

No. 776,046.

PATENTED NOV. 29, 1904.

A. C. CAREY.
SAFETY GAS BURNER.

APPLICATION FILED AUG. 3, 1904.

MODEL.

Fig. 1.

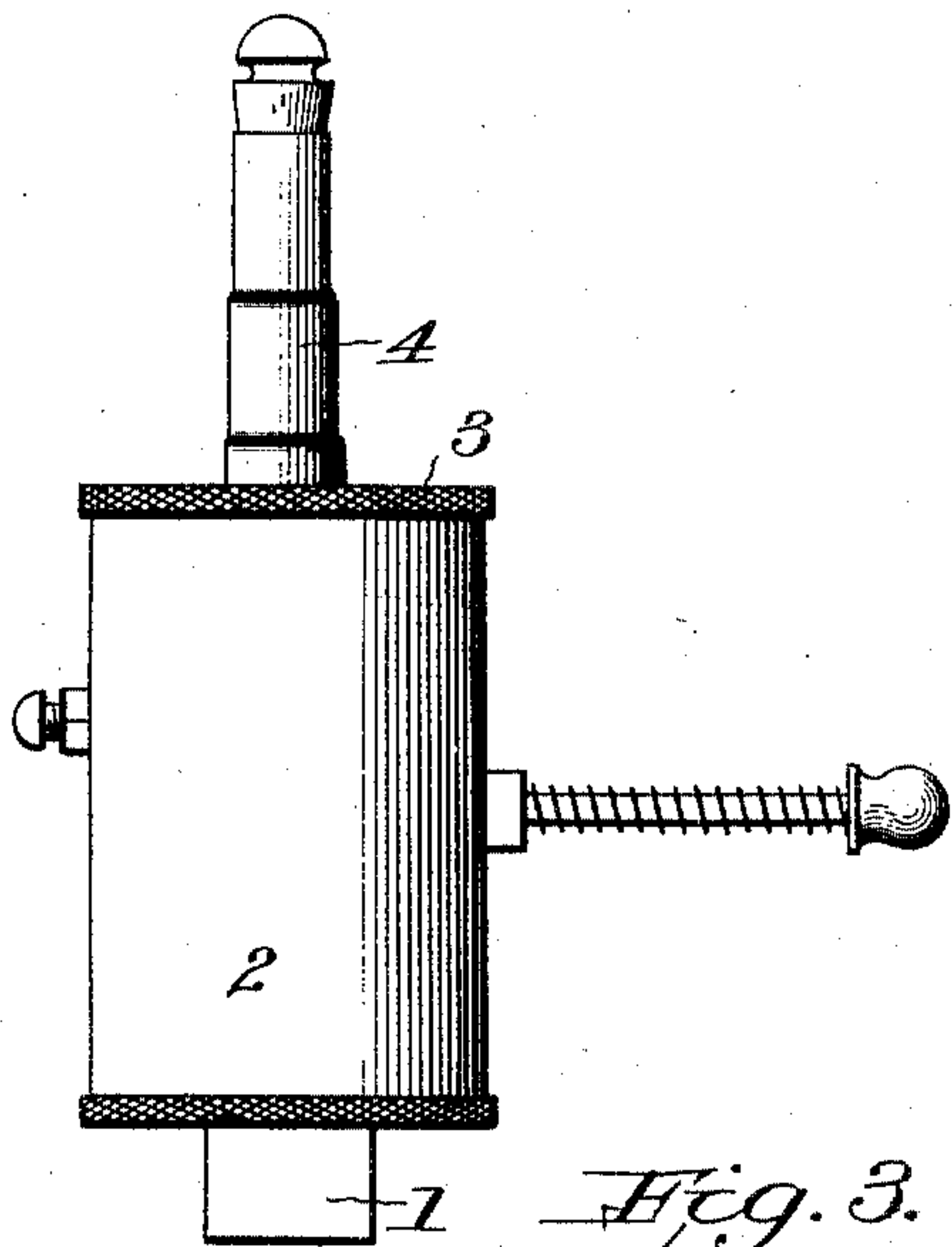


Fig. 2.

