

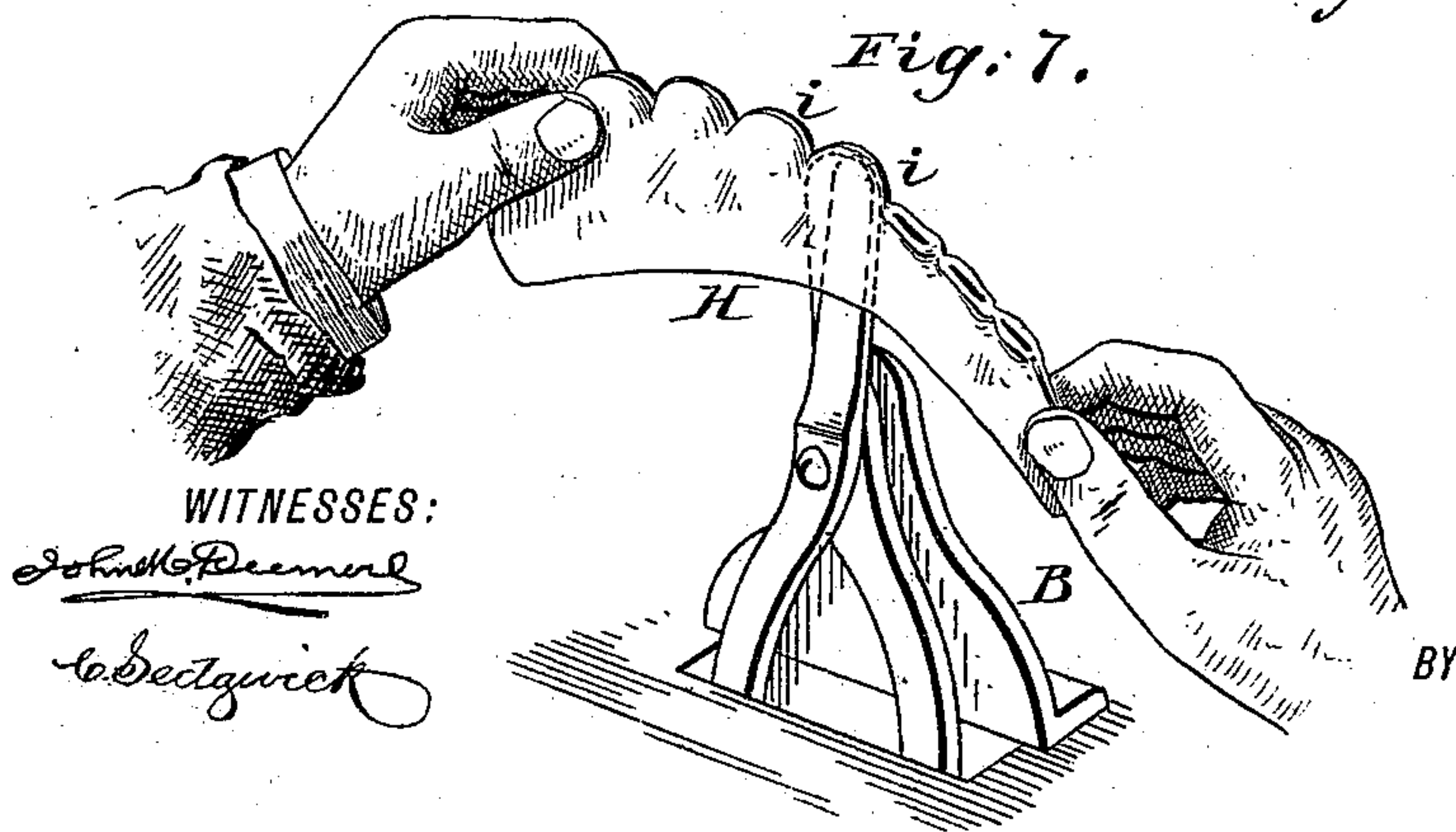
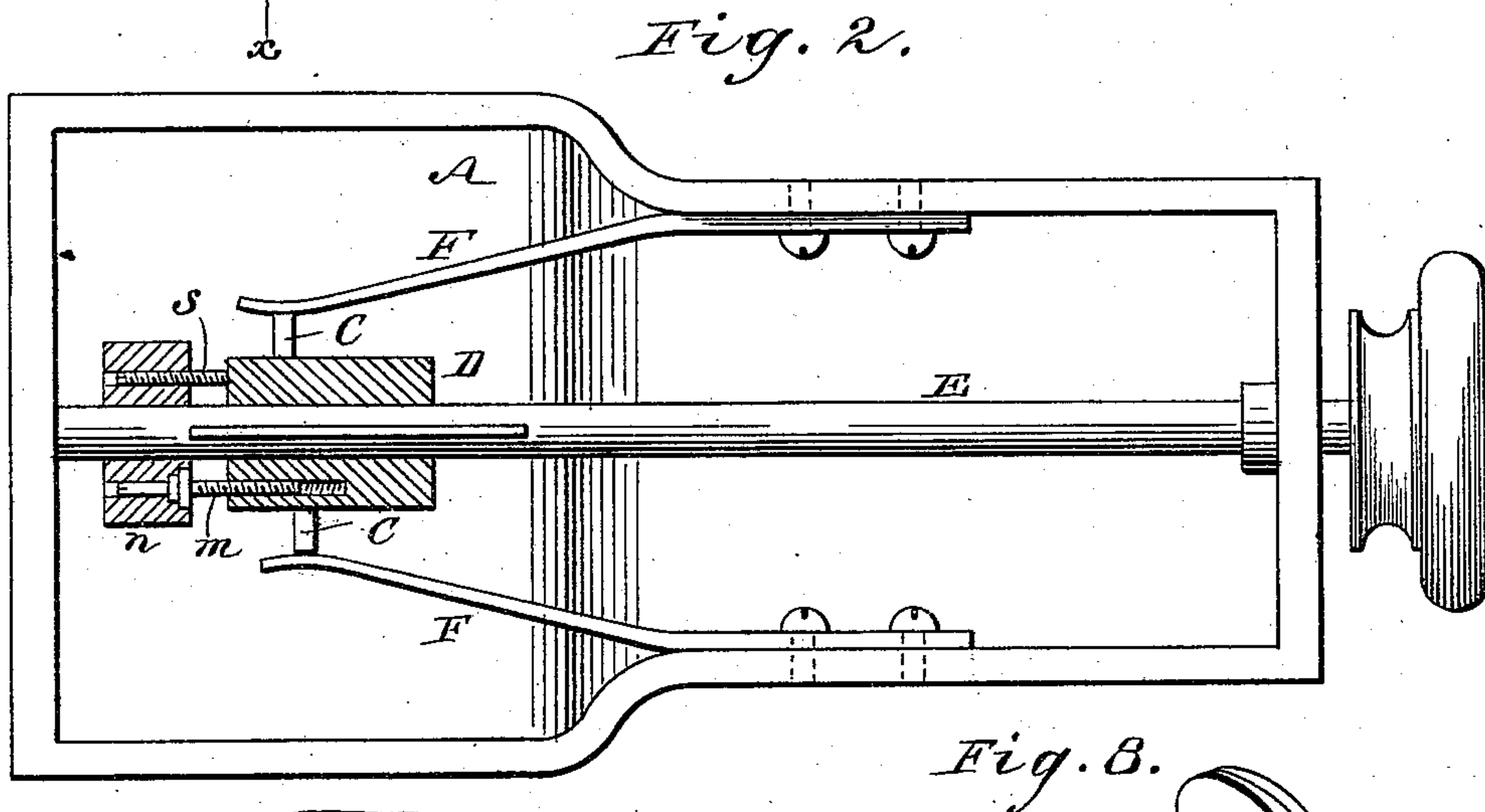
