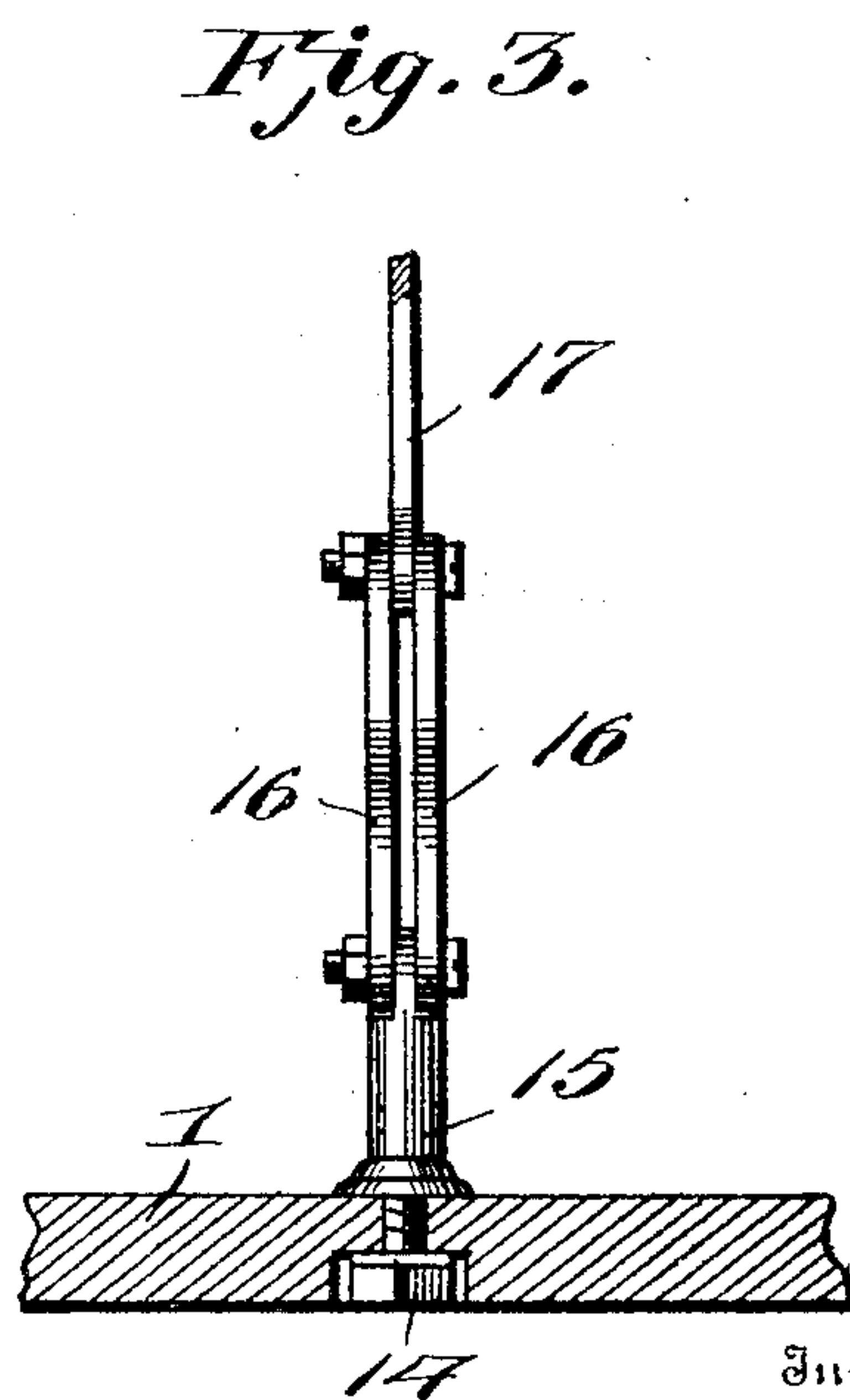
