

(No Model.)

H. K. WOOD.
VALVE.

No. 590,011.

Patented Sept. 14, 1897.

Fig. 1.

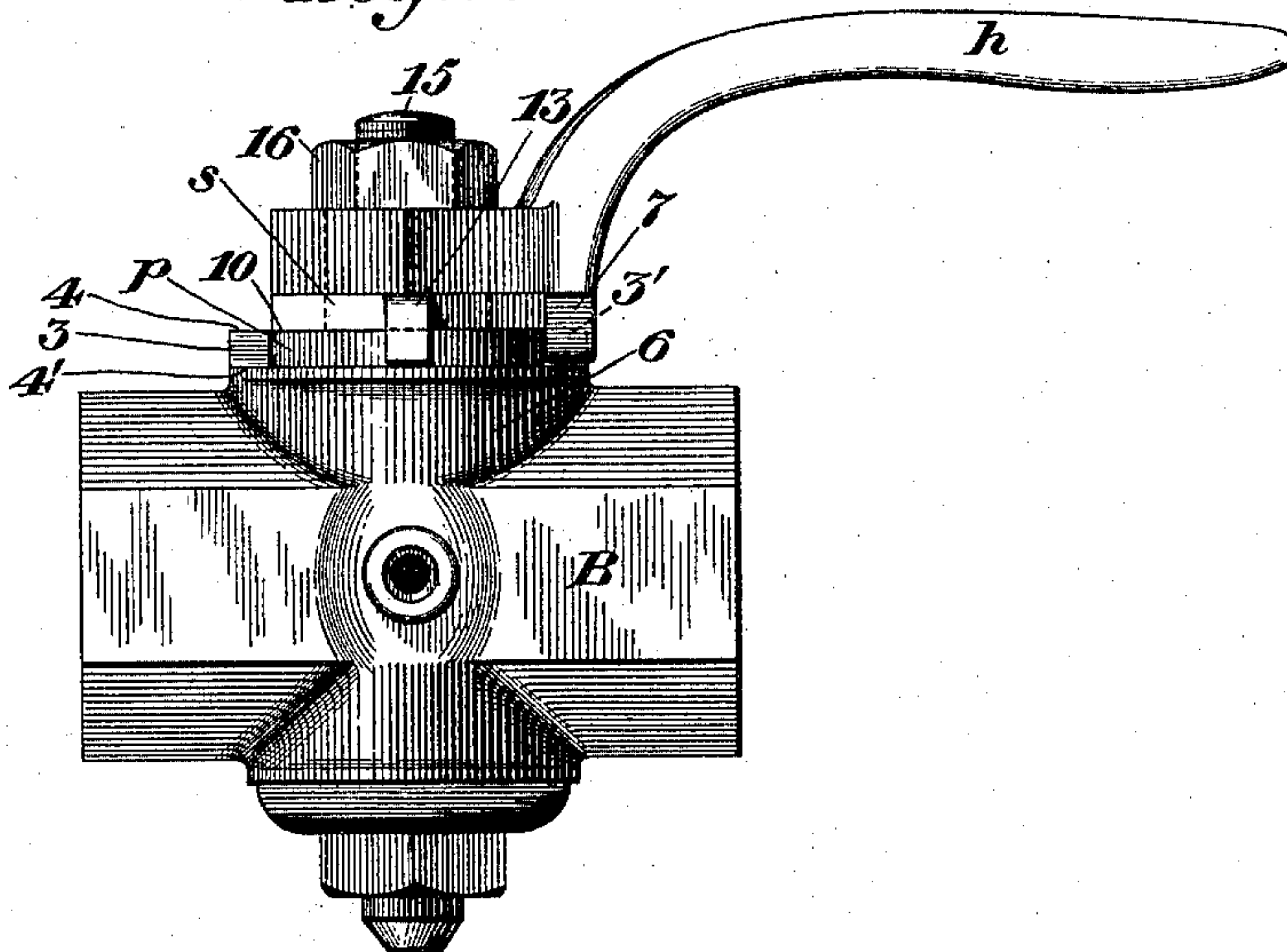


Fig. 4.