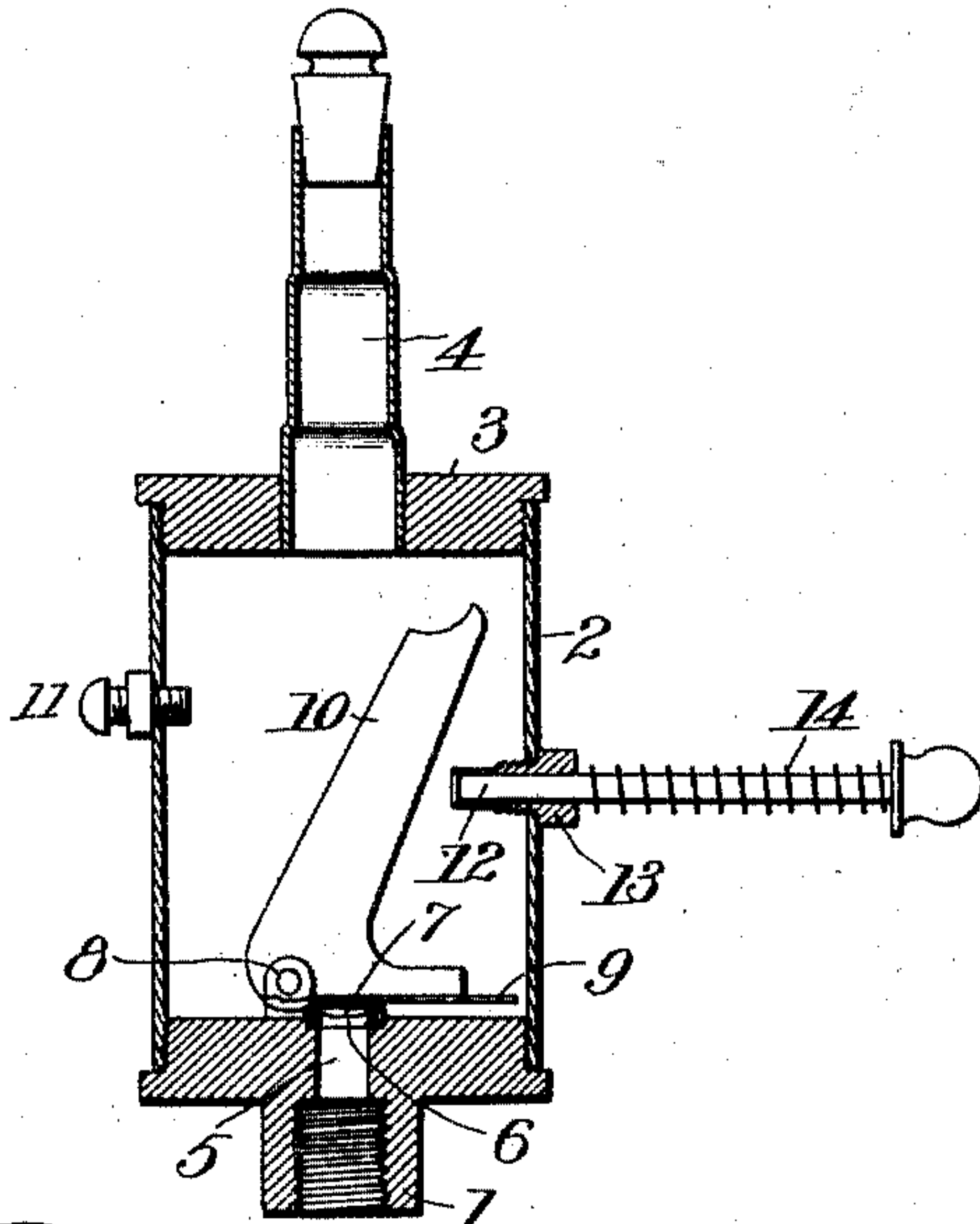


Fig. 3.