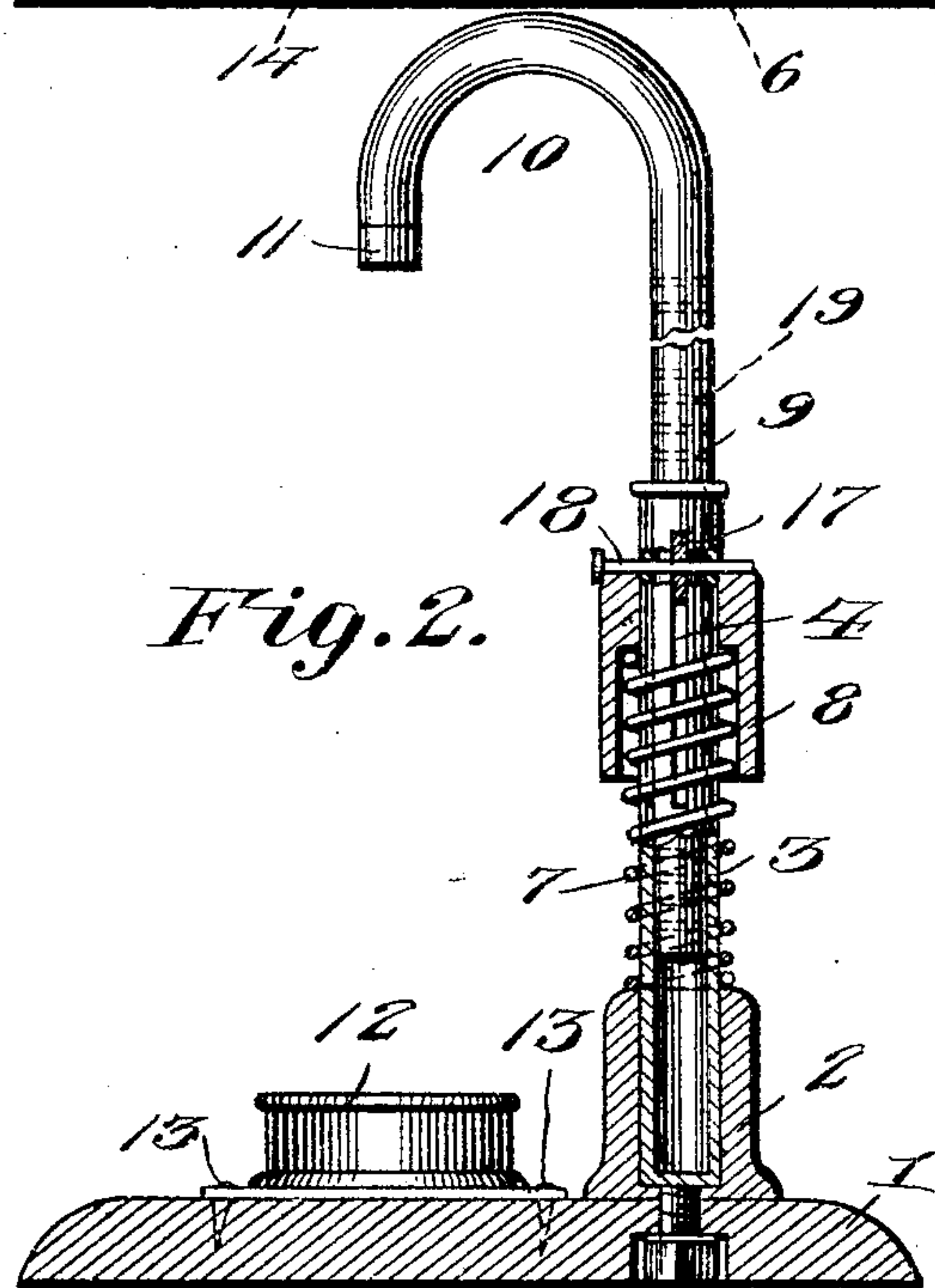