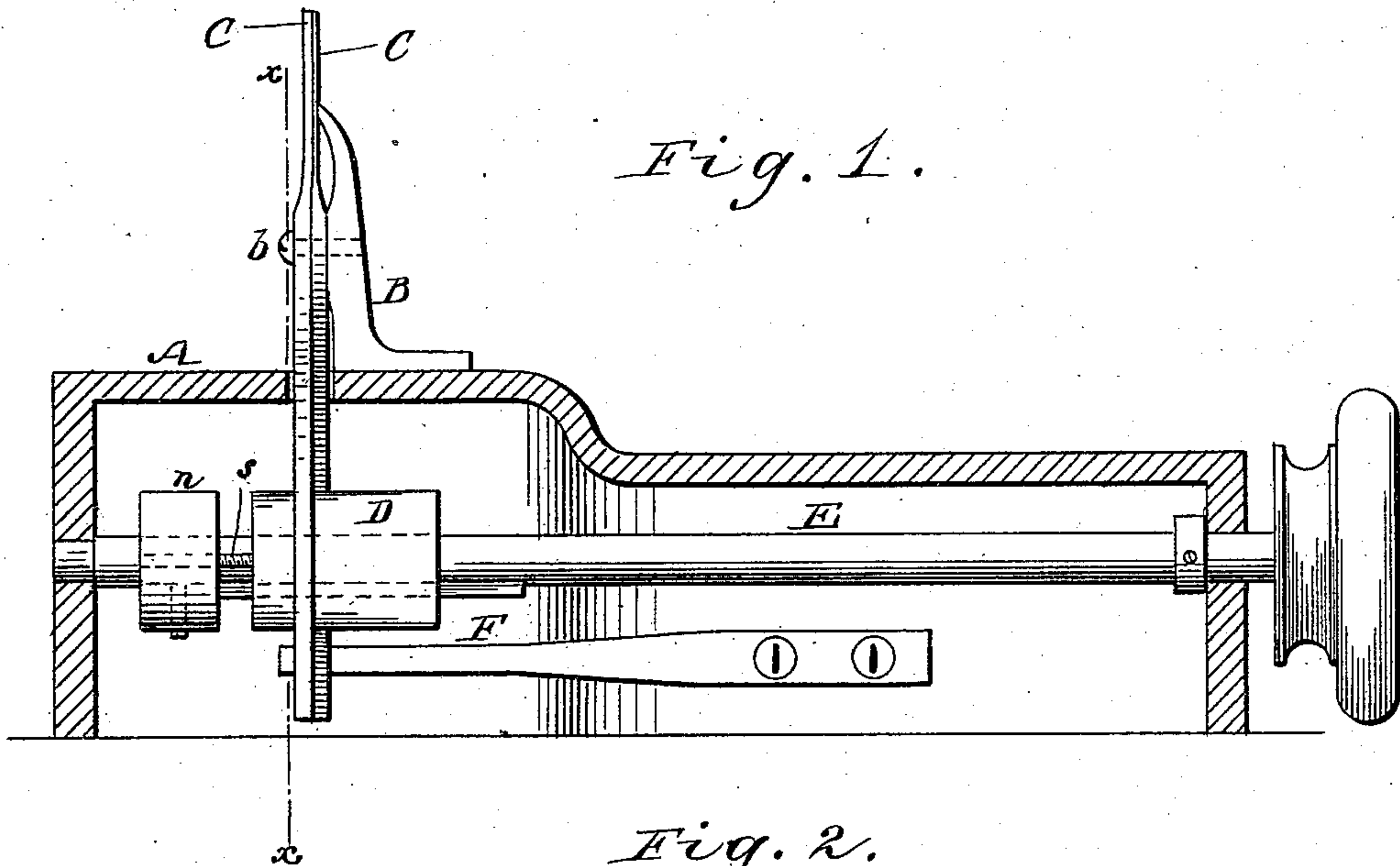
(No Model.)