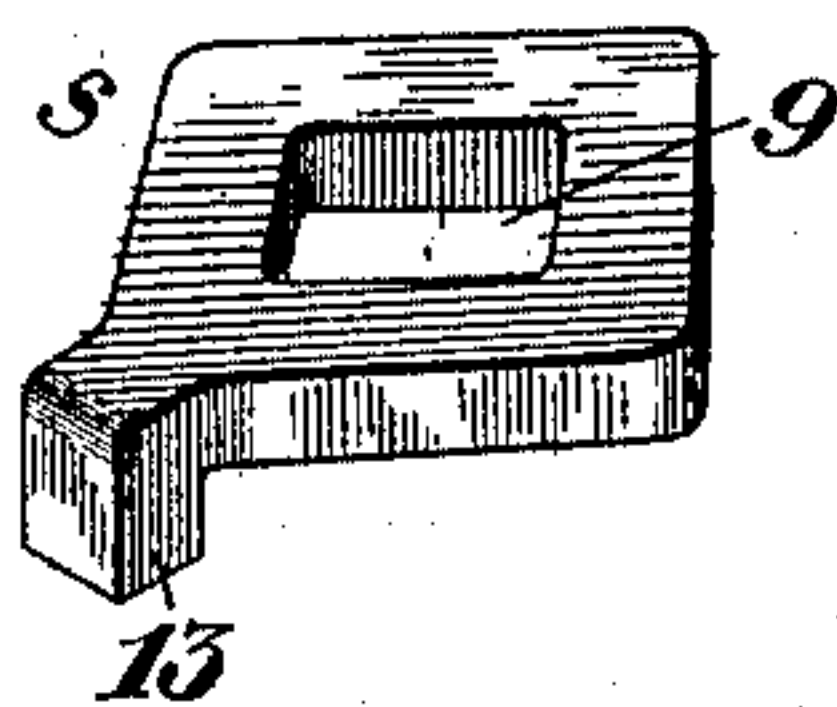


Fig. 3.

