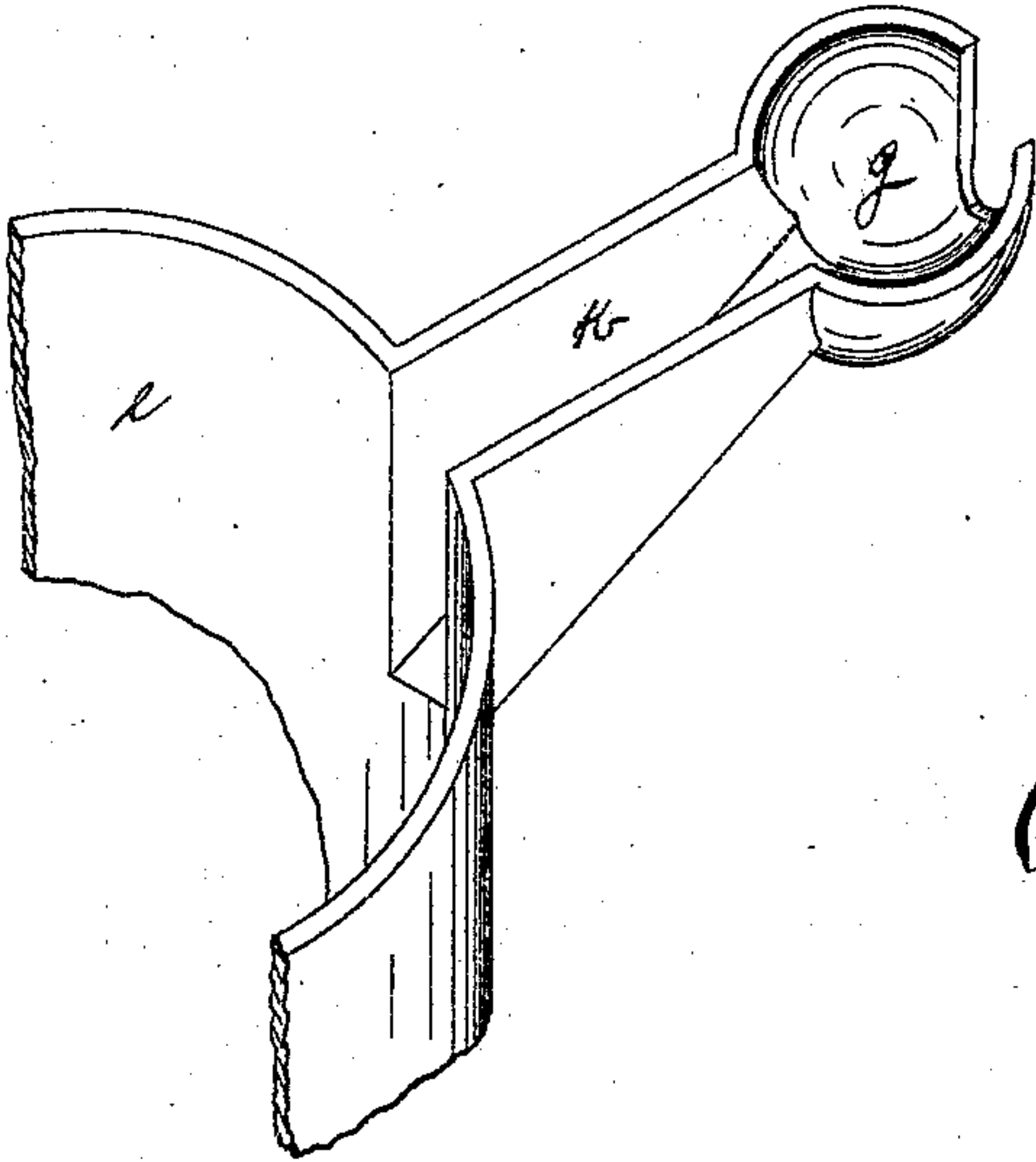
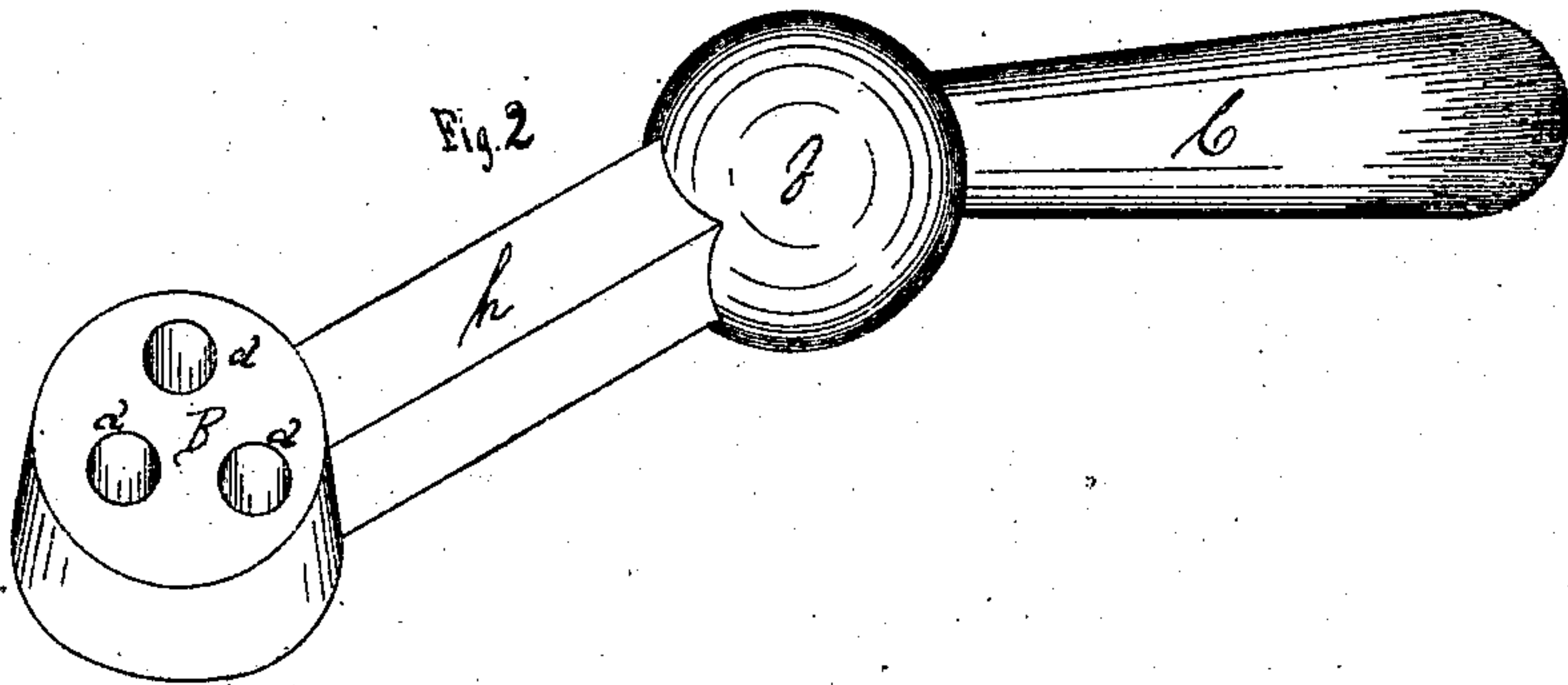