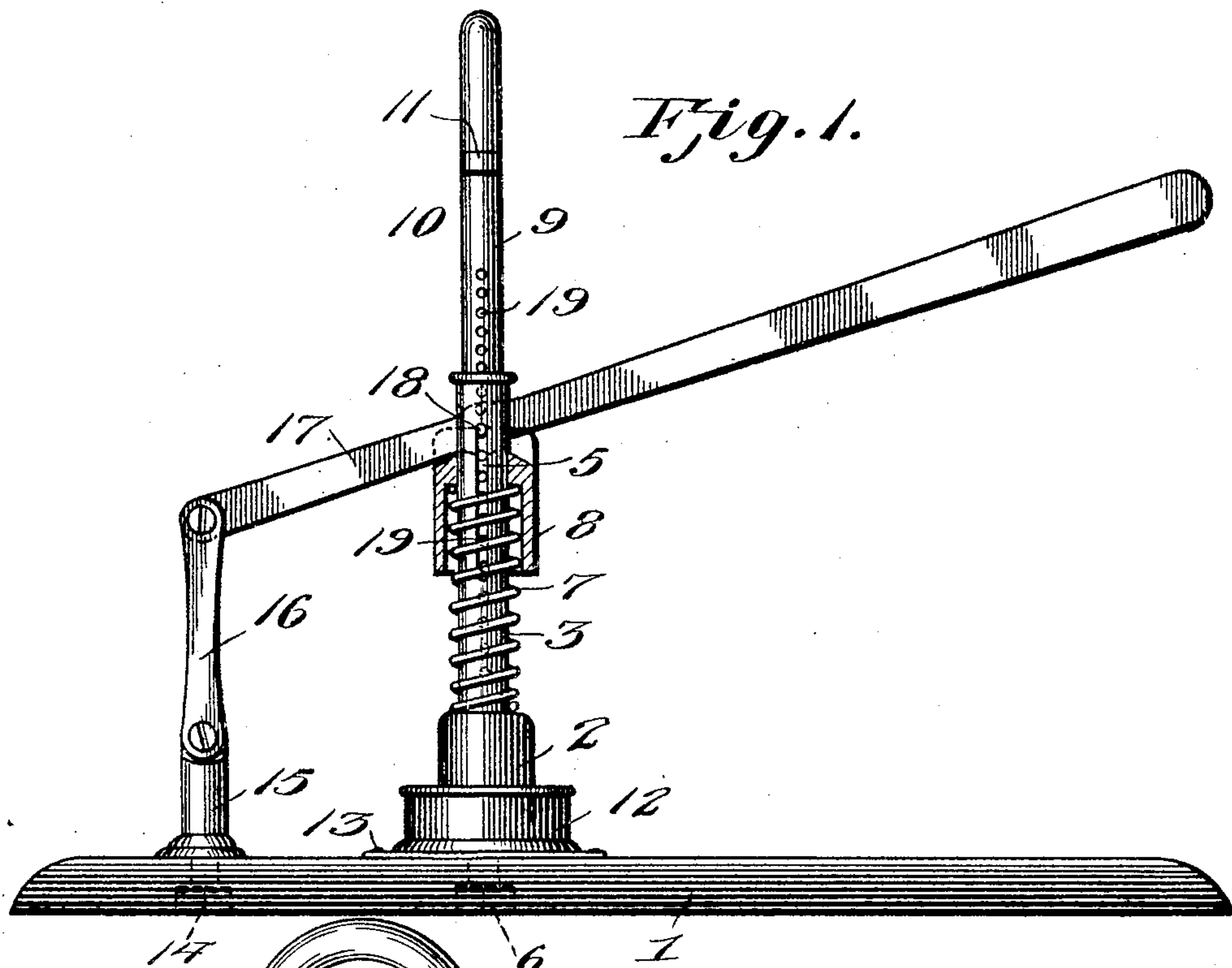


