

(No Model.)

W. McARTHUR.

FLUE STOP.

No. 327,573.

Patented Oct. 6, 1885.

Fig. 1.

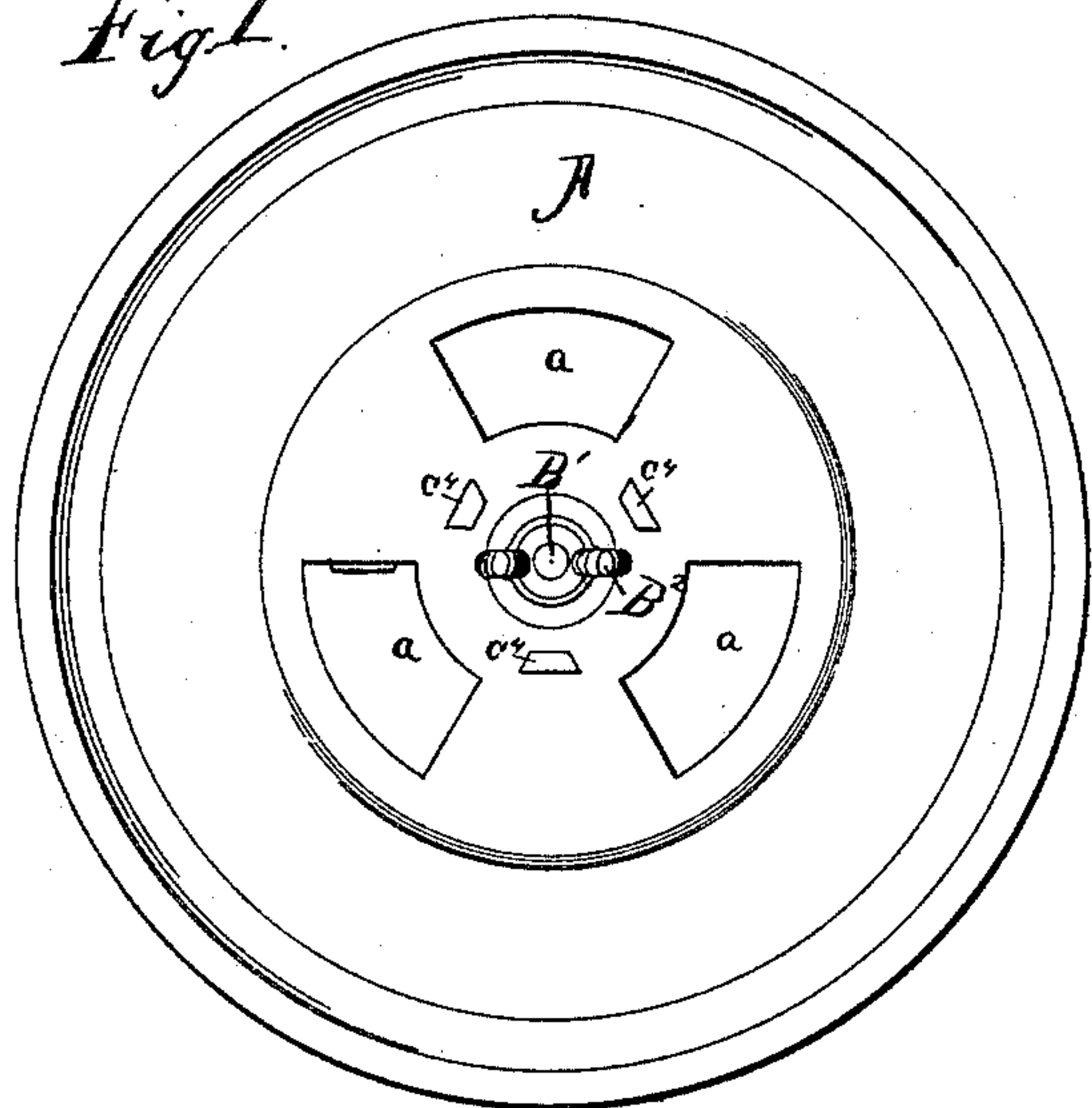


Fig. 2.

