

(No Model.)

C. H. GILMAN.
SNOW GUARD.

No. 549,779.

Patented Nov. 12, 1895.

Fig. 1.

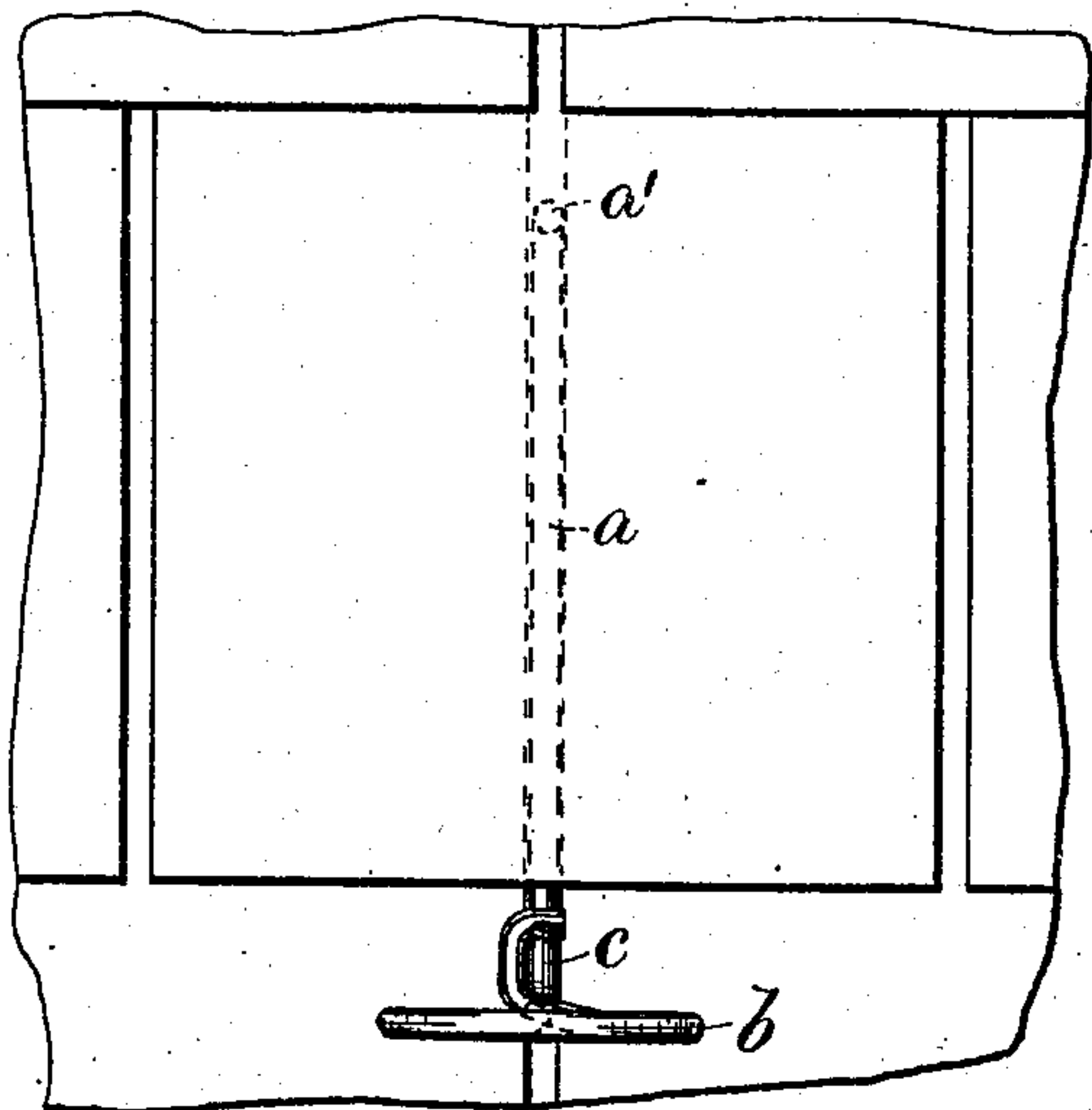


Fig. 2.