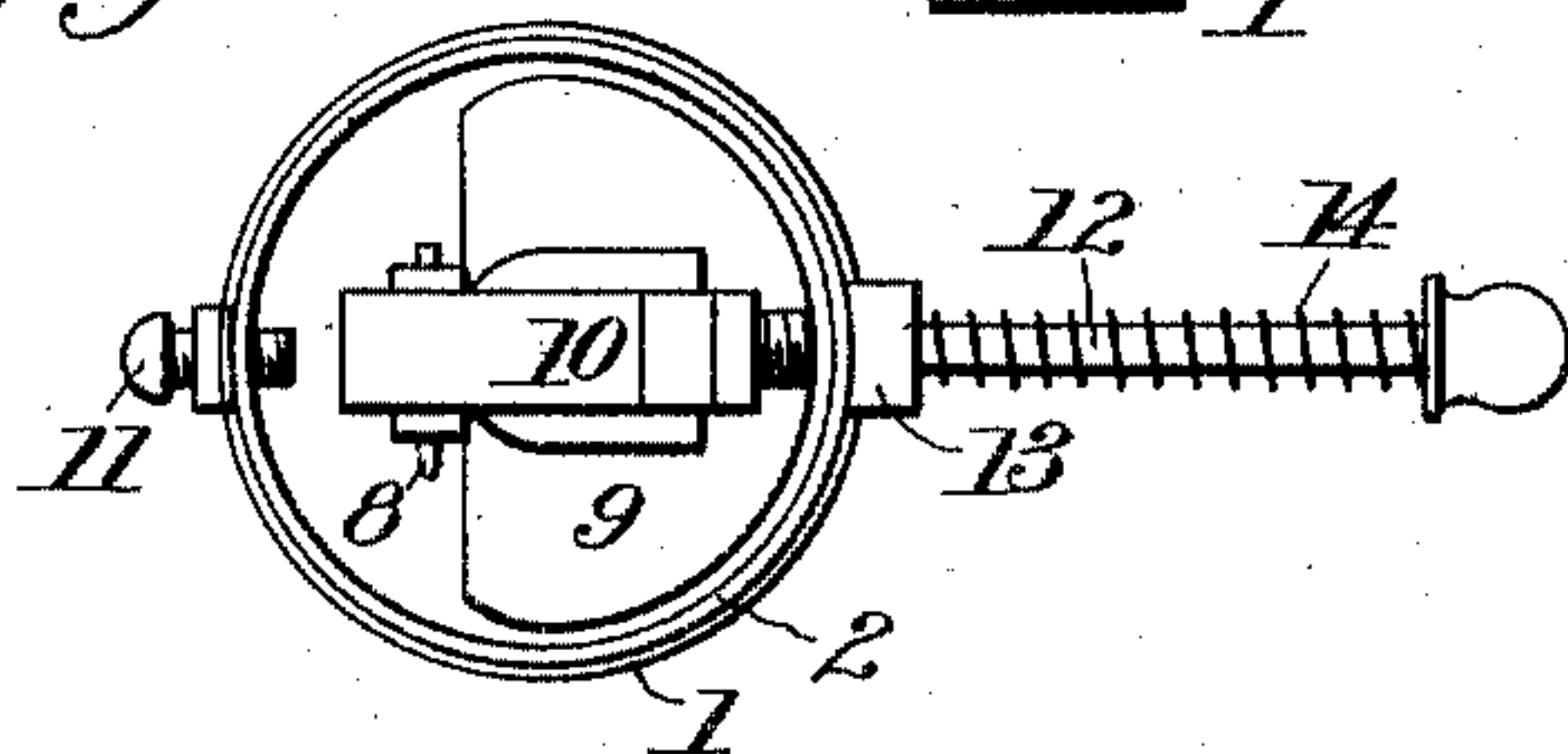


Fig. 4.