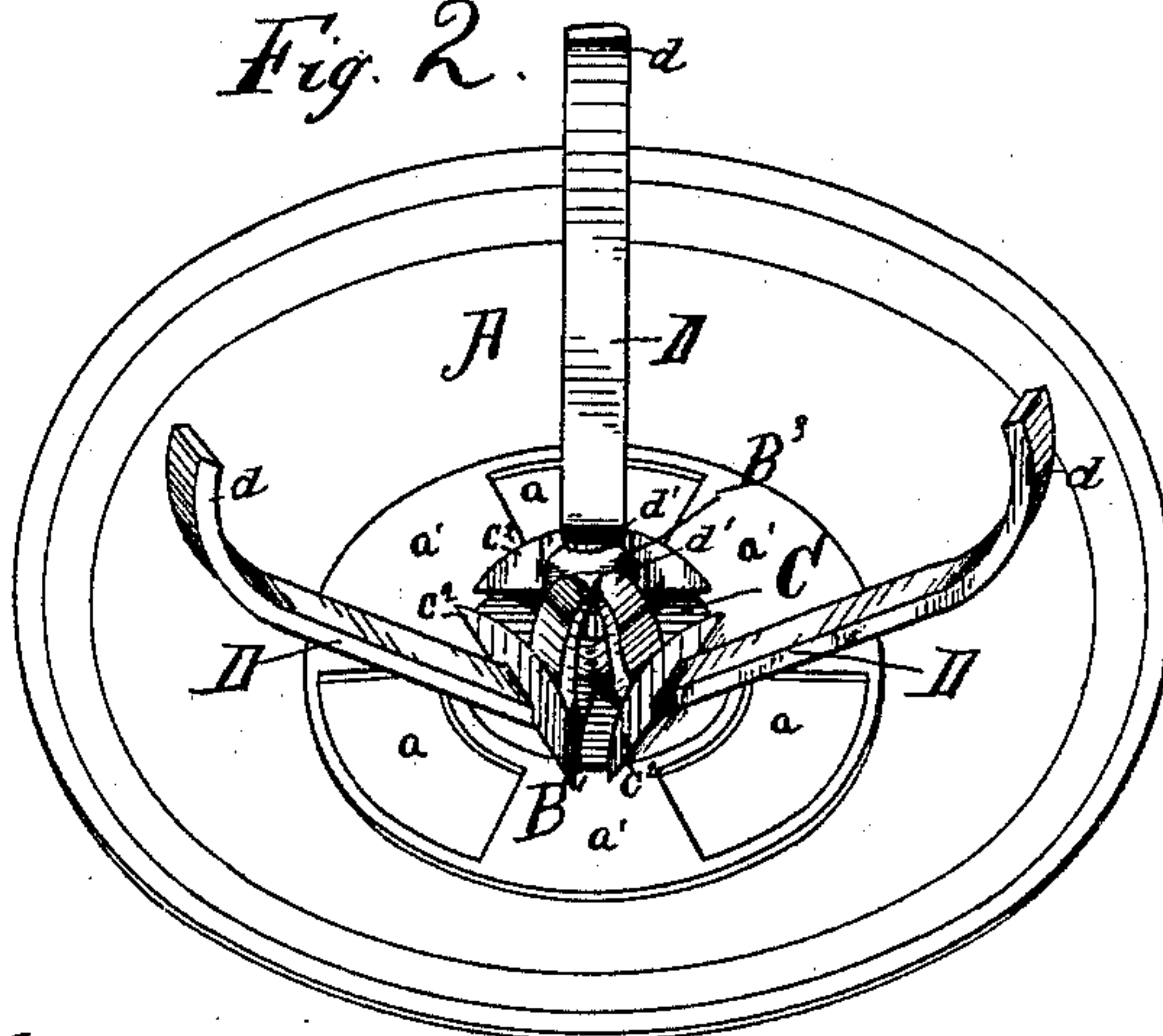


Fig. 5.