2 Sheets—Sheet 1.

W. D. HALL.
SCALLOP TURNER.

No. 532,551.

Patented Jan. 15, 1895.



WITNESSES:
John H. Deemer
Co. Sedgwick

INVENTOR:
W. D. Hall

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ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

W. D. HALL.
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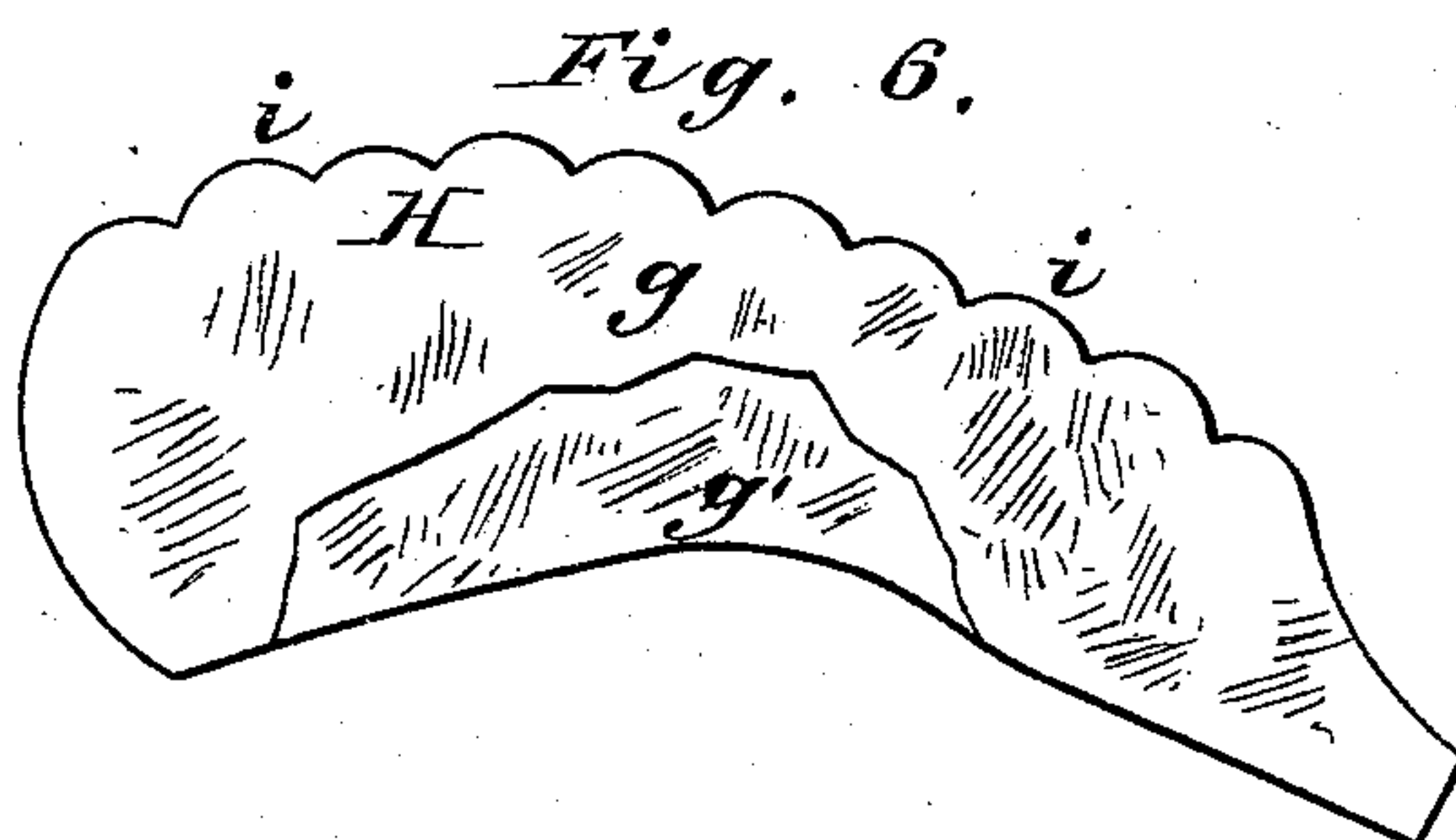
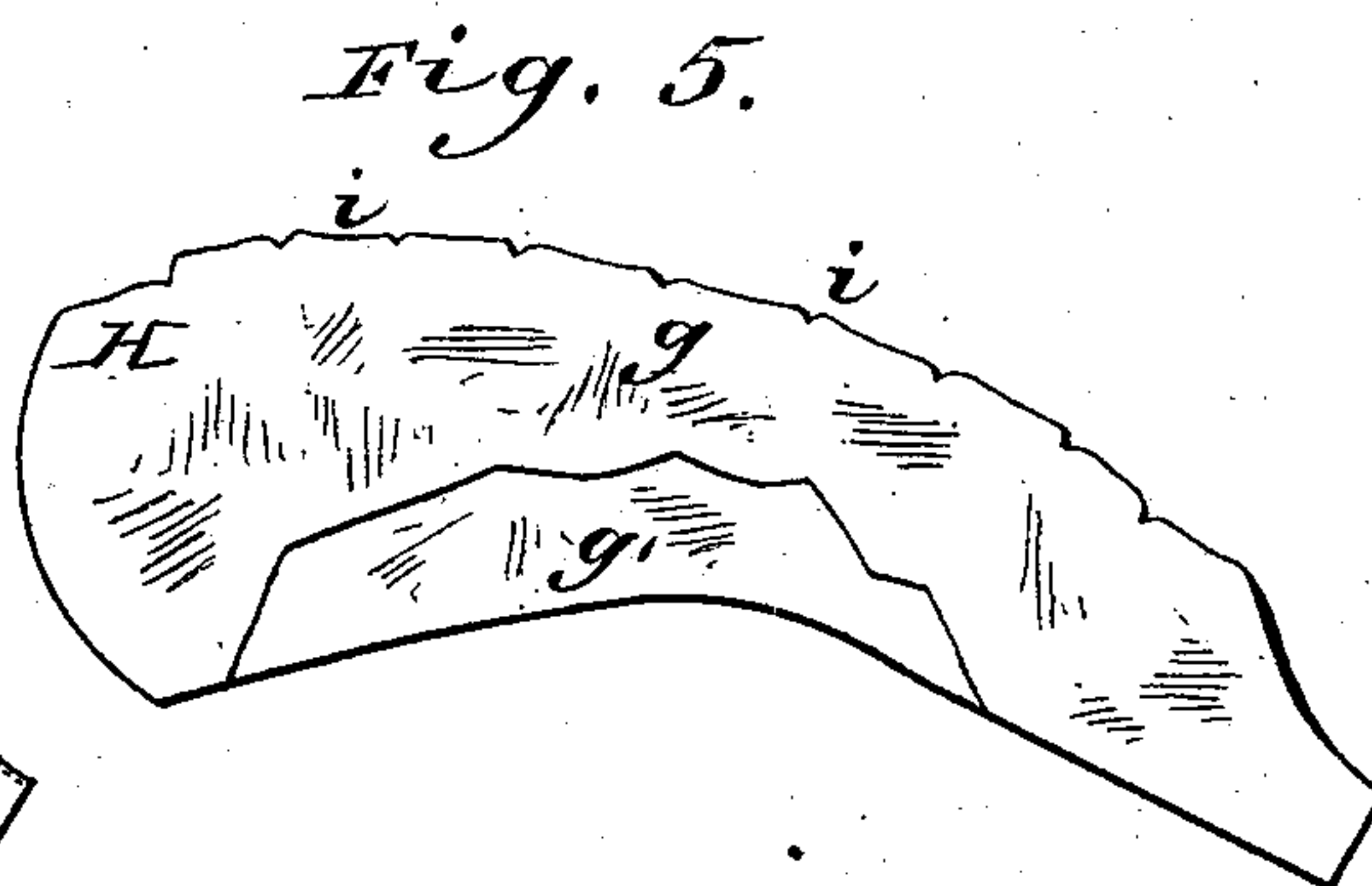
