E. M. Ray,

Latch.

No 6,808. Patented Oct. 23, 1849.

Fig: 4.

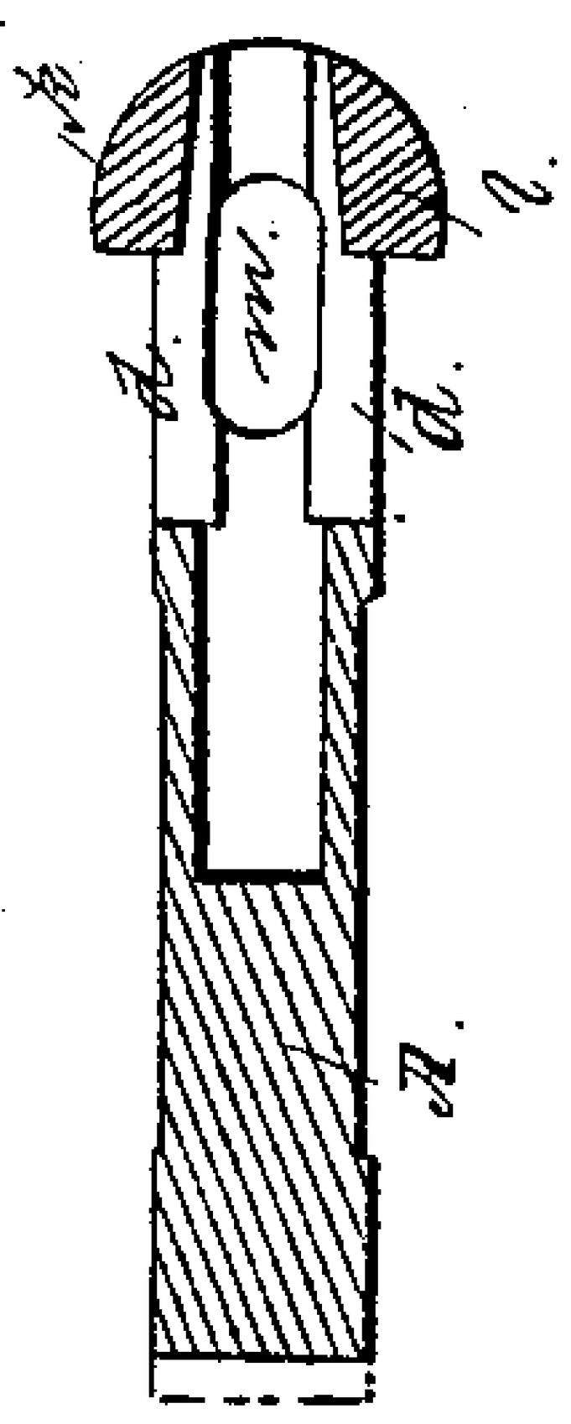


Fig: 3.