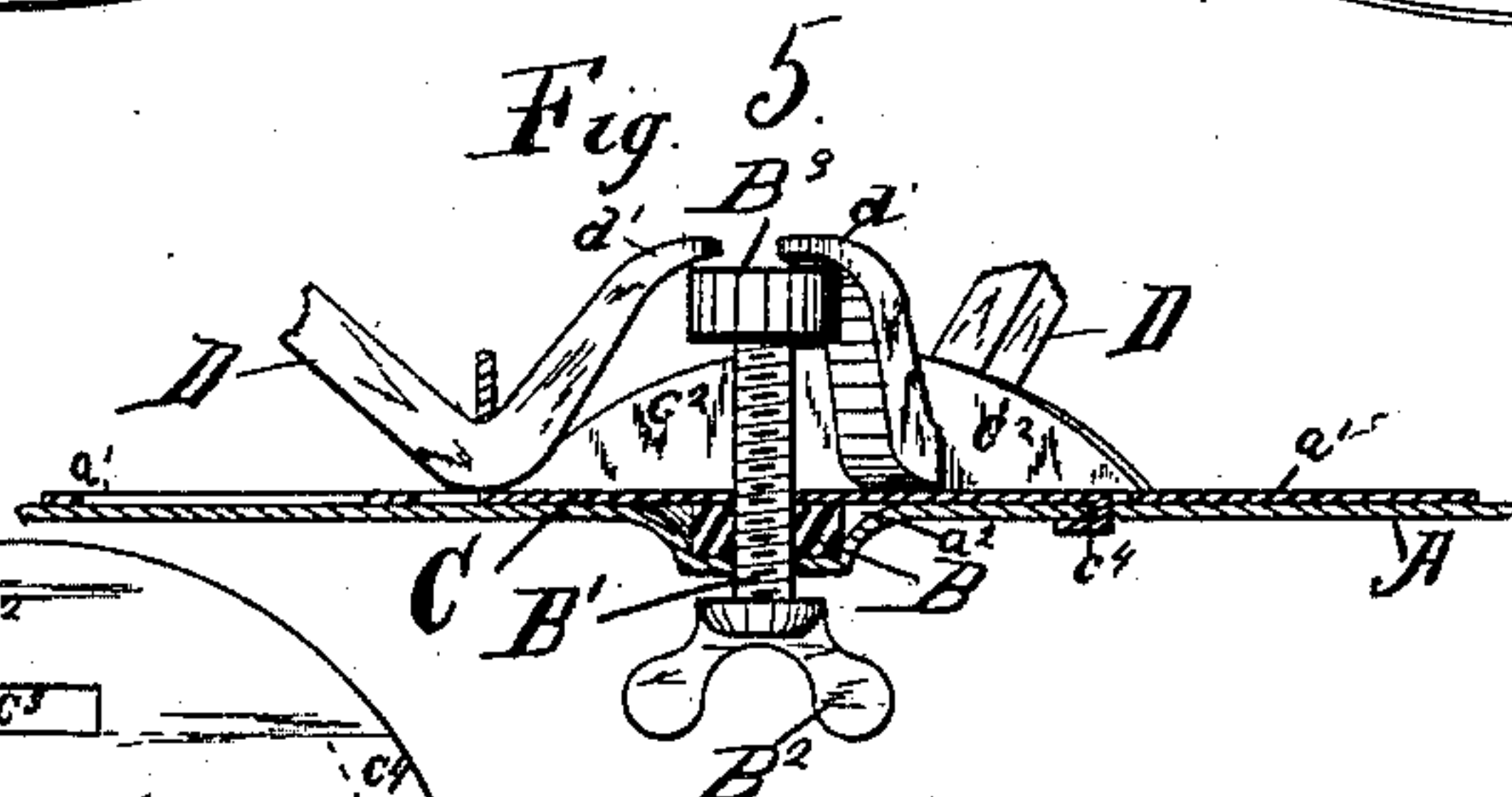


Fig. 3.