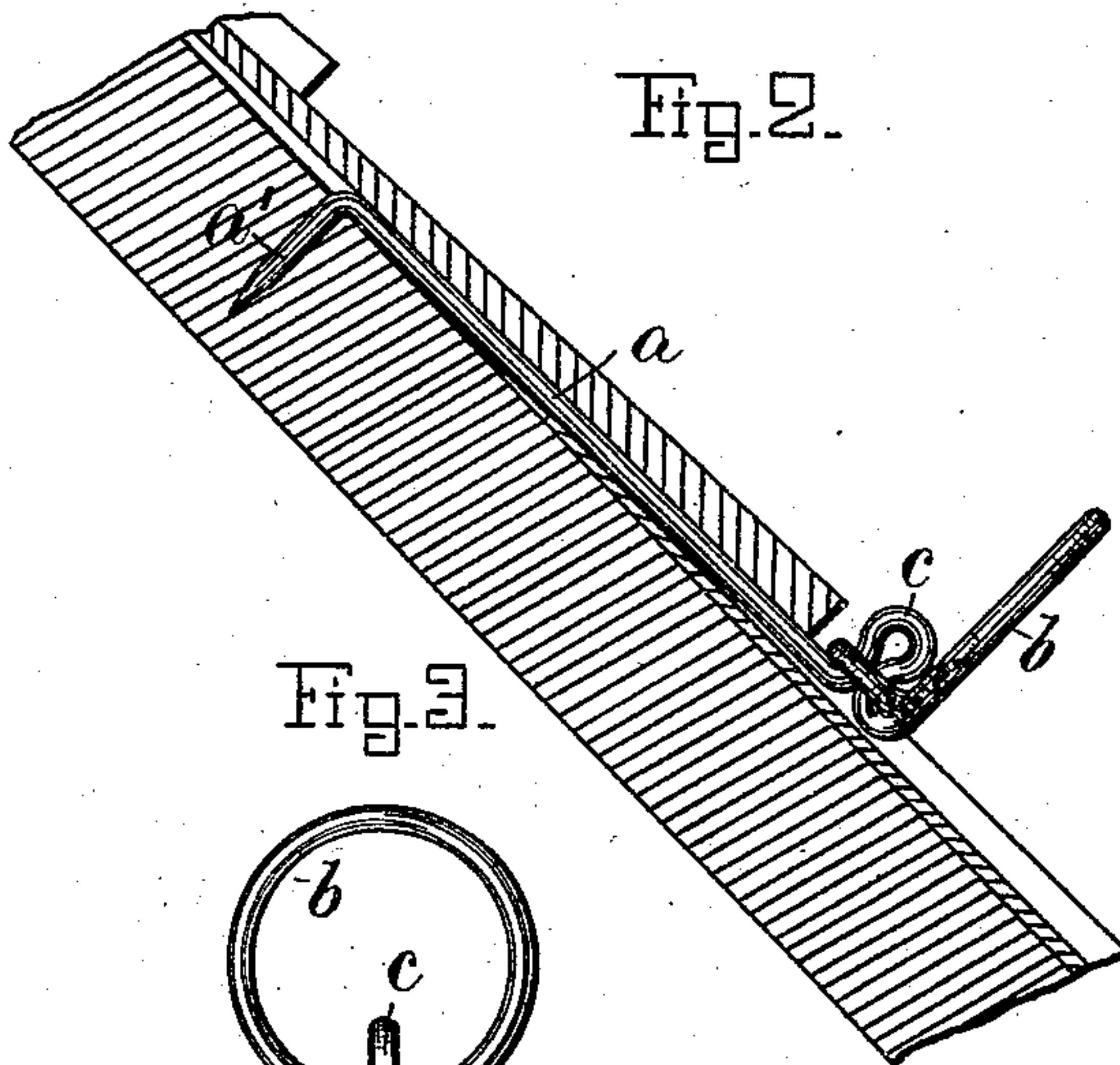


Fig. 3.