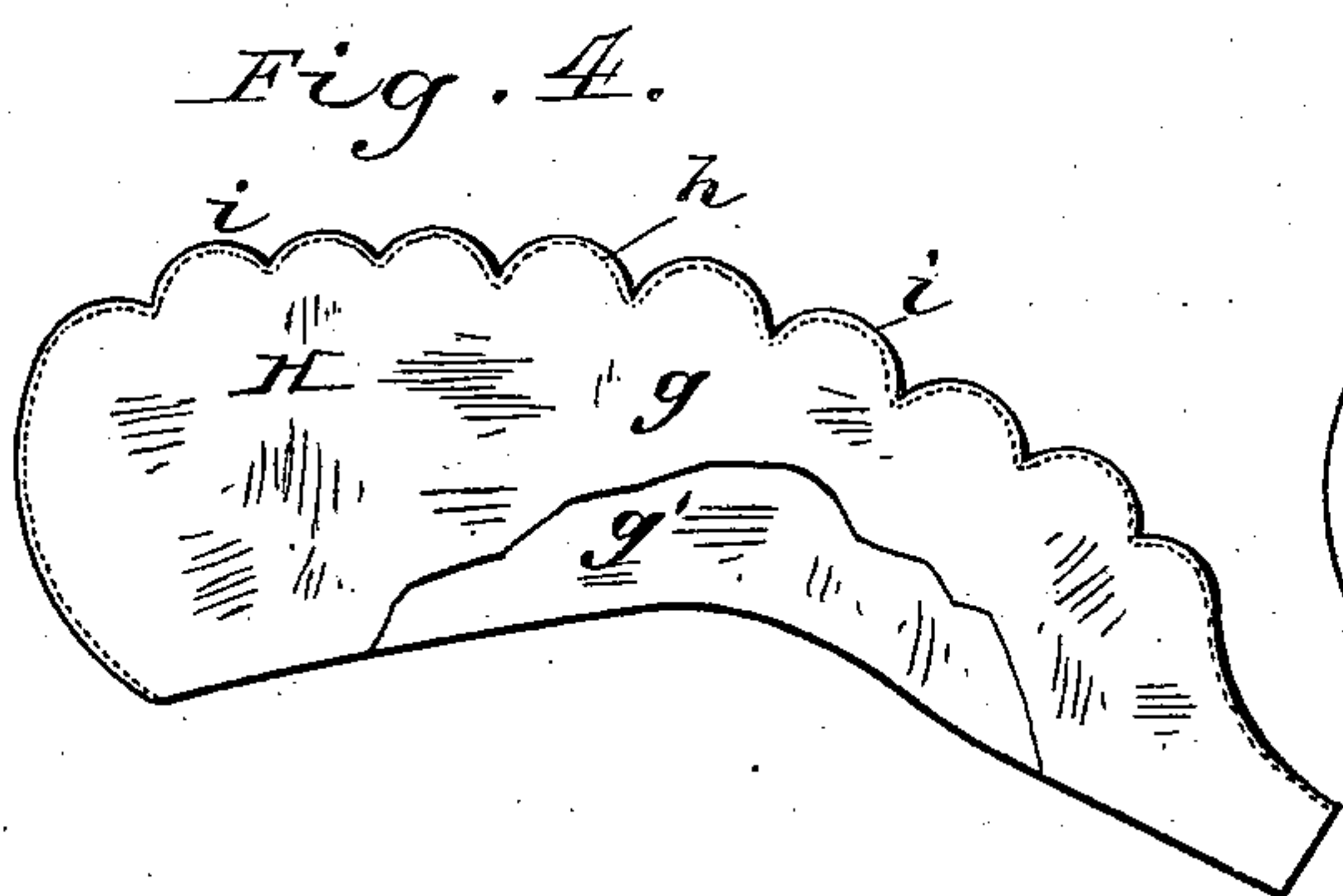
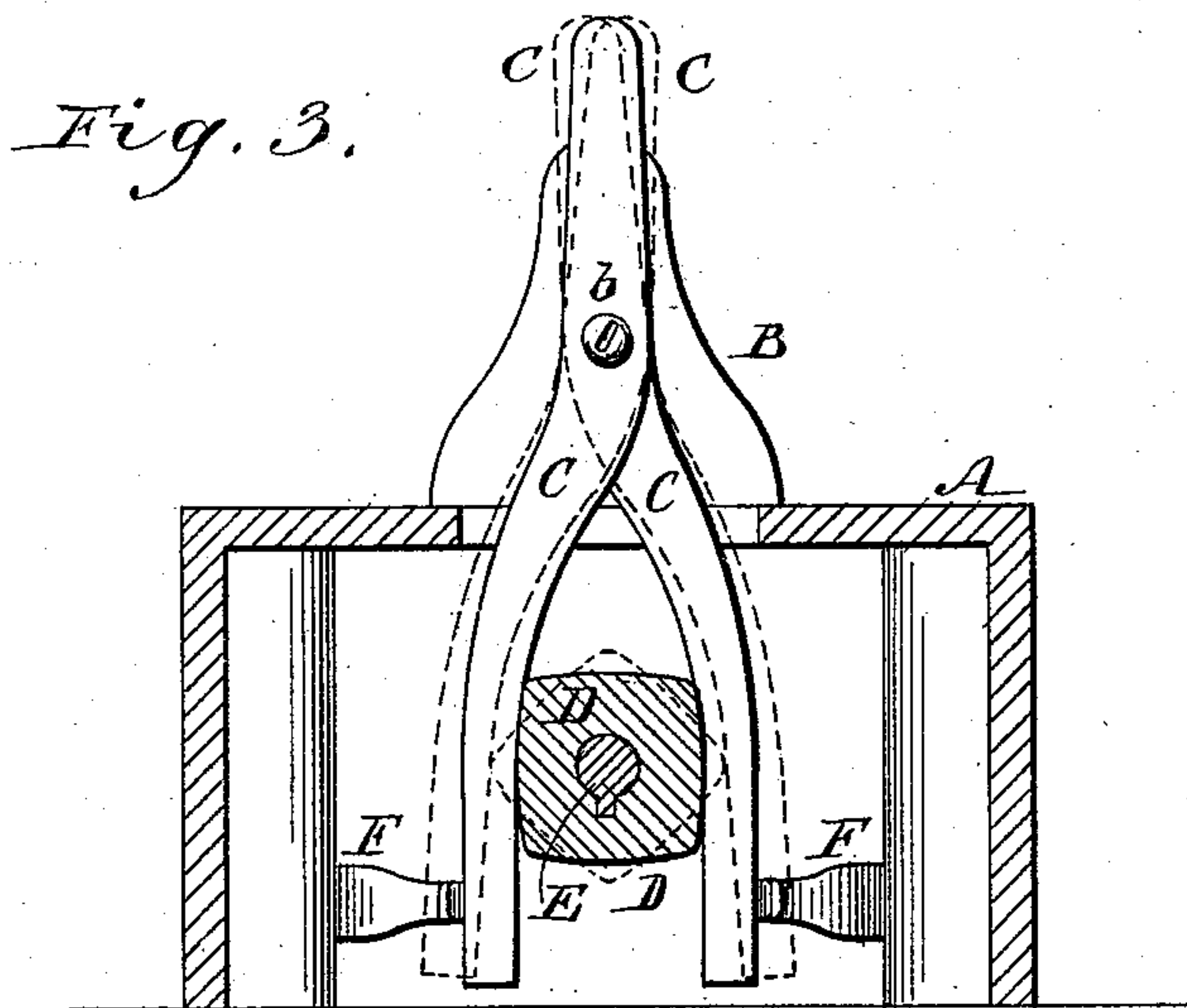
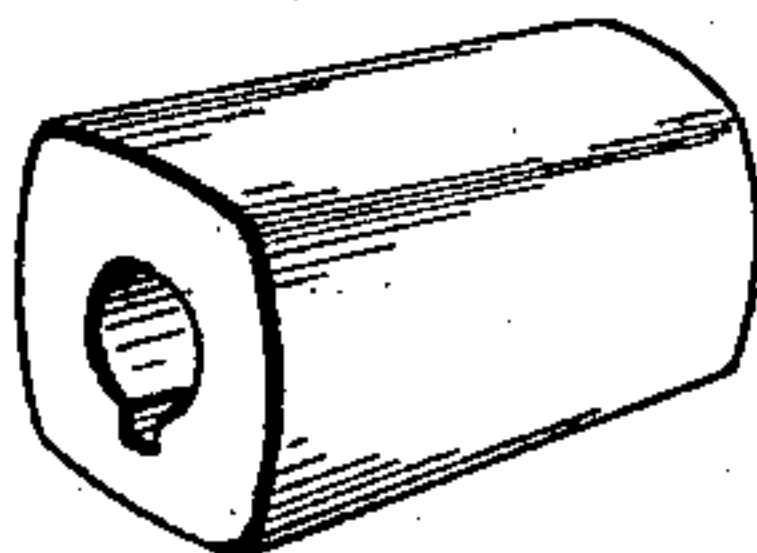