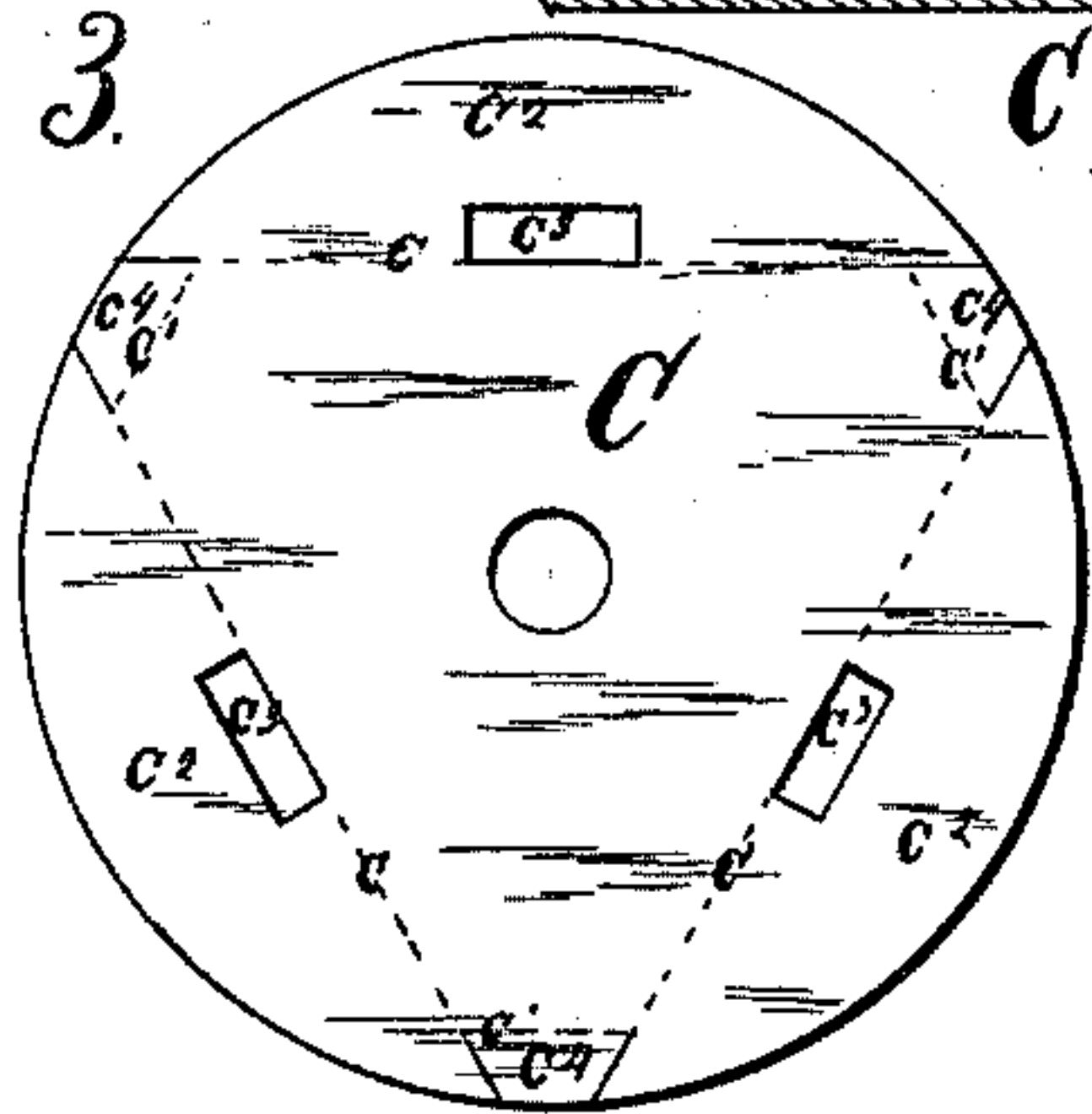


Fig. 4.