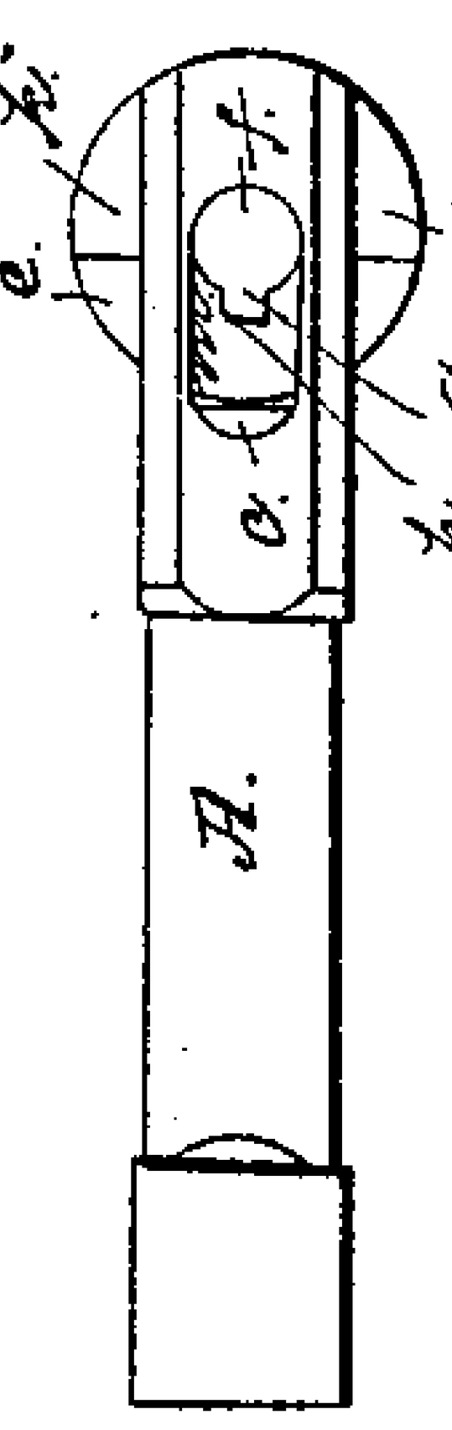


Fig: 2.