Fig. 9.

WITNESSES:
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INVENTOR:
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BY *Munn*
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UNITED STATES PATENT OFFICE.

WILLIAM D. HALL, OF BELOIT, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO QUENTIN W. BOOTH AND IRVING E. BOOTH, OF ROCHESTER, NEW YORK.

SCALLOP-TURNER.

SPECIFICATION forming part of Letters Patent No. 532,551, dated January 15, 1895.

Application filed June 4, 1889. Serial No. 313,039. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. HALL, of Beloit, in the county of Rock and State of Wisconsin, have invented new and useful
5 Improvements in Scallop-Turners, of which the following is a full, clear, and exact description.

This invention is designed as an improvement upon the scallop turner invented by me
10 for which Letters Patent No. 391,144 were issued on October 16, 1888.

The machine patented as above was of special construction for doing various kinds of scallop work or "beading" as it is sometimes
15 termed, and was mainly intended to be operated by hand or foot treadle.

The machine which is the subject of this specification is designed to be operated by steam or other power. It is for doing the same
20 kind of work as the patented machine referred to, but is intended to do such work more rapidly and perfectly and not only to save labor but to leave the operator at liberty to attend only to the handling of the goods being scal-
25 loped or beaded.

As in the case of my herein named patented scallop turner, I shall only here describe the machine which is the subject of this specification as applied to turning out the scallops on
30 the flies of button and other boots, or turning out the scallops and edges of shoe-uppers, in which the linings and outsides are first stitched together wrong side out and then turned right side out preparatory to a second
35 row of stitching being put in, and is suitable for all scallops of button flies or boot-tops of any design or shape. It is also and generally applicable to other kinds of scalloped work requiring to be turned, including the scallops
40 on gloves and for turning out the fingers of gloves, which virtually are but elongated scallops.

In my previous patented scallop turner as hereinbefore referred to, a laterally-expans-
45 ible spreader was used comprising a support, a relatively fixed member, and a relatively movable member or spreader proper was used, the latter working transversely across the face of the fixed member; but in this my
50 improved scallop-turner I use two movable

members or spreaders proper arranged to vibrate in reverse directions simultaneously transversely across the face of each other, whereby the necessary bead can be more suc-
55 cessfully and perfectly produced; and the invention furthermore consists in a combination with such reversely vibrating spreaders of suitable actuating mechanism for vibrating said spreaders by steam or other power, substantially as hereinafter described and
60 pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
65 corresponding parts in all the figures.

Figure 1 represents a vertical longitudinal section of a scallop turning machine, embody-
ing my invention; Fig. 2, an inverted partly sectional plan of the same; Fig. 3, a vertical
70 transverse section thereof upon the line $x-x$ in Fig. 1. Fig. 4 is a side view of a scalloped button-fly, partly broken away, as the same comes from the stitching machine, wrong
side out. Fig. 5 is a similar view of the same fly after it has been turned right side out and
75 the scallops partly turned out. Fig. 6 is a like view of said fly after the scallops have been all or fully turned out and pounded down, as usual, ready for the last stitching. Fig. 7 is a view in perspective of the spread-
80 ers used for turning out the scallops and showing the boot-fly as in the act of having its scallops wholly turned out by said spreaders; and Fig. 8 is a perspective view, upon a larger
85 scale, of the outer or working edge portions of the spreaders in part, for the purpose of illustrating their irregular and reverse thick-
nesses, to prevent cutting the leather when the machine is at work and to make the work-
90 ing points or outer end portions of the spreaders of a uniform thickness when closed. Fig. 9 is a view in perspective of a cam which may be used to give the vibratory spreaders their
95 simultaneous reverse actions across the face of each other.

A is the base or table portion of the frame, which may be of any suitable construction and upon which is mounted as in my former machine a standard B.

C C are the spreaders, which in this inven- 100

tion are both movable members and are both arranged on the front face or one side of the standard B to which they are pivoted at a suitable distance from their upper ends as by
 5 a screw *b* and are arranged to vibrate laterally at their upper working end portions each across the face of the other and are extended down through the table A of the frame.