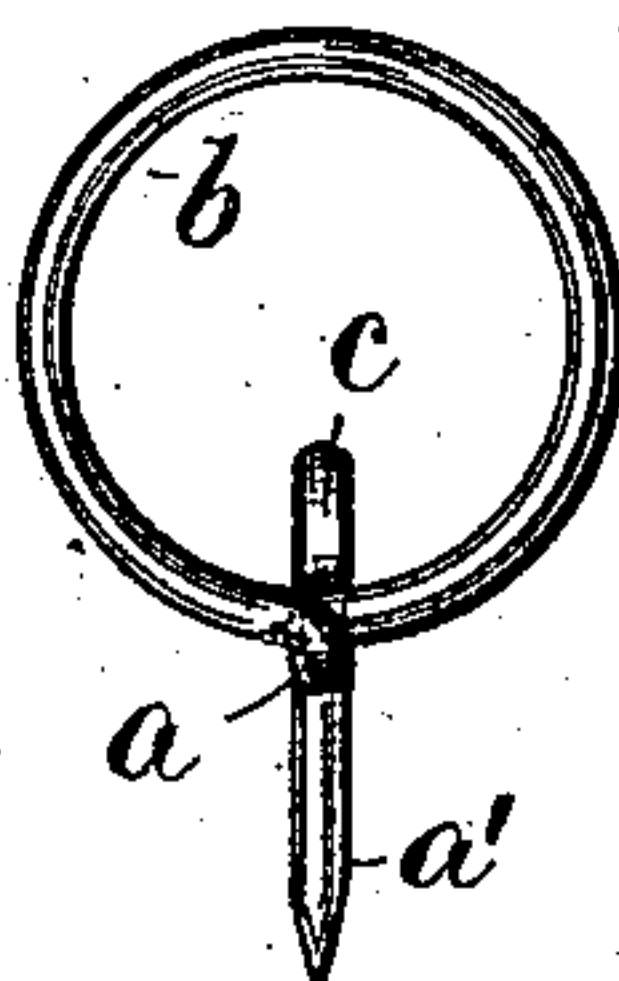


Fig. 4.

