

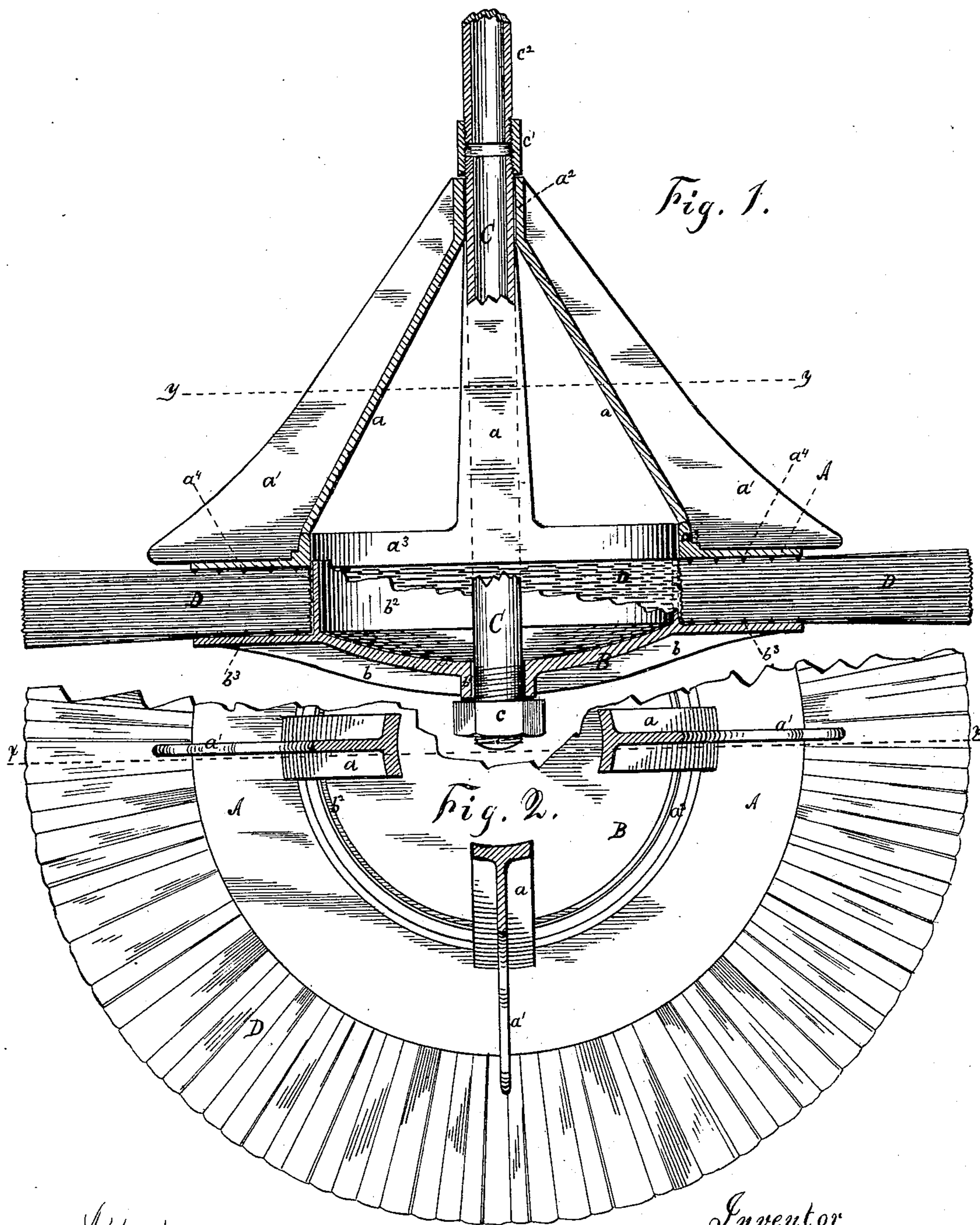
(No Model.)

J. N. GIBSON.

FLUE BRUSH.

No. 253,034.

Patented Jan. 31, 1882.



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UNITED STATES PATENT OFFICE.

JOHN N. GIBSON, OF CINCINNATI, OHIO.

FLUE-BRUSH.

SPECIFICATION forming part of Letters Patent No. 253,034, dated January 31, 1882.

Application filed May 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN NELSON GIBSON, of Cincinnati, county of Hamilton, and State of Ohio, have invented a new and Improved Flue-Brush; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification.

Figure 1 represents a vertical section in line x of Fig. 2, and Fig. 2 is a section taken in line y of Fig. 1.

This invention relates to brushes for cleaning the interior of boiler-flues and for like purposes, freeing them of soot, ashes, or any caked deposits. It consists of the construction, combination, and arrangement of the devices and parts forming said flue-brush, as hereinafter more particularly set forth and claimed.

In construction my invention is as follows:

A is a flat circular ring, on which rise the four legs a , a less number being used for smaller brushes and a greater number for larger ones. These legs are made T-form in transverse section, to give combined lightness and strength. The ribs a' , forming a part of the T on each leg, are extended some distance beyond the ring A, as shown in the drawings. Each leg rises at an angle of about thirty degrees from a vertical line until they all meet to form the hub a^2 . The vertical flange a^3 , rising some distance from ring A, forms the base for the legs a and strengthens the piece.

All the above-described parts form the first member of the structure, and are cast in one piece, without a core, in an ordinary two-way flask.

The second member consists of the disk B, the periphery of which is of a size and shape the same as ring A. In nearing the center it is bulged, as shown, to increase its strength, having a hole cast in its center to receive the tubular bolt C. Ribs b and boss b' are further added to strengthen the piece and still leave it comparatively light.

The disk B and ring A are each provided with a series of concentric sharp-crowned beads, a^4 and b^3 , whereby the filling is more securely held in place. A concentric collar, b^2 , rises from the inner part of the flat portion of disk B to a height a little beyond the filling, and fits snugly within the flange a^3 .

D is the brush-filling, preferably composed

of thin hard-wood splints, although other material—such as steel or brass—may be used instead. These splints abut against collar b^2 , their outer ends being formed into a periphery concentric with ring A.

The operation of my invention is as follows: The brush being made of a size to fit the interior of a flue snugly, it is forced through from one end to the other. As it is passed through the far end of the flue it would be troublesome to have the brush re-enter the flue, but for ribs a' , which reach out over ring A and form a series of inclines to elevate the brush when it is drawn toward the operator, thus re-entering the flue with ease. The collar b^2 forms a convenient abutment for the splints, which having all been cut to a length, the brush is easily made round and also true to the center. It also rises sufficiently high to pass inside the flange a^3 . This permits the two members being drawn tightly together and keeps them at all times in line with each other, and prevents undue strain on hub a^2 . In putting together the brush the nut c is removed from the bolt C, the splints are piled upon disk B to a proper thickness, then the first member is placed over the other, the bolt C passed through, and nut c put on and forced up to a degree sufficient to hold the filling tightly. An ordinary gas-pipe socket, c' , forms a head for the bolt, and also receives the tubular handle c^2 , which is made of a length in proportion to the length of the flues to be cleaned.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of member B and filling D with member A, consisting of a single casting with T-formed legs a , having extended ribs a' and hub a^2 , substantially as set forth.

2. The combination of member A, consisting of a single casting, with T-formed legs a , having extended ribs a' and hub a^2 , with member B and filling D, the said members A and B being clamped together by nut c on bolt C and provided respectively with flange a^3 and collar b^2 , which serve as abutments for the inner ends of the filling, substantially as and for the purpose set forth.

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