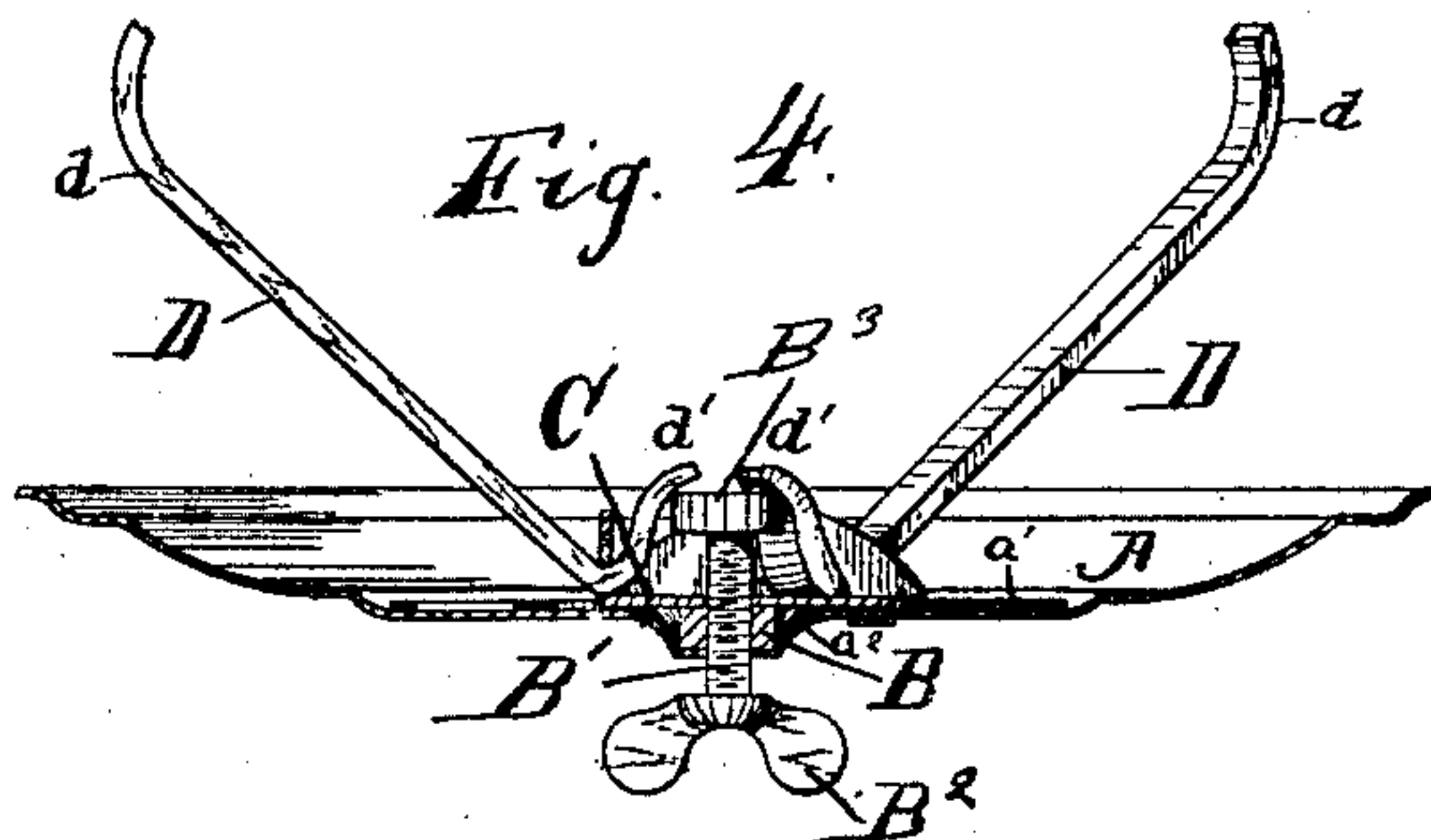