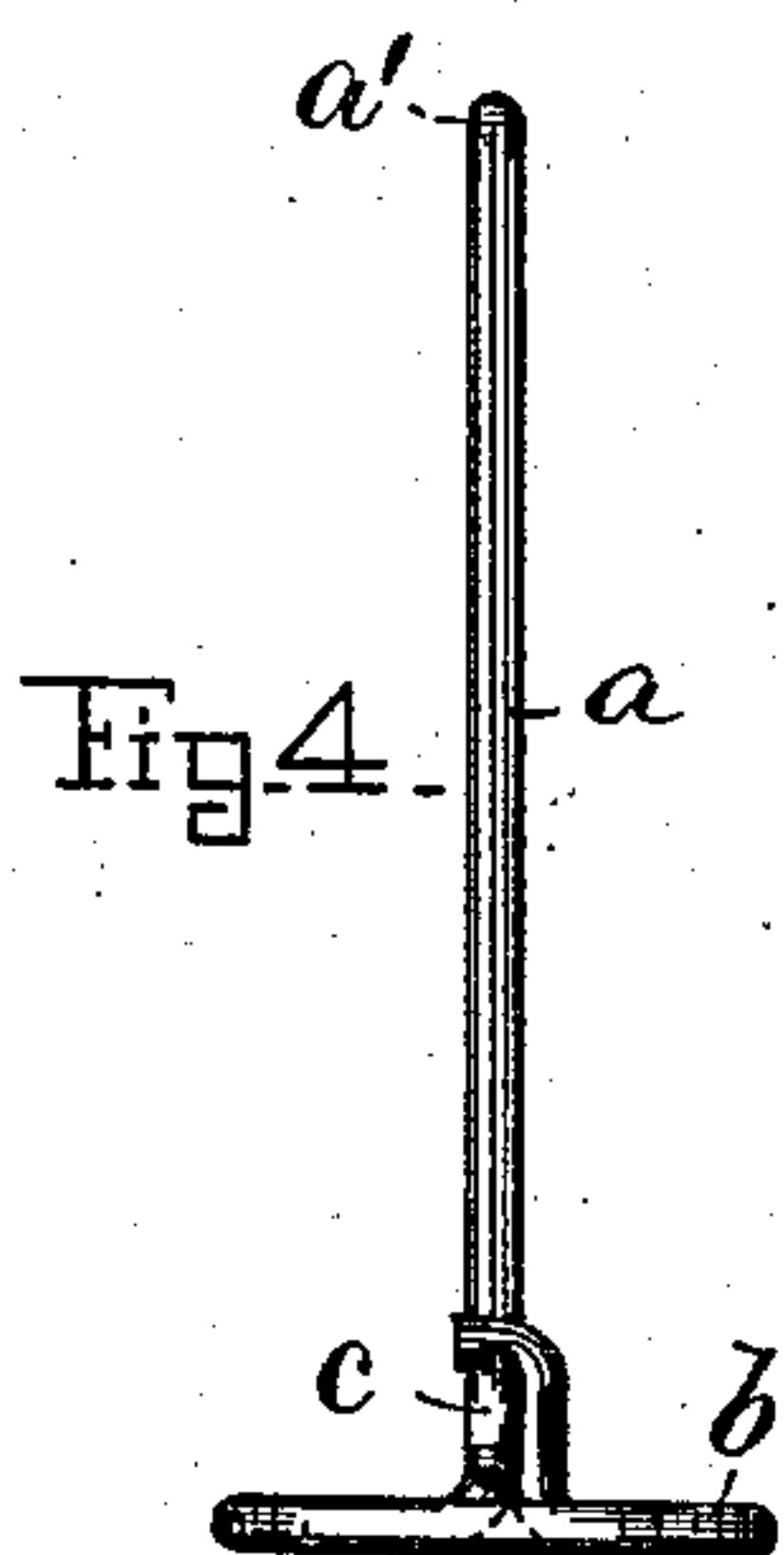


Fig. 5.

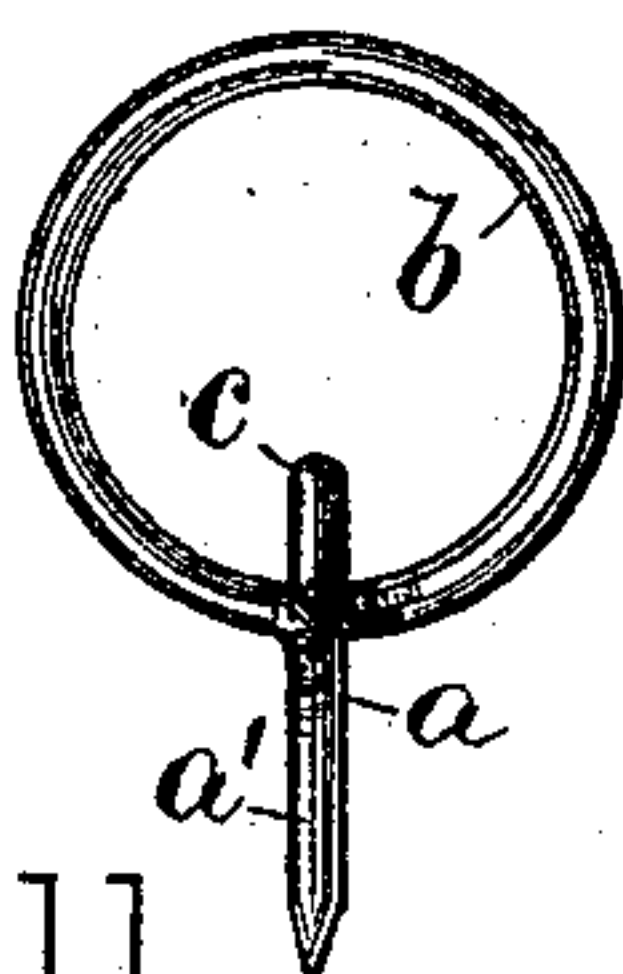


Fig. 6.