G. T. LIDDLE.
CORKING APPARATUS.
APPLICATION FILED JUNE 24, 1905.

2 SHEETS—SHEET 1.



Witnesses

Frank B. Hoffman
Frank W. Lough

Inventor

George T. Liddle

By

Geo. C. Poulton

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2 SHEETS—SHEET 2.

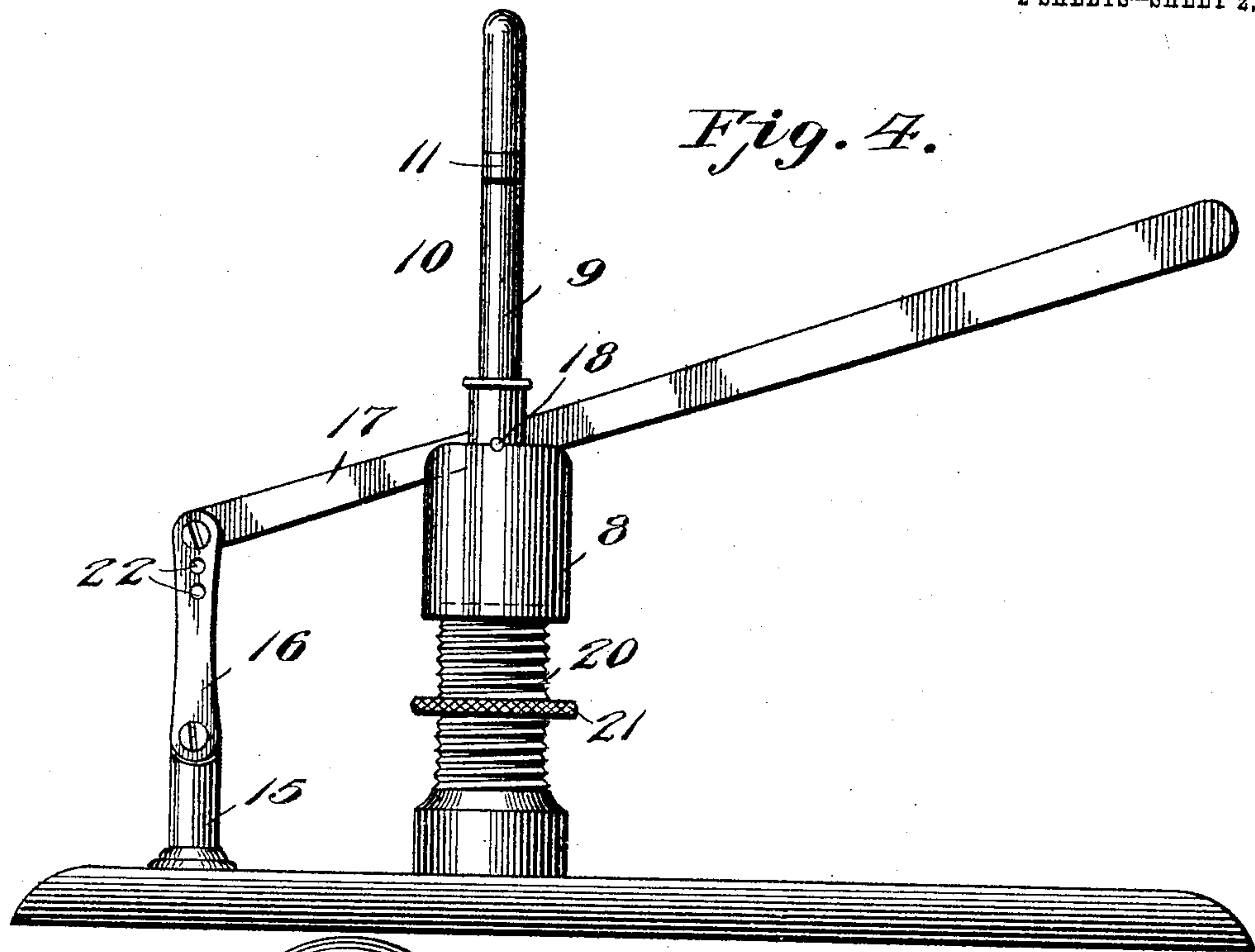


Fig. 4.