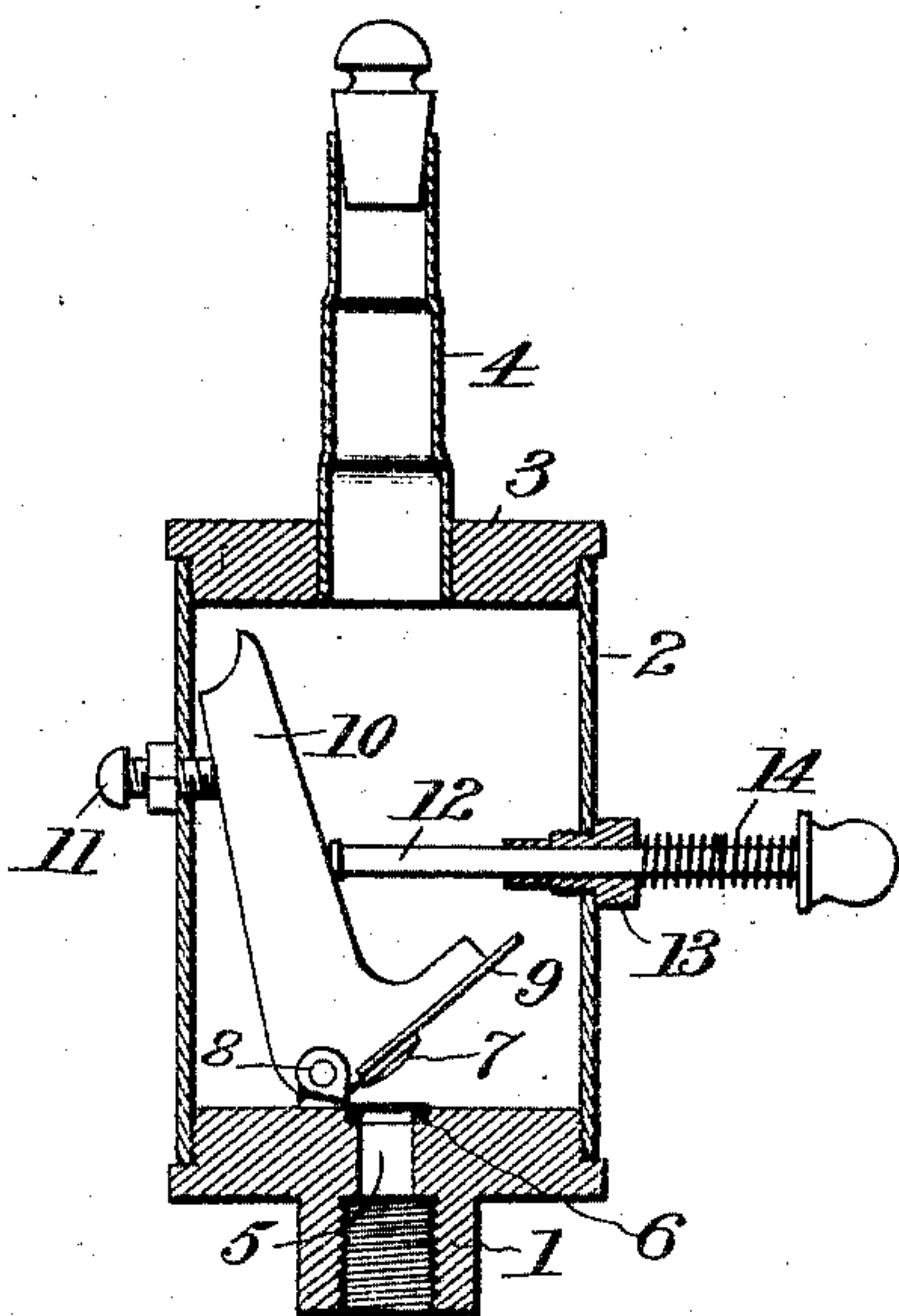
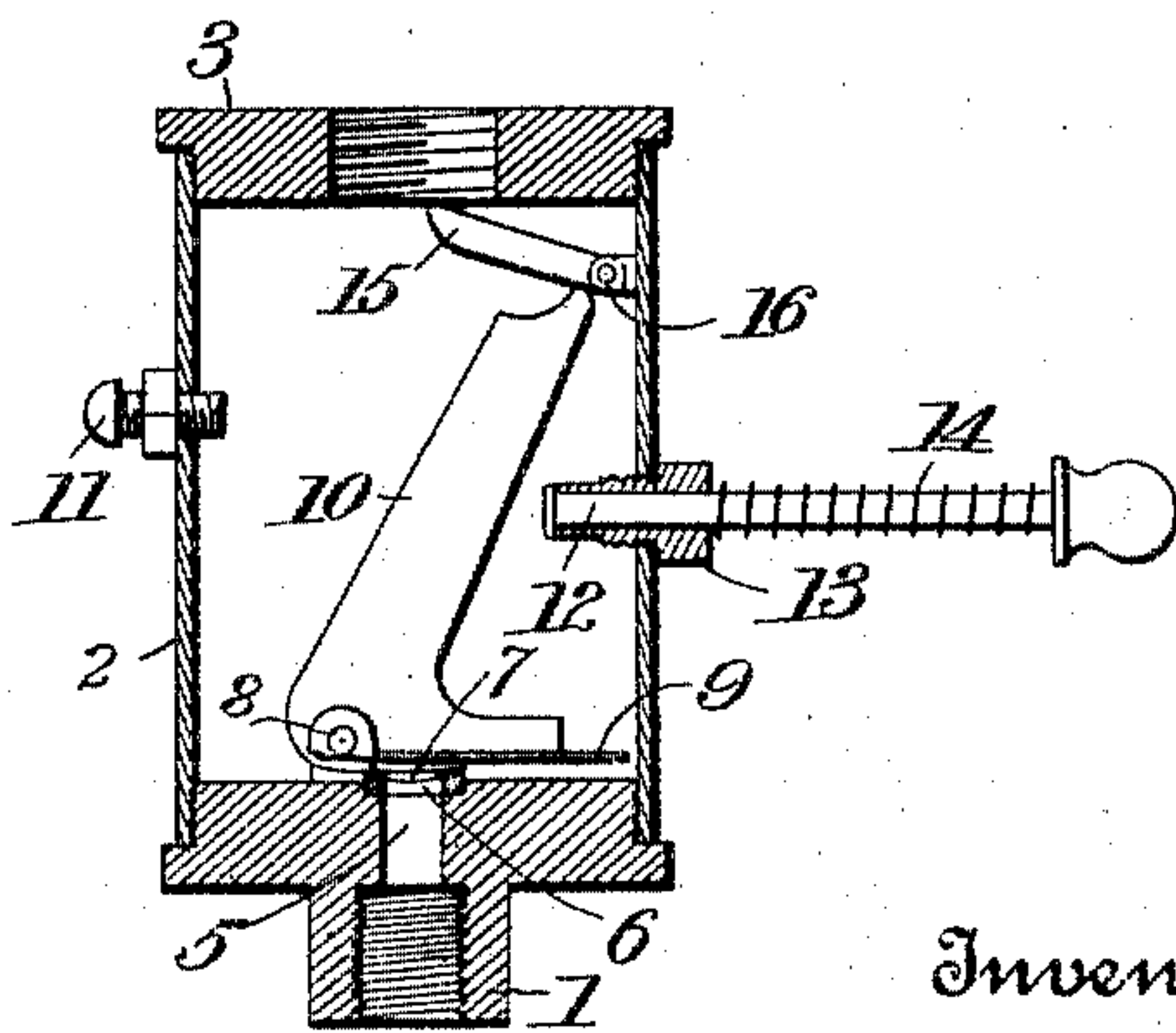