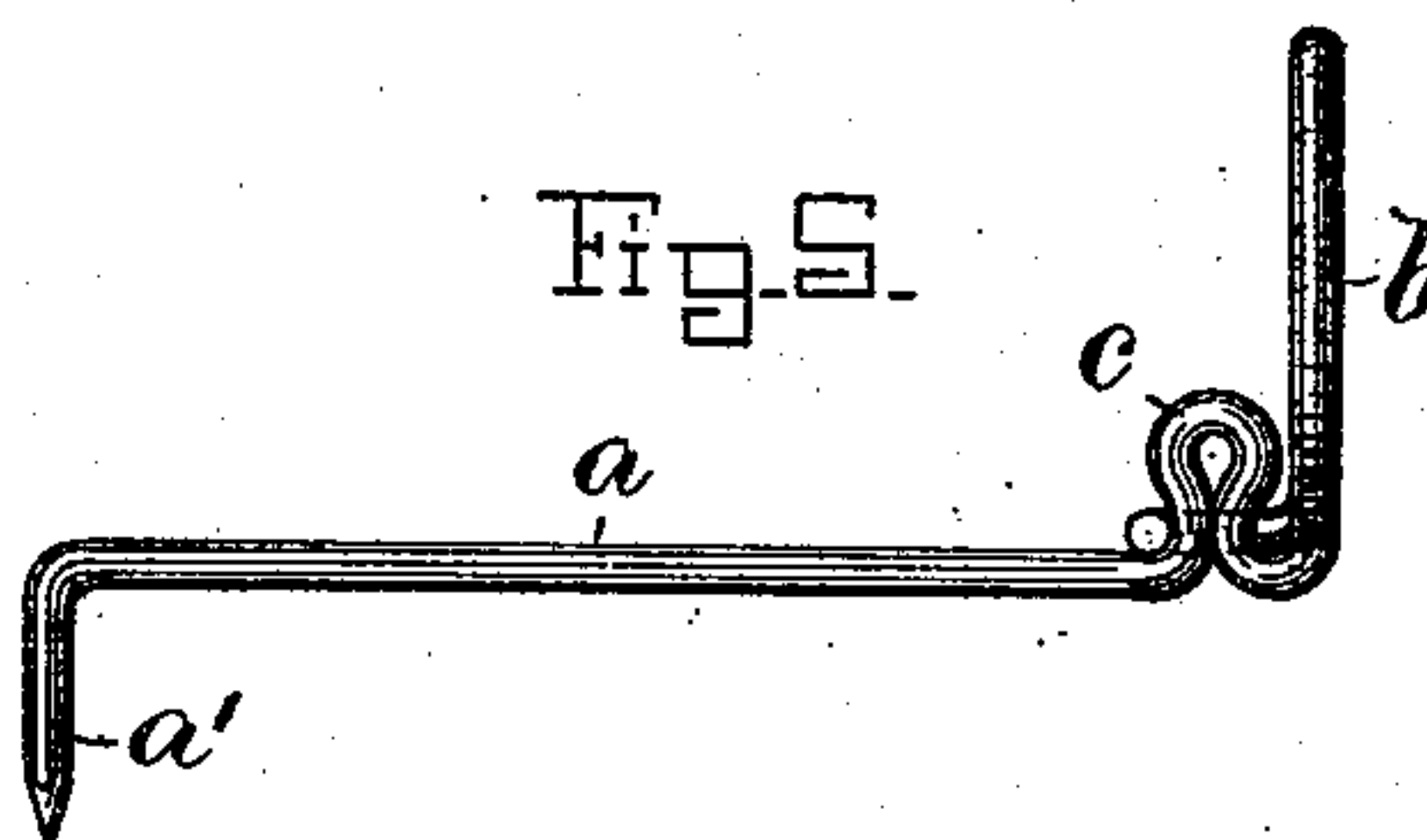


Fig. 7.