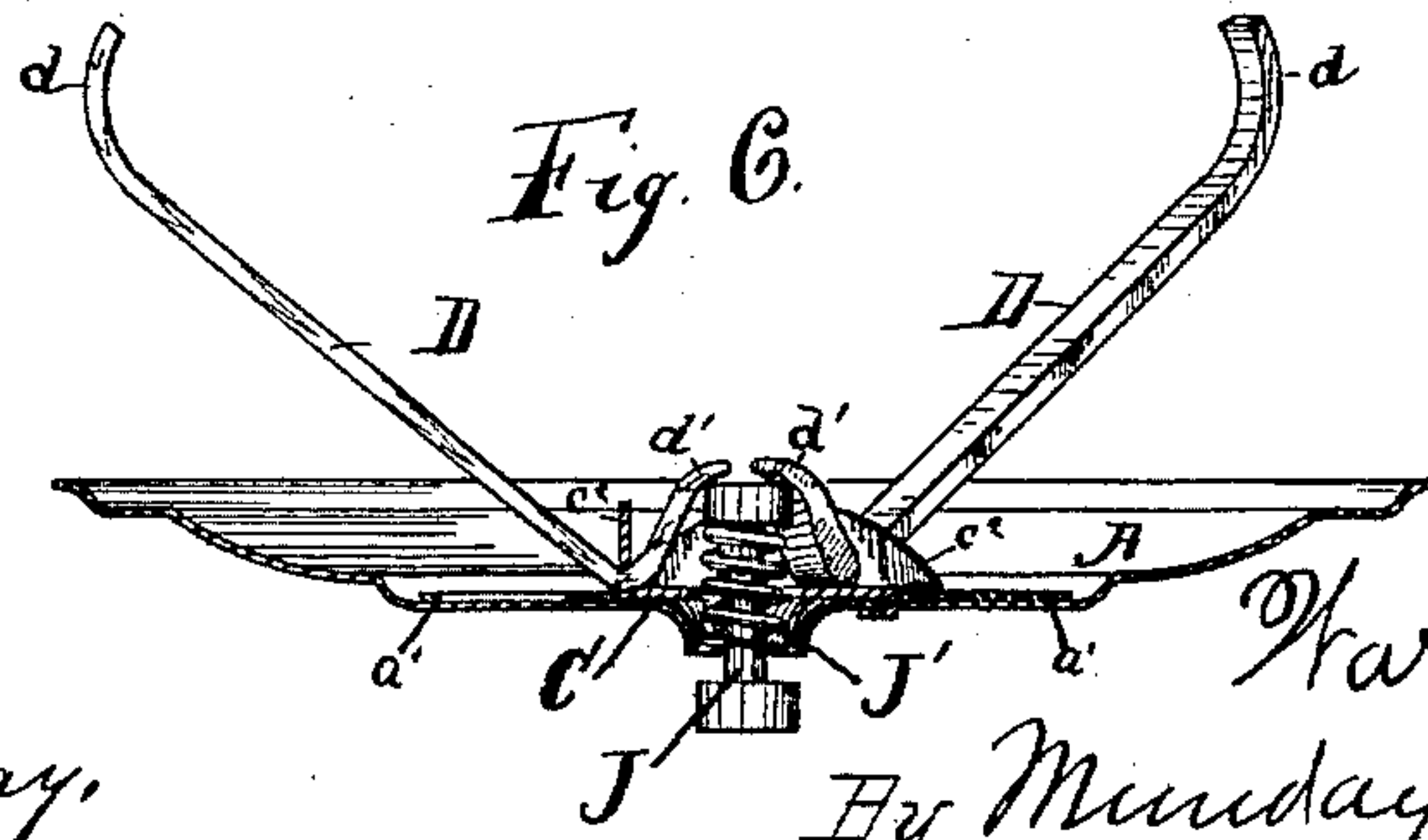