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

AUGUSTUS C. CAREY, OF BOSTON, MASSACHUSETTS.

SAFETY GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 776,046, dated November 29, 1904.

Application filed August 3, 1904. Serial No. 219,309. (Model.)

To all whom it may concern:

Be it known that I, AUGUSTUS C. CAREY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a certain new and useful Improvement in Safety Gas-Burners, of which the following is a full, clear, and exact description.

The object of the invention is to provide means whereby after a gas-burner flame is extinguished by cutting off the supply of gas the burner will be sealed against the escape of gas should the supply be turned on again. Interposed between the gas-cock and the burner is an auxiliary valve which operates automatically to close the gas-port whenever the flame has been extinguished.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation. Fig. 2 is a vertical section. Fig. 3 is a top plan view of the burner with its base removed. Fig. 4 is a view similar to Fig. 2, but showing the auxiliary valve open. Fig. 5 is a view similar to Fig. 2, showing the retaining device for the auxiliary valve.

The device is designed to be attached to ordinary gas-fixtures above the gas-cock, and for this purpose it is supplied with a screw-base 1. Upon this base is mounted a cylinder 2, and this cylinder is closed by a cap 3, upon which is arranged an ordinary gas-burner 4. The base 1 is provided with a gas-port 5, in which is arranged a valve-seat 6, of any suitable material, such as leather, and over this seat is pivoted the auxiliary valve 7 upon a suitable pivot-pin 8. This auxiliary valve may be a piece of metal (shown more in detail in the open position, Fig. 4) mounted upon a semicircular or other widely-extended plate 9, which in turn is secured to a stem 10, rising within the cylinder.