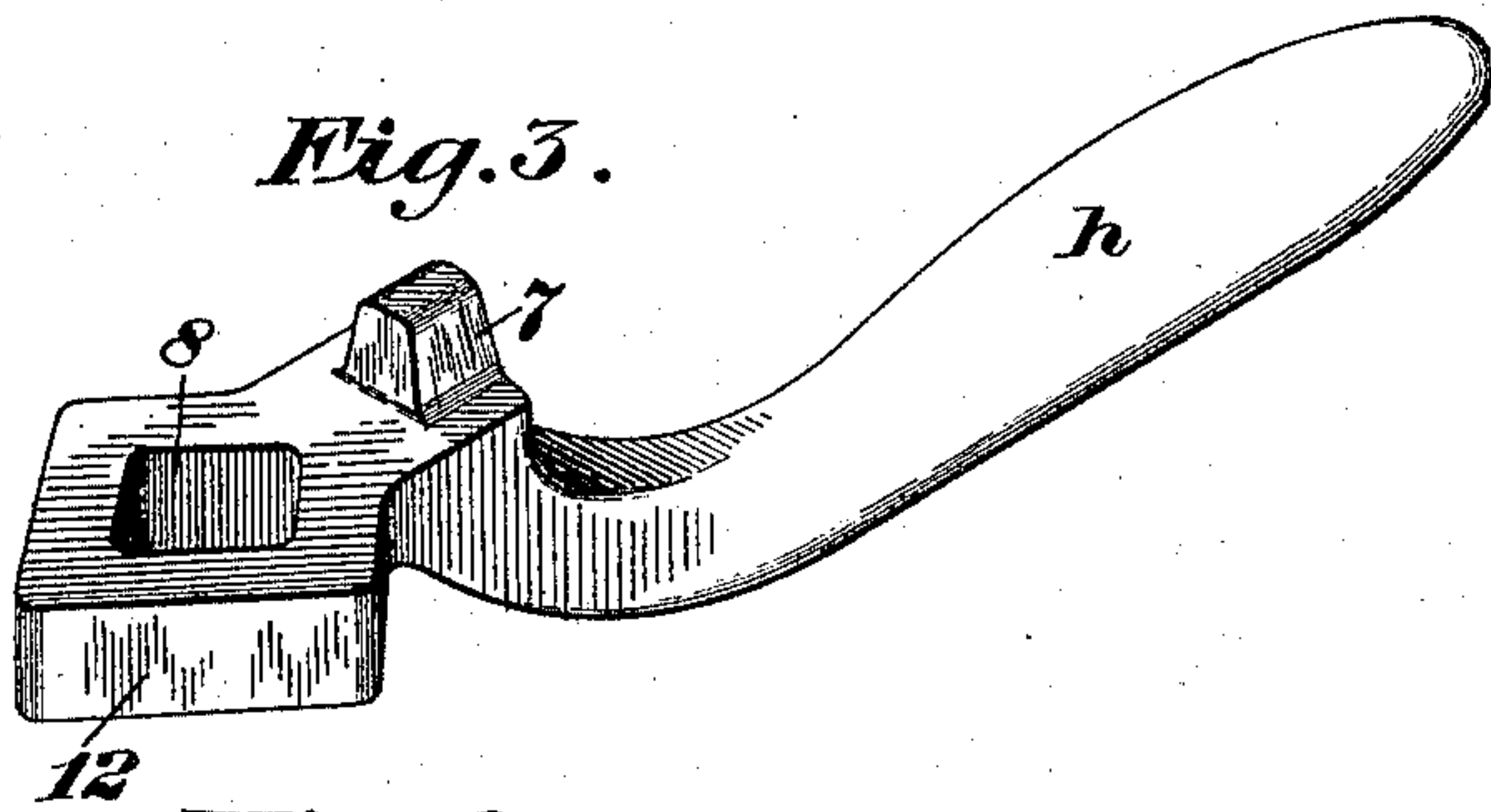
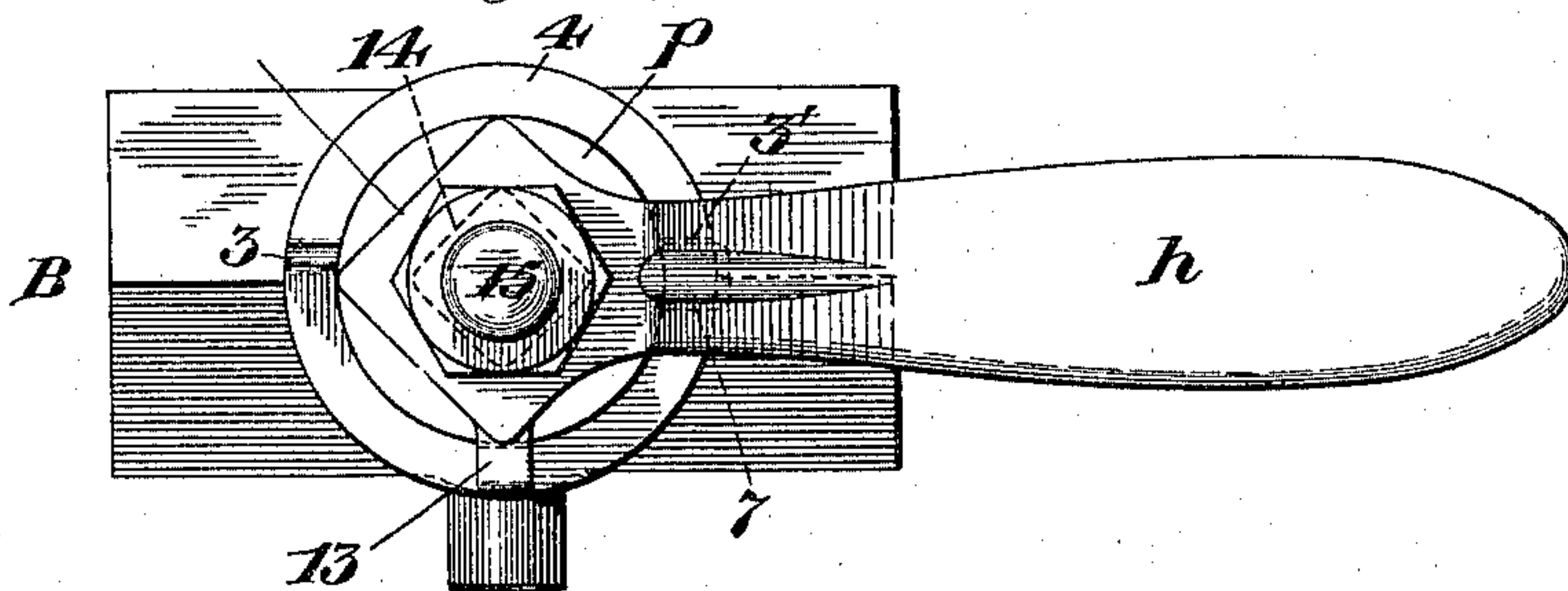