Fig. 6.



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UNITED STATES PATENT OFFICE.

WARREN McARTHUR, OF CHICAGO, ILLINOIS.

FLUE-STOP.

SPECIFICATION forming part of Letters Patent No. 327,573, dated October 6, 1885.

Application filed July 25, 1884. Serial No. 138,816. (No model.)

To all whom it may concern:

Be it known that I, WARREN McARTHUR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Flue-Stops, of which the following is a specification.

This invention relates to an improvement in flue stops or covers for the stove-pipe apertures in chimney-flues.

Heretofore it has been sometimes customary to provide the cover or stop with radial spring-arms attached to the inner face of the covering shield or disk, which spring-arms press outwardly against the walls of the aperture to be stopped and retain the stop in place; but this contrivance is objectionable, because the spring-arms do not always bear with sufficient force, are liable to become weakened by rust and use, and when the stop is removed are apt to drag out into the room quantities of soot and dirt. Besides this, such stops are not adapted to all-sized apertures, nor can they be adjusted to different-sized apertures, except by the inefficient and clumsy device of bending the spring-arms by guess-work.

As an improvement on the foregoing, sometimes spring-arms have been provided which have their inner ends slotted and secured by a bolt and nut, so that when the stop is removed from the aperture the radial extension of said spring-arms may be adjusted approximately to suit different-sized apertures; but this contrivance only overcomes one of the objections to the common spring-arms. In its use it is still necessary to guess at the adjustment, and to drag out the soot in its removal.

In the present invention I provide radial arms, substantially rigid in character, secured to the interior of the flue-stop disk in such manner that said arms may be swung outward and thus expanded to any desired extent from the outside after the stop is inserted in its place and contracted in the same manner when it is desired to remove the stop, thus producing a stop which will accurately fit any ordinary flue, be held with great security and rigidity in place, and which can be removed without dragging out the soot.

In the accompanying drawings, which form a part of this specification, and in which simi-

lar letters of reference indicate like parts, Figure 1 is an external view of the improved flue-stop, showing the outer face of the same. Fig. 2 is a perspective view showing the rear or inner face of the flue-stop. Fig. 3 is a detail view of a part more particularly hereinafter explained. Fig. 4 is a cross-section of the flue-stop and fastening devices. Fig. 5 is an enlargement of a part of Fig. 4; and Fig. 6 is a section similar to Fig. 4, showing a modification of the same.

In the drawings, A is the common shield or disk, made preferably of dish-form, and it may be provided with a ventilating-register, a , closed by the rotary valve a' . At the center, in a cavity, a^2 , stamped in the sheet metal of the shield, is placed a common stove-bolt nut, B, secured in place by the plate C, shown in detail, and as it comes from the cutting-die at Fig. 3. This plate is bent upward along the dotted lines $c\ c\ c$ and downward along the dotted lines $c'\ c'\ c'$. The parts which fold upward are marked c^2 , and are provided with holes c^3 , to receive the expansible arms, presently to be described. The parts which fold downward are marked c^4 , and form lips or clasps by which to secure the plate C to the shield or disk A, as indicated in Fig. 5. When the parts c^2 are folded upward, the corners will form shoulders between which and the surface of the shield A the annular register-valve a' may be held in such manner as to rotate.

Engaging with the nut B is a screw, B', provided on the outside with a suitable handle or thumb-piece, B², and on the inner end with a flat head, B³.

D D D are bent levers, of cast or substantially rigid metal, with their outer ends, d , preferably suitably curved to engage the inside of the flue-aperture. These arms are fulcrumed in the apertures c^3 of the upturned sides of the plate C, and their inner ends, d' , are in position to be acted on by the screw B', so that by turning said screw from the outside after the disk is in place the arms may all be simultaneously swung and forced out against the walls of the flue-aperture.

Although I have thus particularly described the specific construction of my improved flue-stop in the exact form in which I contemplate

making it, and which form is the best and cheapest known to me at the present time, I do not wish it to be understood that my invention is limited to the precise form, as, for example, it is obvious that the shape of the expansible arms may be easily varied without changing the nature of the device, and so likewise in regard to the means of attaching the same to the disk and to the means for operating them from the outside.

One modification of the means for operating the arms from the outside by use of a pin, J, and spring J' is shown in Fig. 6 of the drawings. By pulling the pin outward the arms are free to collapse, and a release of the pin will cause the spring to force the arms into an expanded condition; but I prefer the positive action of the nut and screw or other positive means.

I claim—

1. The flue-stop furnished with swinging

fulcrumed retaining-levers D and the screw or equivalent means for operating said levers, substantially as specified.

2. The combination of the disk A, stamped with a cavity, a^2 , the nut B, the screw B' B² B³, and the bent levers or pivoted swinging arms D, substantially as specified.

3. The combination of the disk A and the plate C, having the apertured turned-up portions c^2 and the lips c^4 , with the arms D and their operating device, substantially as specified.

4. The combination, with the disk of a flue-stop, of the plate C, secured to said disk and having shoulders, and a register-valve held to the disk by said shoulders, substantially as specified.

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Witnesses:

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