The laterally vibrating motion of the upper
 10 portions of the spreaders C C simultaneously and transversely across the face of each other, may be produced by mechanism of any suitable description driven by steam or other power and applied to operate upon the legs
 15 of said spreaders which project below the table. It is preferred however to use a cam D fast upon a rotating power driven shaft E running lengthwise of the machine, said cam receiving the bent or straddling legs of the
 20 spreaders on opposite sides of it and said legs being forced up to or held in contact with said cam by springs F of any suitable description attached to the frame of the machine or otherwise suitably supported. By constructing
 25 this cam, so that it will be a four throw one as shown, that is with two pairs of opposite sides with rounded angular junctions, it will give four motions to each spreader C for each revolution of the shaft E, whereby a rapid
 30 action will be given to said spreaders. Said cam when its widest parts are in contact with the legs of the spreaders C C opens the upper working ends of the spreaders which are afterward drawn to their closed position by the
 35 springs F as the narrowest parts of the cam are in contact with the legs of the spreaders.

By the expression, opens the upper working ends of the spreaders, is meant passing
 40 said end parts transversely across the face of each other as shown by dotted lines in Fig. 3, and closing them is when they are brought back to their normal position in line with each other, as shown by full lines in Figs. 3 and 8.

By the reversely lateral motions of the movable members or spreaders C C, a most perfect, gradual and easy spreading action is obtained for the scallop and the same will be much better produced than when only one of
 50 said members is reciprocated across the face of the other. In the operation, after the boot fly H—in which *g* may indicate the lining and *g'* the outside—comes from the stitching machine wrong side out, with a line of stitching
 55 *h*, running in direction of the scallops *i*, as shown in Fig. 4, has been turned by hand or otherwise right side out, as shown in Fig. 5, then said fly is subjected to the action of the spreaders or movable members C C, one
 60 scallop *i* at a time, as shown in Fig. 7, by bearing down with the hands on the fly H and simultaneously and uniformly working the upper end portions of the movable members C C laterally across the faces of each other
 65 by the action of the cam D for instance. This spreads the scallops as required without

stretching the leather and turns each scallop out to its fullest extent as controlled by the stitching, leaving it perfect in shape, after which the scallops may be pounded down as
 70 usual or hammered as required as shown in Fig. 6, ready for the subsequent or second stitching.

When a cam D is used to spread the movable members C C, it is desirable that it be made
 75 of tapering form in direction of its length, as shown in Fig. 9, and be adjustable on or along the shaft E, as for instance by an adjusting screw *m* in a collar *n* and a set screw *s*, as shown more clearly in Fig. 2, whereby
 80 the length of the spreading motions of the movable members C C can be changed as desired, but the closed position of said members will always be the same.

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

1. In a seam turning and spreading machine, a spreader composed of two vibrating blades, the working ends of which are movable toward and from each other in similar
 90 curves, and means for simultaneously vibrating said blades.

2. In a seam turning and spreading machine, the combination of two spreading
 95 blades, each having a lateral movement, and a power-driven shaft co-operating with said blades to move the same, substantially as set forth.

3. In a beading machine the combination
 100 of two blades hinged together having their free ends flattened and in close proximity and laterally movable relatively to each other, and power mechanism to impart a rapid relative lateral vibration to such blades and
 105 mechanism to return them to the normal position, substantially as set forth.

4. An expansible spreader for turning and stretching out laterally the scallops or edges of boot flies, shoe uppers and other turned
 110 work or articles, comprising a supporting frame, two spreader members pivoted together and to the frame, and means for forcing the lower ends of the members apart to cause their upper ends to move transversely
 115 across the face of each other to spread the article placed thereon, substantially as described.

5. In a spreader, the combination with a supporting frame, of a spreader consisting of
 120 two spring-pressed members pivoted to each other and to the frame, and a cam between the lower ends of the said members, substantially as herein shown and described.

6. The combination, with the frame and an
 125 expansible spreader mounted thereon and consisting of a support and two movable pivoted members working at their upper or outer end portions across the face of each other, of a cam actuating said movable members in
 130 reverse outward directions simultaneously, and springs applied to close said members or

to bring their upper end portions in line with each other, essentially as described.

5 7. In a machine of the character described, the combination, with the frame and the pivoted movable spreading members working across the face of each other at their upper or outer ends, of a rotating driveshaft, a tapering cam adjustable along said shaft adapted to

vibrate said movable members in reverse directions simultaneously, and springs adapted to give a reverse or closing action to said members, substantially as specified.

WILLIAM D. HALL.

Witnesses:

F. E. KUNZ,

CARRIE DAVENPORT.