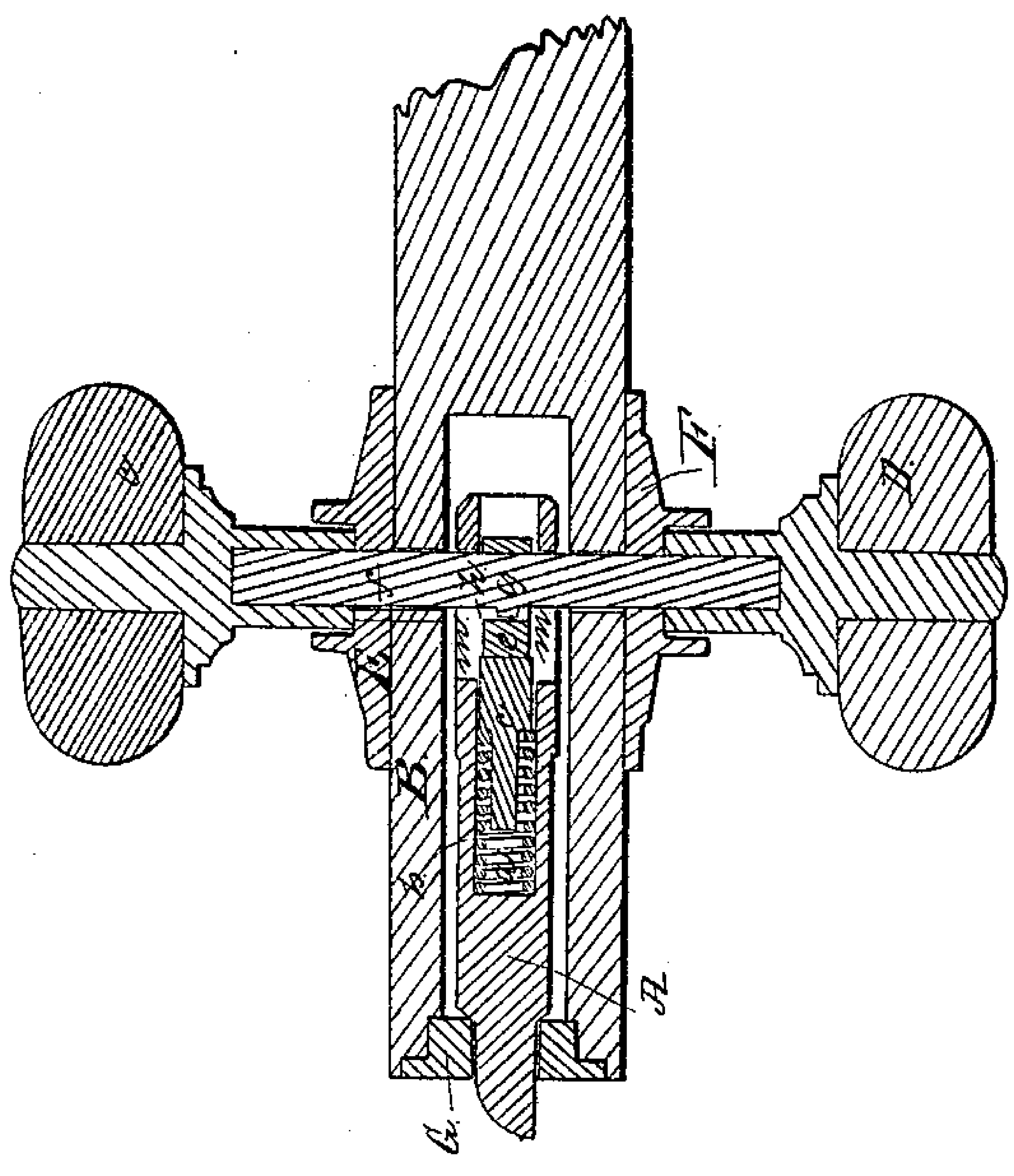
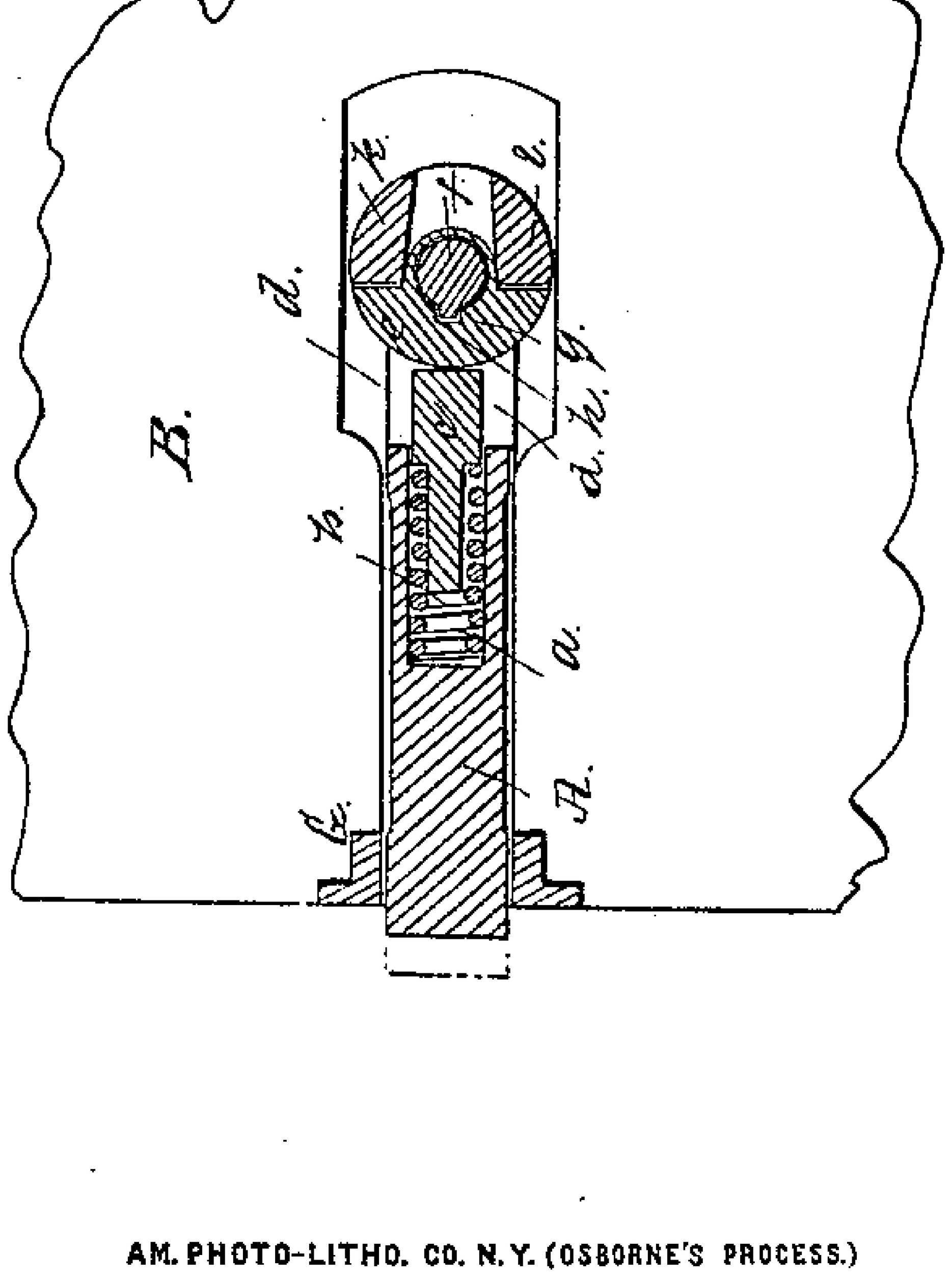


Fig: 1.