11 is an adjustable stop.

12 is a push-pin mounted in a socket 13 in the cylinder, and this push-pin is provided with a spring 14, which normally pushes outwardly from the cylinder, as shown in Figs. 1, 2, and 3.

The normal position of the valve is as in

Figs. 2, 3, and 5—that is to say, closed—and when the gas is turned on the auxiliary valve is opened by pushing it over to the position shown in Fig. 4 by means of the push-pin 12. So long as conditions are normal and the gas is flowing and burning at the burner the auxiliary valve remains in its open position. Now should the gas be left burning and the supply turned off from the street or for repairs or for other purposes of course the flame would be extinguished, but not until the accumulation of gas within the cylinder has been burned. The so-called “vacuum” formed within the cylinder in this event will overbalance the nicely-adjusted auxiliary valve and cause it to close, so that should the supply of gas be restored again the weight of the valve and the superposed atmospheric pressure upon the superior pressure area of the plate 9 will suffice to keep the burner closed against the escape of gas. In order to render the auxiliary valve effective, it should be balanced quite nicely, and the adjustable stop 11 is provided, so as to insure the overbalancing adjustment of said valve.

It may be necessary or advisable in some instances to provide means for locking the auxiliary valve in closed position, and in Fig. 5 I have shown one simple form of such device, same consisting of a dog 15, pivoted at 16 above the valve-stem 10 and adapted to fall by gravity upon the said valve-stem when the valve is closed to prevent the opening of the valve except by the operation of the push-pin 12. This valve-locking device is especially useful when the apparatus is made large enough to carry sufficient gas for a whole building or street. The dog 15 may have a rule-joint at 16 or any other suitable arrangement to keep it from dropping out of place.

The invention obviously is susceptible of various modifications, and hence I mean not to limit it specifically to the construction and arrangement of parts shown in the drawings and hereinabove particularly described.

What I claim is—

1. A safety gas-burner, comprising a base adapted to be mounted upon a gas-fixture, a cylinder thereon, a burner applied to said

cylinder, an overbalanced auxiliary valve interposed in the said cylinder between the base and the burner, and means to move it manually.

5 2. A safety gas-burner, comprising a base adapted to be mounted upon a gas-fixture, a cylinder thereon, a burner applied to said cylinder, an auxiliary valve of relatively large
10 superficial area exposed to atmospheric pressure, interposed in said cylinder between the base and the burner, and means to move said auxiliary valve manually.

3. A safety gas-burner, comprising a base, a burner, a cylinder connecting said base and
15 burner, a gas-port in the base, an auxiliary valve pivoted above and controlling said gas-port, an operating-stem for said valve, and a push-pin for opening said auxiliary valve.

4. A safety gas-burner, comprising a base,
20 a burner, a cylinder connecting said base and burner, a gas-port in the base, an auxiliary valve pivoted above and controlling said gas-port and having an atmospheric-pressure surface of greater area than the gas-port, an operating-stem for said valve, and a push-pin
25 for opening said auxiliary valve.

5. A safety gas-burner, comprising a base, a burner, a cylinder connecting said base and burner, a gas-port in the base, an auxiliary

valve pivoted above and controlling said gas- 30 port, an operating-stem for said valve, an adjustable stop for said stem, and a push-pin for opening said auxiliary valve.

6. A safety gas-burner, comprising a base adapted to be mounted upon a gas-fixture, a 35 cylinder thereon, a burner applied to said cylinder, an auxiliary valve interposed in the said cylinder between the base and the burner and operating under variations in pressure, hand-operated means for opening said auxil- 40 iary valve, and automatic means to retain the said auxiliary valve in closed position.

7. A safety gas-burner, comprising a base, adapted to be mounted upon a gas-fixture, a 45 cylinder thereon, a burner applied to said cylinder, an auxiliary valve interposed in the said cylinder between the base and the burner and operating under variations in pressure, automatic means to retain the said auxiliary valve in closed position, and spring-released 50 means to open the said valve.

In testimony whereof I have hereunto set my hand this 1st day of August, A. D. 1904.

AUGUSTUS C. CAREY.

Witnesses:

GARDNER KNAPP,
CHARLES H. LITTLE.