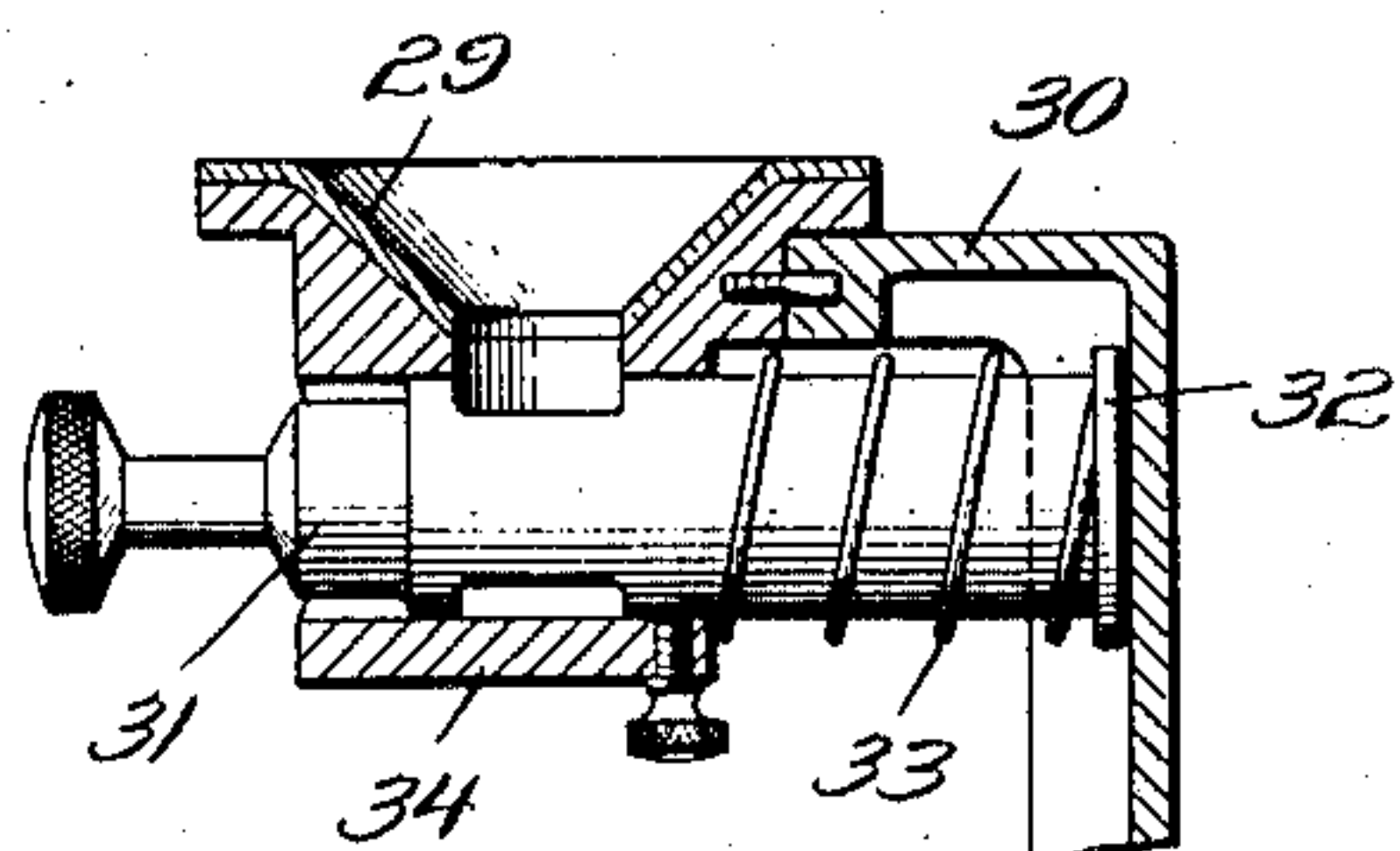


Fig. 4.



Witnesses
J. L. Gibson.

James D. ...

Inventor
William B. Penick.

Hugh T. Kirkland.

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM B. PENICK AND HUGH T. KIRKLAND, OF LYNCHBURG, VIRGINIA; SAID
PENICK ASSIGNOR TO FLORENCE V. PENICK, OF LYNCHBURG, VIRGINIA.

DISPENSING APPARATUS.

998,389.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed February 4, 1911. Serial No. 606,543.

To all whom it may concern:

Be it known that we, WILLIAM B. PENICK and HUGH T. KIRKLAND, citizens of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented new and useful Improvements in Dispensing Apparatus, of which the following is a specification.

This invention relates to dispensing apparatus.

Headache preparations or the like which are commonly and frequently used and dispensed and sold by inexperienced dispensers at drug stores or like places, as a rule contain acetanilid or the like, which is extremely dangerous if the headache drug is not taken exactly in the dose prescribed and in view thereof, it is a primary object of the present invention to embody in our improved dispensing apparatus means whereby a predetermined amount of the drug can be readily dispensed so as to insure against any possible overdose.