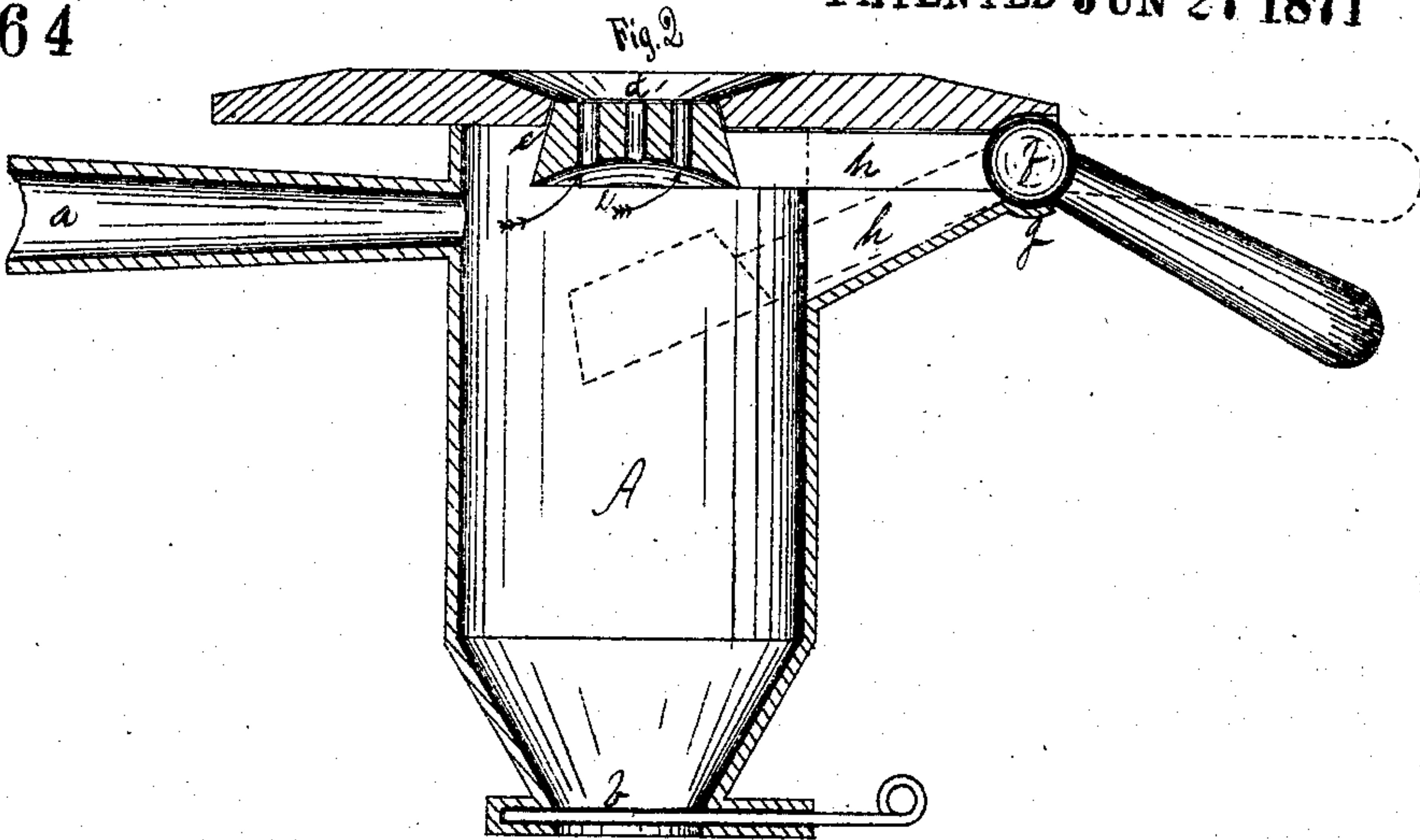