UNITED STATES PATENT OFFICE.

ELIAS M. RAY, OF NORFOLK COUNTY, MASSACHUSETTS.

SPRING LATCH-BOLT.

Specification of Letters Patent No. 6,808, dated October 23, 1849.

To all whom it may concern:

Be it known that I, ELIAS M. RAY, of the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Latch-Bolts for Doors; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings Figure 1, denotes a vertical section of my improved latch bolt as applied to a door. Fig. 2 is a horizontal section of it. Fig. 3, is a side view of the bolt. Fig. 4, is a longitudinal section of the bolt without its spring piston or tumbler.

The simplicity of my improved latch spring bolt enables it to be affixed to a door with great ease and with much less trouble or cutting away of the door, than is generally experienced in fitting or applying a common mortise lock or latch. The latch bolt is inserted in a hole or socket bored into the door and perpendicular to its edge, a smaller hole being bored through the door and of a size only sufficient to receive the shank of the knobs and permit its free rotary movements.

The bolt is seen at A, as applied to the door B. The said bolt is made with a hollow cavity or chamber *a*, for the reception of a wound helical spring *b*, and a piston or spring head *c*, all of which are arranged in the bolt as seen in Figs. 1 and 2. This chamber *a*, opens out of a space or cavity *d*, made in the rear end of the bolt and down through it for the reception of the tumbler *e*. The shank *f* of the knobs C, D, passes horizontally through the rear part of the bolt, and also through the tumbler. A small pin or projection *g*, from the shank is made to enter a recess made at *h*, in the tumbler, the same being for the purpose of so connecting the shank and the tumbler that whenever the former is turned on its axis either in one direction or the other, by the hand applied to one of the knobs the tumbler will be turned with it, and so as to retard the bolt. The tumbler operates against two projections or bearings *k*, *l*, fixed to opposite sides of the bolt, as seen in Fig. 1. The spring head or piston *c*, before mentioned rests and is forced by power of the spring, directly against the tumbler. In order that the main bolt may be moved backward it has a slot *m*, made horizontally and entirely through it as seen in Figs. 2 and 3, the shank of the knobs being passed through the slot.

E, F, are the bearing plates of the shank of the knobs, they being arranged with respect to the door as seen in Fig. 2. A metallic socket piece G, is fitted into the door and for the front end of the bolt to pass through. It serves to steady the bolt, and to preserve its correct position.

I have heretofore or lately made application for a patent for a contrivance somewhat similar to that above described although differing from it in several particulars. The invention as explained in the specification of the said application had its latch or spring bolt, divided into two parts which were connected by a screw; the tumbler and rear part of the bolt being placed within a box or case which was fitted into the door. Such box or case is entirely dispensed with in my present improved latch bolt, a hole through the door for the reception of such a case being dispensed with my invention requiring a hole only large enough for the passage of the shank of the knobs. The hole bored in the door and for the reception of the bolt extends across that for the shank, and there is no spring placed on the outside of the bolt, as in the contrivance for which I have previously made application for a patent. The latch bolt as now made by me is not only much simpler in its construction than the old or other one but can be made at a much cheaper rate.

I wish it to be understood that I do not claim the making of the latch bolt in two parts and in other respects as I claimed in the specification of the application for a patent to which I have hereinbefore alluded and which is now lodged in the Patent Office of the United States, but

That which I do claim as my invention and desire to secure by Letters Patent, is—

Arranging the spring in the cavity of the bolt with one end of said spring bearing upon the end of the cavity in the bolt and the other end of it or its equivalent upon the tumbler as herein described; whereby I am enabled to dispense with the usual bearings for the spring external to the bolt.

In testimony whereof I have hereto set my signature this fourteenth day of September A. D. 1849.

ELIAS M. RAY.

Witnesses:

EDWARD C. ROGERS,

ALLEN TILLINGHAFT.