It is another object of the invention to provide an improved form of detachable hopper capable of convenient removal from the apparatus and constructed so as to permit of its engagement with the neck or discharge end of the drug container, the detachable engagement of the hopper from the apparatus providing means whereby the drug container or bottle can be canted or inverted for use without loss of the drug.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—

Figure 1 is a side view of the apparatus. Fig. 2 is a vertical section therethrough with parts in elevation. Fig. 3 is a section taken on line 3—3 of Fig. 1. Fig. 4 is a vertical section through a portion of the apparatus showing a slightly modified form thereof.

On reference to Figs. 1 to 3 inclusive, of the drawing, it will be described that our improved apparatus embodies a horizontally disposed supporting base 1 which is provided at one side with a vertically extending standard 2. The standard is formed at its upper end to provide a substantially semi-circular head 3 having oppositely curved side arms 4 which are spaced from each other at their extremities for a purpose to be hereinafter described. The head 3 is dis-

posed immediately above the base 1. A hopper 5 extends downwardly between the arms 4, and as illustrated, the hopper is formed at its upper end with a horizontal flange 6 having horizontally disposed lugs 7 therein on its underside. These lugs fit in correspondingly formed passages 8 in the upper surfaces of the arms 4 near the forward extremities thereof. The hopper is provided with a stud 9 which fits in a relatively large passage 10 in the head 3, the stud acting with the lugs 7 to hold the hopper operatively positioned on the head as will be understood. The hopper is provided with a portion 11 which is located below the plane of the head 3, having formed therein a circular guideway 12 in which the charge-forming device is slidably mounted. The charge-forming device comprises a valve or plunger 13 which is formed midway between its ends with a passage 14 adapted to contain a predetermined charge of the drug to be dispensed. In order that the plunger will be normally held in a position wherein the passage 14 will be in coincidence with the discharge end of the hopper, we provide a helical extensile spring 15, one end of which having engagement with a retaining device 16 on the plunger, and the opposite end of the spring having detachable engagement with a hook 17 which extends forwardly from the standard 2. A guide screw 18 in the portion 11 of the hopper extends into a guide groove 19 in the bottom of the plunger. This screw operates to hold the plunger against rotary movement. The outer end of the plunger is formed with a manipulating knob 20 by means of which the plunger may be withdrawn manually against the tension of the spring 15 so as to cause the charge opening 14 to be disposed forwardly of the portion 11 of the hopper and in discharge position with respect thereto. In this position of the plunger or valve the charge may be discharged directly into a receiver such as a tumbler or any suitable vessel which may be placed upon the base 1 in a receiving position with respect to the valve. To facilitate the withdrawing operation of the valve or plunger, we provide the hopper, at the front thereof, with a suitable thumb rest 21. The standard 2 is preferably provided with superimposed guides 22 and 23, the latter being provided with a

set screw 24 which bears against a slidably mounted rod 25 on the standard 2 of the apparatus as shown. The rod 25 is provided at its upper end with an arm 26 having an elastic head portion 27 on its underside. The head portion 27 of the arm is disposed immediately above the hopper and it is provided on its underside with a convexed surface 28 adapted to fit the concavity in the bottle. The mouth of the hopper is lined with elastic material 29, such as rubber, by means of which the discharge end or neck of the bottle may be brought to bear on the required adjustment of the rod 25, it being obviously the intent that the rod on the required adjustment will be positioned with respect to the bottle so that the head 27 of the rod will bear against the bottle to hold the neck of the bottle operatively positioned against the surface 29 of the hopper. By providing the hopper with the elastic surface 29 a perfect air tight joint is formed between the hopper and the discharge end of the bottle. The bottle A shown in dotted lines in Figs. 1 and 2 of the drawing is of a construction commonly employed as a package or container for various well known powdered headache remedies or the like, and when it is positioned with respect to the hopper, as previously described, the powdered medicine will fall by gravity to a position where it will be taken up by the valve 13 to be delivered in predetermined charges. When associating the bottle with the hopper the inner end of the spring 15 is disengaged from the retaining hook 17, after which the valve 13 is removed. The hopper is then wholly removed from the head 3. On this adjustment of the bottle against the hopper it is desirable to hold the apparatus in a position where the standard 2 will be disposed horizontally. This will permit inser-

tion of the valve into the plunger and prevent any possible loss of the medicine.

On reference to Fig. 4 of the drawing, the modification illustrated therein embodies a head 30 which is similar in construction to the head 3 in the preferred form of our invention. The plunger or valve 31 in this form of our invention is provided at its rear end with a stop shoulder or collar 32 against which one end of a coil extensile spring 33 bears. The opposite end of the spring bears against the inner portion of the hopper 34 so that the spring will exert its tension to normally hold the valve in a receiving position with respect to the hopper.

The hopper in both forms of the invention has its walls flared upwardly and outwardly so as to permit of the attachment therewith of bottle necks of different sizes.

We claim:—

1. Dispensing apparatus comprising a support, spaced arms carried thereby, the said arms being provided with recessed portions, a hopper removably supported by the arms and provided with bosses fitting the said recesses, and a measuring device removably mounted beneath the hopper.

2. Dispensing apparatus comprising a support, a head thereon, the said head having a recess therein, arms formed on the head, a hopper embraced by the arms, a stud carried by the hopper and extending into the recess of the head, and a measuring device movably mounted beneath the hopper.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM B. PENICK.
HUGH T. KIRKLAND.

Witnesses:

A. E. HARVEY,
G. M. STERN.