John Cappon's Blacksmiths Tuyere.

116264

PATENTED JUN 27 1871



Witnesses.

H. Drake
C.N. Woodward

John Cappon,
Inventor, By
Burke Fraser & Cogood, Attys.
Rochester N.Y.

UNITED STATES PATENT OFFICE.

JOHN CAPPON, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN TUYERES.

Specification forming part of Letters Patent No. 116,264, dated June 27, 1871.

To all whom it may concern:

Be it known that I, JOHN CAPPON, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Blacksmiths' Tuyeres, of which the following is a specification:

This invention consists in the valve, provided with a lever or arm having a ball-and-socket joint and a flat-sided shank, by which it is prevented from turning or twisting out of place, as herein-after described.

In the drawing, Figure 1 is a vertical section of my improved tuyere; Fig. 2, a perspective view of the valve-arm and its sockets or bearings.

A represents the tuyere, which is embedded in the forge. It has on one side a nozzle, *a*, by which the blast enters, and at the bottom a damper-slide, *b*, by which the ashes are let off or discharged as they drop from the opening above. B represents the valve which rests in the eye or opening *e*. The fire is built on top the valve, and the latter has openings *d d*, as well as a space, *e'*, at its periphery to allow the blast to pass to support the combustion. C is the lever or arm of the valve, which passes out within reach of the operator. When the outer end of the arm is raised the valve is correspondingly depressed, as shown in dotted lines, to allow the ashes and slag to drop through. The arm is provided with a ball, *f*, which rests in a corresponding socket, *g*, so that an air-tight joint is produced which will resist the pressure of the blast at whatever position the arm is turned to. It also has a flat-

sided shank or stem, *h*, which rests in a corresponding socket or bearing, *k*, so that the upright and true position of the valve is insured when it enters its opening at the top of the tuyere.

These features are of importance in insuring the proper action of the valve, and, so far as I am aware, they are new. The ball-and-socket joint is effective in producing a tight joint, and cannot be replaced by any other arrangement with which I am acquainted. The flat-sided shank is also a simple way of keeping the upright position of the valve. The valve itself is also effective in preserving the fire without undue stirring and agitation. It allows the free passage of air, and may, if desired, be depressed to admit more when high heat is required. When fully depressed it allows the ashes to fall freely, and, if necessary, the poker may be used to assist without destroying the fire-bed.

What I claim, and desire to secure by Letters Patent, is—

The lateral extension of the air-chamber, and the semi-spherical socket at the extremity thereof, combined with the semi-spherical socket in the hearth-plate and the semi-spherical protuberance on the lever, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand this 5th day of April, 1871.

JOHN CAPPON.

Witnesses:

R. F. OSGOOD,

C. N. WOODWARD.