T. & J. Barber,

Stop Cock,

No. 48,147, Patented June 13, 1865.

Fig: 1

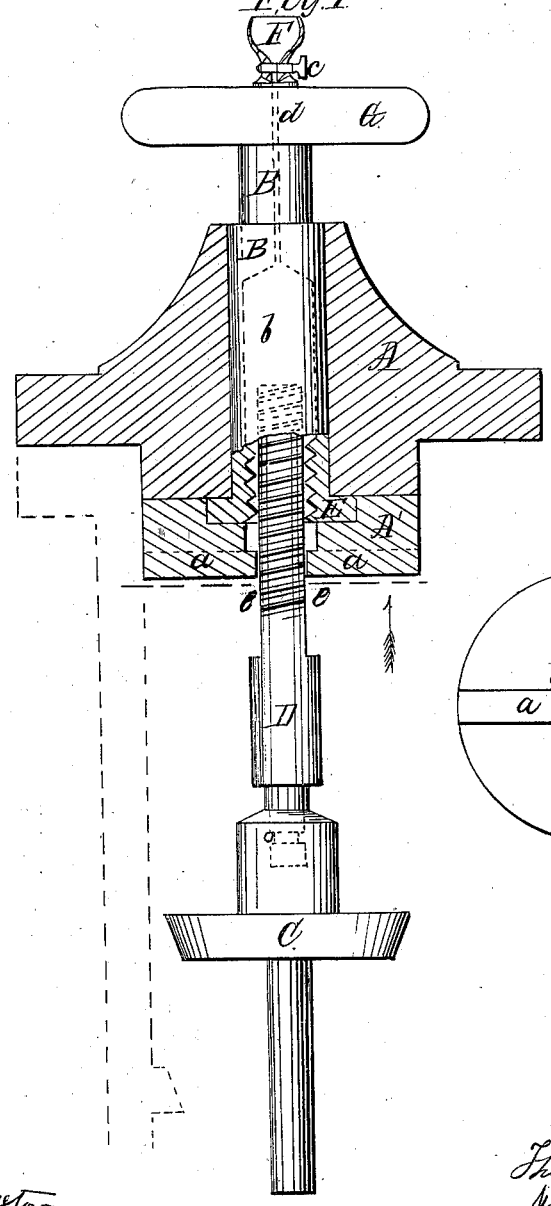
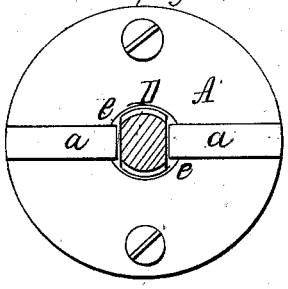


Fig: 2



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UNITED STATES PATENT OFFICE.

THOMAS BARBER AND JOHN BARBER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN STUFFING-BOXES FOR VALVE-SPINDLES.

Specification forming part of Letters Patent No. **48,147**, dated June 13, 1865.

To all whom it may concern:

Be it known that we, THOMAS BARBER and JOHN BARBER, on the corner of Fourteenth street and Third avenue, of South Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Stuffing-Boxes for Valve-Spindles; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an elevation in vertical section of a stuffing-box made according to our invention. Fig. 2 is an under side view of the stuffing-box.

Similar letters of reference indicate like parts.

This invention consists in an improvement in stuffing-boxes for spindles or valves, by means of which we are enabled to dispense with the system of packing stuffing-boxes with hemp or similar stuffing material, and yet make the joint tight.

C is a valve, a part of whose seat is shown in red outline, and D is its spindle. The upper end of the spindle has a screw-thread cut upon it, which engages a screw-thread tapped in the lower end, *b*, of a socket, B. Two opposite sides of the spindle, at its upper end, are made straight and parallel with each other, as seen at *e e*, to enable us to advance and withdraw the valve, and yet prevent it from rotating during its vertical movements. The socket B is fitted in a gland, A, in which it has a rotary motion.

G is a hand wheel fixed to the upper end of the socket, by means of which the socket is rotated and the valve C raised from and lowered upon its seat. A lubricating-cup, F, with a cock, *c*, fitted to it, is placed on the top of the socket above the hand-wheel, and a channel, *d*, (shown in Fig. 1 in dotted outline,) is made through the center of the socket, from the bottom of the cup F to the upper end of the tapped hole made in the lower part of the socket.

E is an annular valve formed upon the foot of the socket, and extending beyond it on all sides under the lower face of the gland A, in which position it is secured by means of a collar, A′, which fits about the valve E and sets up against the lower side of the gland, to which it is secured by screws, as shown in Fig. 2. Snugs or guides *a a* are secured to the under side of the collar at points opposite to each other, and which project so as nearly to be in contact with the straight sides *e e* of the spindle. The effect of this construction and arrangement is that the valve E will be kept tight against the lower face of the gland, to fit which it is ground, by the pressure of steam from below, or by the pressure of any vapor or gas or liquid with which the valve C is used, and there will therefore be no leakage through the joint formed between the socket B and the gland, while the valve C can be operated with great facility by rotating the socket B, and thereby moving the valve-spindle D by means of the screw-threads cut on it and within the socket. These screw-threads will be lubricated by means of the stop-cock *c* and the channel *d*, which leads from the cup F downward into the hole in the socket. We thus make a tight joint for the valve-spindle without the use of any hemp or other stuffing materials, and it is evident that the joint will not wear itself loose or become leaky by use, since the construction of the parts is such that the valve E is made more tight by the increase of the pressure from below.

We claim as new and desire to secure by Letters Patent—

1. The combination, with the annular valve E, socket B, and valve-stem D, of the gland A and collar A′, when constructed and arranged to operate in the manner and for the purposes herein set forth.

2. The combination of the guides or snugs *a a* on the collar A′ with the straight sides of the valve-spindle, substantially as above described.

3. The lubricating device above shown, and its channel *d*, in combination with the socket in which the valve-spindle works, substantially as described.

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