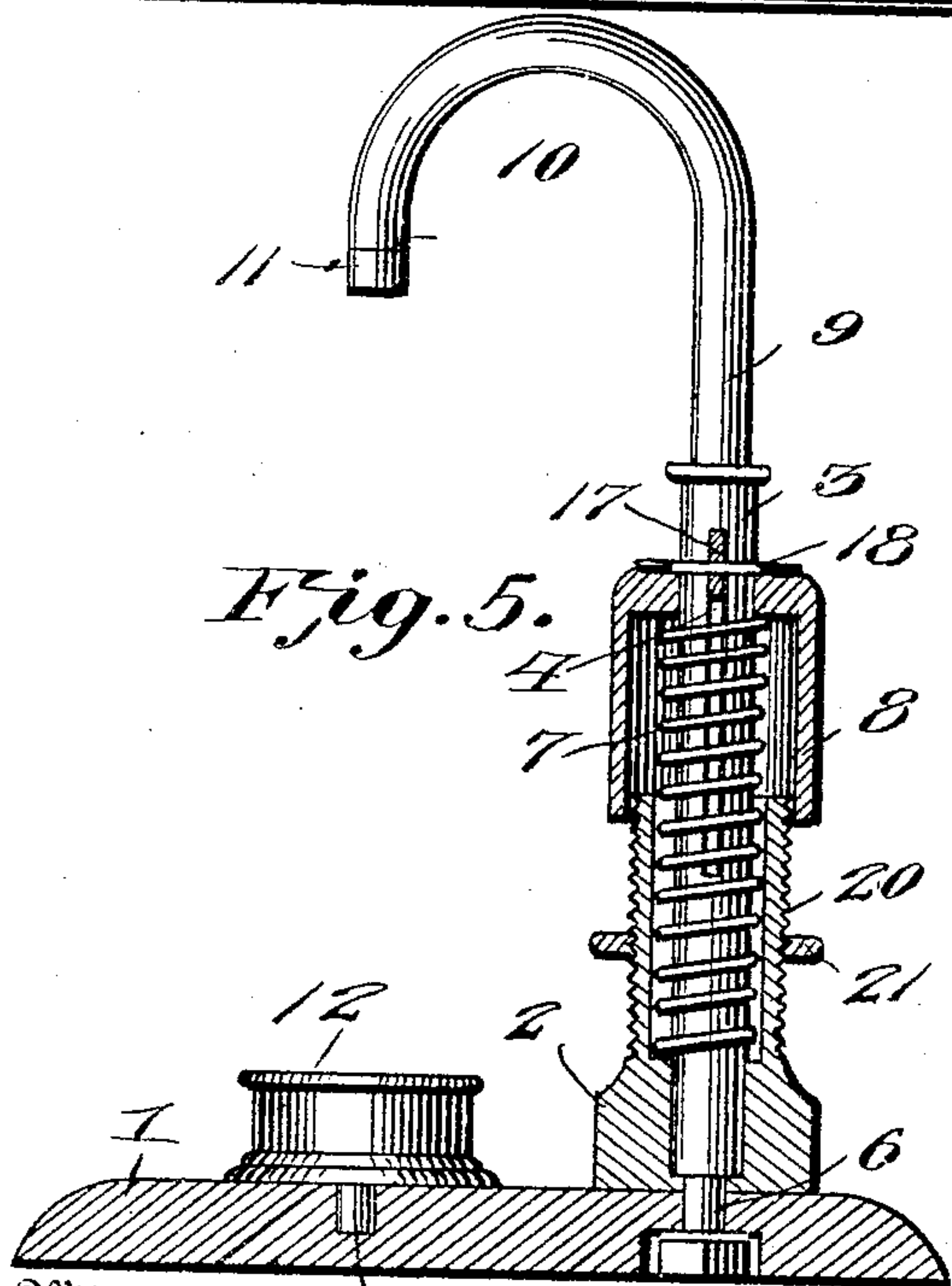


Fig. 5.