Fig. 2.



Witnesses;

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UNITED STATES PATENT OFFICE.

HUBERT K. WOOD, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE
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VALVE.

SPECIFICATION forming part of Letters Patent No. 590,011, dated September 14, 1897.

Application filed May 8, 1897. Serial No. 635,671. (No model.)

To all whom it may concern:

Be it known that I, HUBERT K. WOOD, a citizen of the United States, residing in Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Valves, of which the following is a specification.

This invention relates to improvements in valves; and it has for its main object the provision of an improved device of this type which may be changed readily from a right to a left hand valve and adapted for use as such without the addition of any part thereto or the removal of any therefrom. For this purpose I provide, in connection with the usual handle or wrench which is secured to the valve-plug and by means of which the plug is turned, a removable stop, which will preferably be fitted over a polygonal portion of the plug, so as to move therewith in a quadrant and limit the closing movement of the handle by which the plug is turned, the construction and organization of the parts being such that the handle may be shifted from the left to the right hand side by changing it from the position in which it may be to a diametrically opposite one and securing it in place again.

In the drawings accompanying and forming part of this specification, Figure 1 is a side elevation of a right-and-left-hand valve embodying my present invention. Fig. 2 is a plan of the same. Fig. 3 is an under side perspective view of the handle or wrench by which the valve-plug is manipulated, and Fig. 4 is a similar view of a stop-washer for limiting the movement of the handle in one direction.

Similar characters designate like parts in all the figures of the drawings.

My improved valve comprises as its essential features a body or barrel having a pair of oppositely-disposed stops and bored transversely to receive the usual valve-plug, a removable stop secured to the plug and limited in its movements in one direction by one of the stops on the barrel, and a handle secured to the valve-plug at a considerable angle, preferably at a right angle, to the removable stop, so as to be limited in its movements by the other stop on the barrel.

The preferred construction is that shown herein, in which the valve-plug has a polygonal portion or upper end, to which the handle or wrench is fitted, as is also the removable stop, this latter being in the form of a washer fitting the polygonal portion of said plug and having a stop-lug projecting therefrom into the path of one of the stops on the valve.

The body or barrel of the valve is designated in a general way by B and may be of any usual construction, as may also the valve-plug, which is indicated herein by *p*. These parts are of old and well-known construction and, except as to certain features hereinafter pointed out, constitute no part of my present invention. They will not be described in detail except as to such new features.

The plug *p* is seated in a transverse bore in the barrel B in the usual manner and has a polygonal upper portion, which in this case is shown as a squared part adapted to receive the handle for turning the same and also the removable stop-washer.