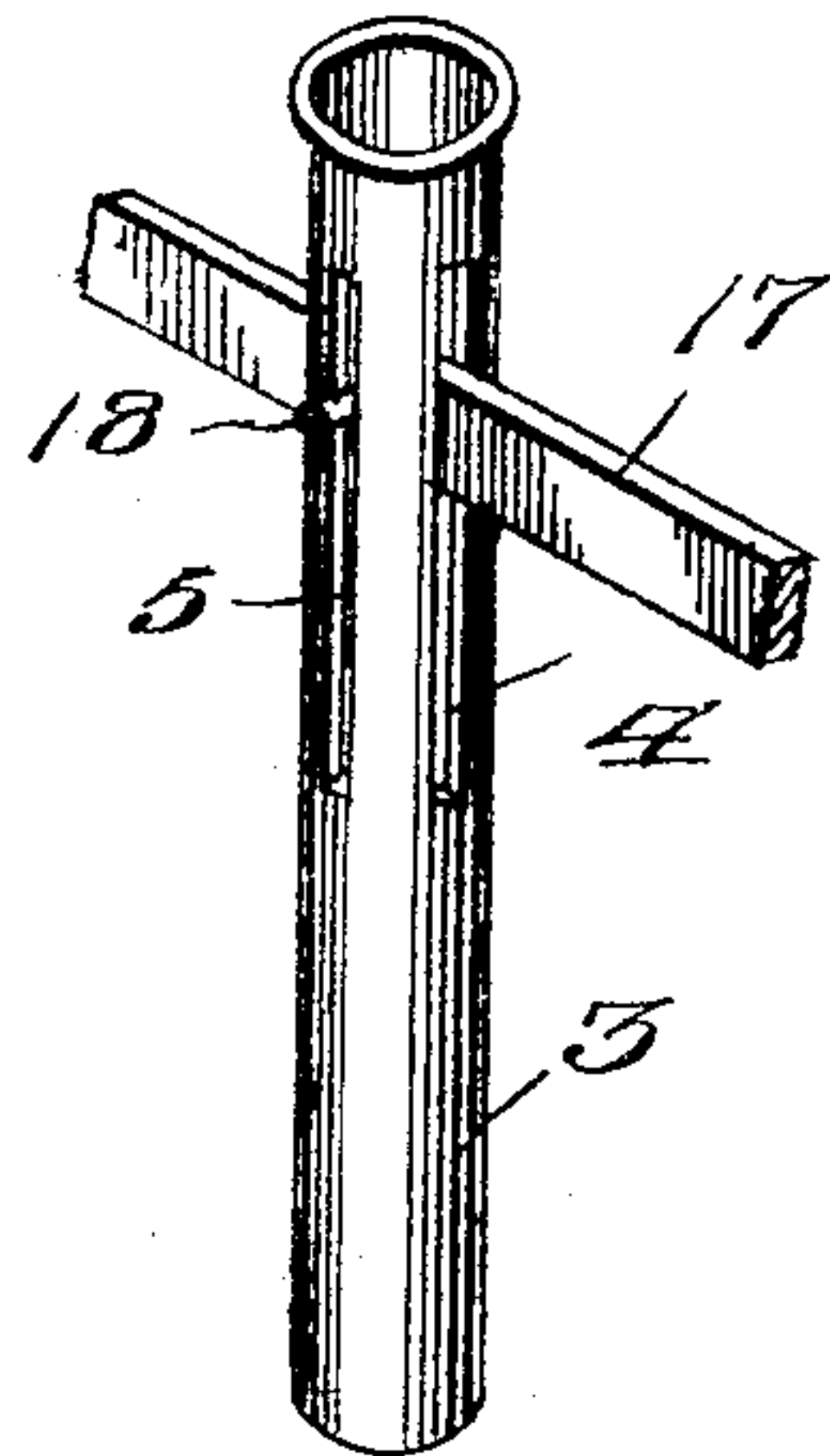


Fig. 6.

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UNITED STATES PATENT OFFICE.

GEORGE THOMAS LIDDLE, OF MUSKEGON, MICHIGAN.

CORKING APPARATUS.

No. 805,566.

Specification of Letters Patent.

Patented Nov. 28, 1905.

Application filed June 24, 1905. Serial No. 266,734.

To all whom it may concern:

Be it known that I, GEORGE THOMAS LIDDLE, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented new and useful Improvements in Corking Apparatus, of which the following is a specification.

This invention relates to bottle-corking machines, and has for its objects to produce a comparatively simple inexpensive device of this character which will in practice be susceptible of rapid manipulation for seating the corks firmly in place, one wherein the cork-driving member or plunger may be readily adjusted to adapt the device for bottles of varying sizes, and one in which the plunger will after each operation be automatically returned to normal position.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a front elevation of a bottle-corking device, showing one form of embodiment of the invention. Fig. 2 is a side elevation, partly in section, of the same. Fig. 3 is a detail view, partly in section, of the lever-pivoting device. Fig. 4 is a rear elevation showing another form of embodiment of the invention. Fig. 5 is a side elevation, partly in section, of the same. Fig. 6 is a detail perspective view of the tubular standard.