The barrel which coöperates with the plug to limit the movement of the parts carried by the latter has a pair of stops, which are illustrated in the drawings (see Figs. 1 and 2) in the nature of stop-faces 3 and 3', connecting the complementary portions 4 and 4' of the end of the transversely-bored portion 6 of the barrel B, these complementary faces lying in parallel planes.

It will be observed that the construction is one in which the two faces 4 and 4' may be machined without difficulty, as each surface is in a single plane. This construction also obviates the necessity for casting on the edge of this portion of the barrel stop-lugs for limiting the movements of the handle.

The handle or wrench *h*, which is secured to the valve-plug and by means of which the latter is turned, is of the well-known construction and has depending from the under side thereof at the proper point a lug 7, which serves as a stop for limiting the movement of the handle in opening the valve. If the handle is in its right-hand position, as shown in the drawings, this stop-lug will abut against the face 3' when the valve is open, but if the handle is positioned so that the valve is adapt-

ed for use as a left-hand one this stop-lug will come against the face 3, diametrically opposite the face 3', when the valve is opened. The opening in the jaw of the handle may be of any suitable shape so long as it corresponds to the contour of the portion of the plug to which it is to be fitted, a square opening being preferable for the reason that it permits the handle to be positioned readily when the latter is changed from its right to its left hand position, and vice versa.

As before stated, the stop-lug 7 limits the movements of the handle in one direction and the removable stop is intended to control the movement of such handle in the opposite direction—that is to say, when the barrel is closed. This removable stop is designated in a general way by *s* and preferably comprises a washer having a squared opening therein adapted to be fitted to the polygonal or squared portion of the plug and to rest on the upper face of the main body of the plug between such face 10 and the under face of the jaw 12 of the handle *h*. This washer has projecting from one side thereof a depending lug 13, which forms a stop adapted to abut against the face 3 or the face 3', according to whether the handle is in its right or left hand position. When in place, this removable washer *s* should be so disposed that with the valve wide open the lug 13 will lie at a right angle to the handle *h*, as shown in Figs. 1 and 2, and the handle will then be slipped over the squared portion 14 of the valve-plug, so that the handle will be in the position just stated. The position of the stop-washer *s* will of course always be the same in assembling the parts, but the handle may be either in the position shown in the drawings or else turned so as to face in a diametrically opposite direction, so that the handle instead of moving through an arc of ninety degrees between the stop-face 3' and the lug 13, as is the case in the organization illustrated in the drawings, would move through the same arc between such lug and the stop-face 3.

It will be clear from the foregoing descrip-

tion of my invention that by providing the stop-washer *s* I am enabled to adapt my invention for use in connection with any ordinary form of plug now made, as it is not necessary to shape the plug in any different manner in order to apply thereto such a washer. This I deem a feature of importance, as it is a distinct advantage to employ my invention in connection with valves of this type without having to remodel the usual valve-fittings.

The extreme upper end of the valve-plug (indicated herein by 15) may be screw-threaded in the usual manner to receive a nut 16, whereby the handle and the stop-washer will be held in place, and it will only be necessary to unscrew this nut and remove it and the handle in order to change the latter from the right to the left hand position, or vice versa.

Having described my invention, I claim—

1. The combination, in a valve, of a valve-body having a pair of oppositely-disposed stops; a valve-plug; a stop secured to said plug and limited in its movements in one direction by one of the stops on the valve-body; and a handle also secured to the valve-plug and having a stop disposed at an angle to the stop on the plug and limited in its movements in one direction by the other stop on the valve-body.

2. The combination, in a valve, of a valve-body having a pair of oppositely-disposed stops; a valve-plug having a polygonal portion; a removable stop-washer fitted over said polygonal portion of the plug and having a laterally-projecting stop limited in its movements in one direction by one of the stops on the valve-body; and a handle also fitted to the polygonal portion of the valve-plug and having a stop disposed at an angle to the stop on the washer and limited in its movement in one direction by the other stop on the valve-body.

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