Referring to the drawings, 1 designates a base or support having attached thereto a tubular bearing member or block 2, which receives the lower end of a tubular guide member or standard 3, provided with a pair of longitudinally-extending guide-slots 4 and 5, disposed in diametrical planes at right angles to each other, the block 2 being detachably secured to the base 1 by means of a fastening member or screw 6, entered through the base from beneath. Disposed upon the standard 3 is a normally expanded spiral spring 7, bearing at its lower end upon the block 2 and at its upper end against a tubular head or sleeve 8, slidably arranged upon the standard, which latter telescopically receives for longitudinal movement the stem 9 of a cork-driving member or plunger 10, preferably of the form shown, to present a cork-engaging portion 11, appropriately spaced from the stem 9 and in axial alinement with a bottle-sustaining element or cup 12, detachably secured to the base 1, this cup being in

the form of device illustrated in Figs. 1 and 2, retained in place by means of screw 13.

Fixed upon the base 1 by means of a screw-bolt 14 is a vertical post 15, having pivoted to its upper end a pair of connecting members or links 16, in turn having pivoted thereto one end of an operating lever or handle 17, seated between its ends for movement in the guide-slot 4 and operatively connected to the standard 3 by means of a transverse member or pin 18, entered through the slot 5 and adapted to bear upon the upper end of the sleeve 8, said pin being also entered through one of a series of vertically-spaced openings or perforations 19, provided in the stem 9 of the plunger, whereby the latter may be adjusted vertically relative to the standard 3.

In practice the bottle to be corked is held firmly in position by seating its lower end in the sustaining element or cup 12, after which the stopper or cork is placed in position and driven home into the neck by means of the plunger 10, the latter being operated through the medium of the handle 17, which in moving downward carries with it the sleeve 8 and compresses the spring 7. Upon release of the handle after each operation the parts are automatically returned to normal position under action of the spring, the handle being guided in its movements through the medium of slot 4, while the plunger is in turn guided by the handle and also by pin 18, the latter serving the further function of limiting the upward movement of the plunger, it being apparent that by changing the pin from one to another of the openings 19 an appropriate vertical adjustment of the plunger to accord with the height of the bottles being corked may be obtained. Downward movement of the plunger to prevent driving the cork entirely through the neck is limited through contact of the pin with the lower end of the slot 5.

In the form of device illustrated in Figs. 4 and 5 the bearing-block 2 is considerably elongated and externally threaded, as at 20, to receive an adjustable nut or collar 21, constituting a stop or abutment with which the lower end of the tubular head 8 contacts for limiting the downward movement of the plunger 10, it being noted that in this instance the lower end of sleeve 8, which is a size to telescopically receive the threaded portion of member 2, normally overlaps the end of the latter, whereby the parts serve to effectually house the spring 7. Further-

more, the links 16 are provided with a plurality of perforations 22 for permitting adjustment of the pivoted end of lever 17 to accord with the desired movement of plunger 10, while the bottle-retaining member or cup 12 has a depending stud or pin 23, designed to enter a corresponding socket or step in the base 1 for detachably holding the cup in position thereon. In all other particulars the construction, arrangement, and operation of the parts are identical with that above described.

From the foregoing it is apparent that I produce a comparatively simple inexpensive device admirably adapted for the attainment of the ends in view, it being understood that minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus described my invention, what I claim is—

1. A bottle-corking apparatus comprising a support having a tubular block secured thereto, a tubular guide member vertically movable in the block and having longitudinal slots arranged reversely in pairs therein and in diametrical opposite positions to each other, a spiral spring mounted on the guide member, a sleeve arranged to slide vertically on the guide member, an adjustable plunger mounted in the guide member and having

vertical movement therein, a lever passing through one of the pairs of slots and pivotally secured at one of its ends, means passing through the other pair of slots and through the lever, said means also serving to contact with the upper surface of the sleeve, substantially as specified.

2. A bottle-corking apparatus comprising a support having a tubular screw-threaded block secured thereto, a tubular guide member vertically movable in the block and having longitudinal slots arranged reversely in pairs therein and in diametrical opposite positions to each other, a spiral spring mounted on the guide member, a sleeve arranged to slide vertically on the guide member, a plunger vertically movable in the guide member, an adjustable screw-threaded ring mounted on the screw-threads of the block, a lever passing through one of the pairs of slots and pivotally secured at one of its ends, means passing through the other pair of slots and through the lever, said means also serving to contact with the upper surface of the sleeve, substantially as specified.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

GEORGE THOMAS LIDDLE.

Witnesses:

O. LE ROY DOANE,
LENA NICHOLS.