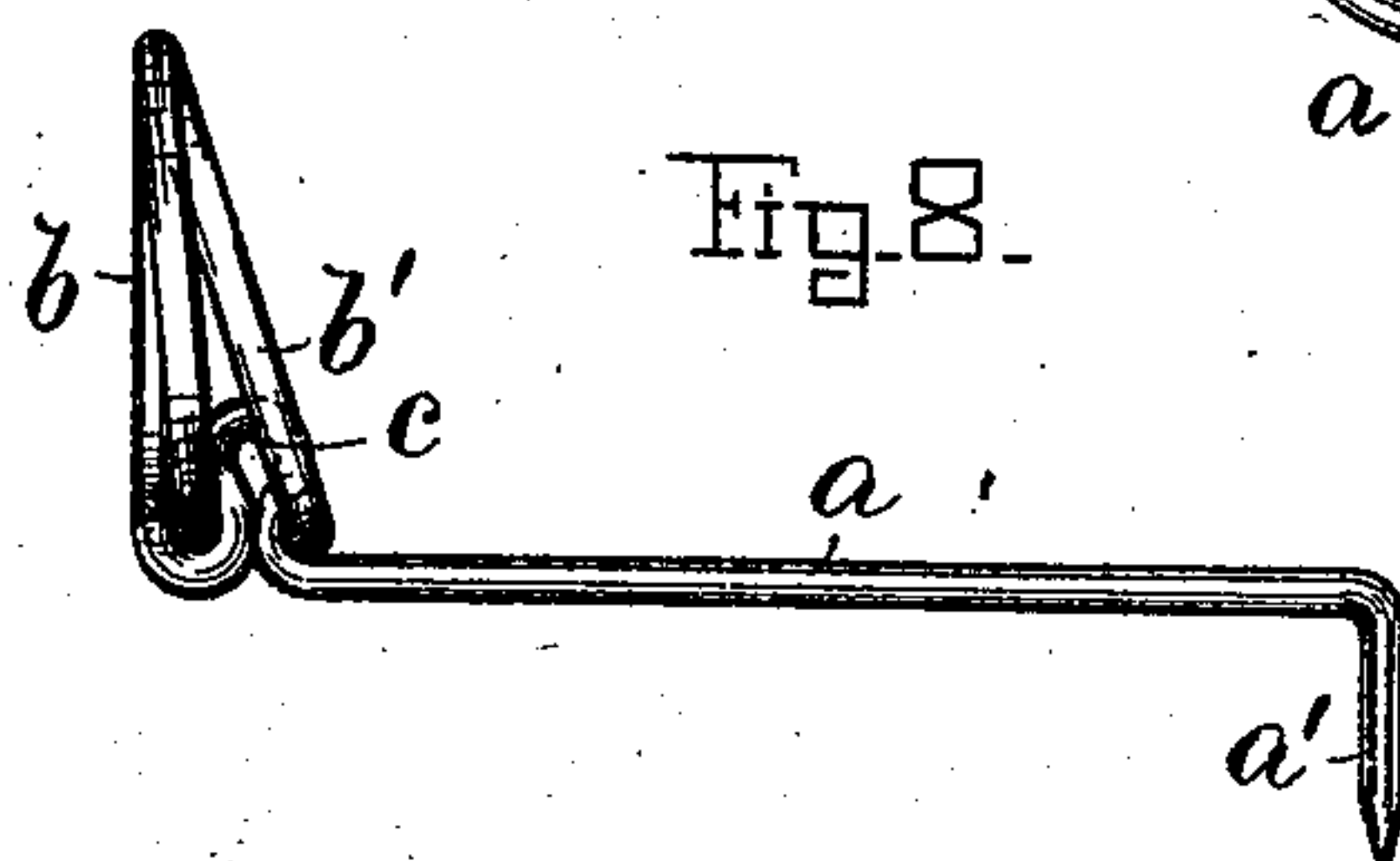


Fig. 8.

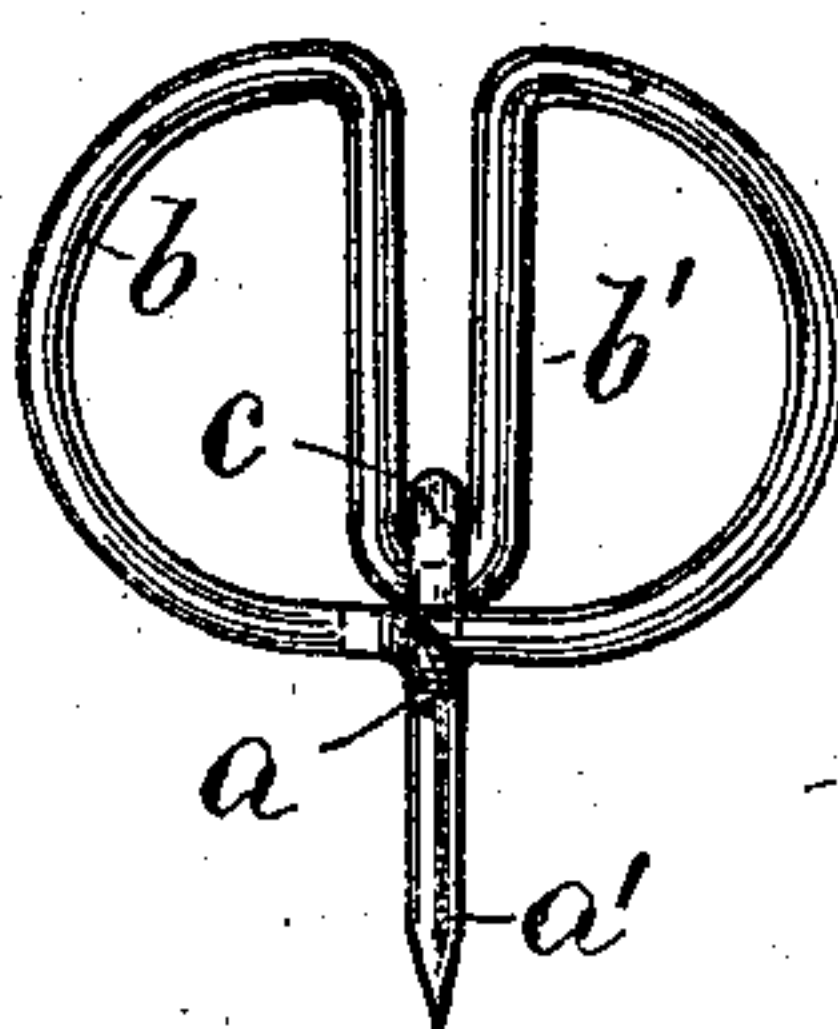
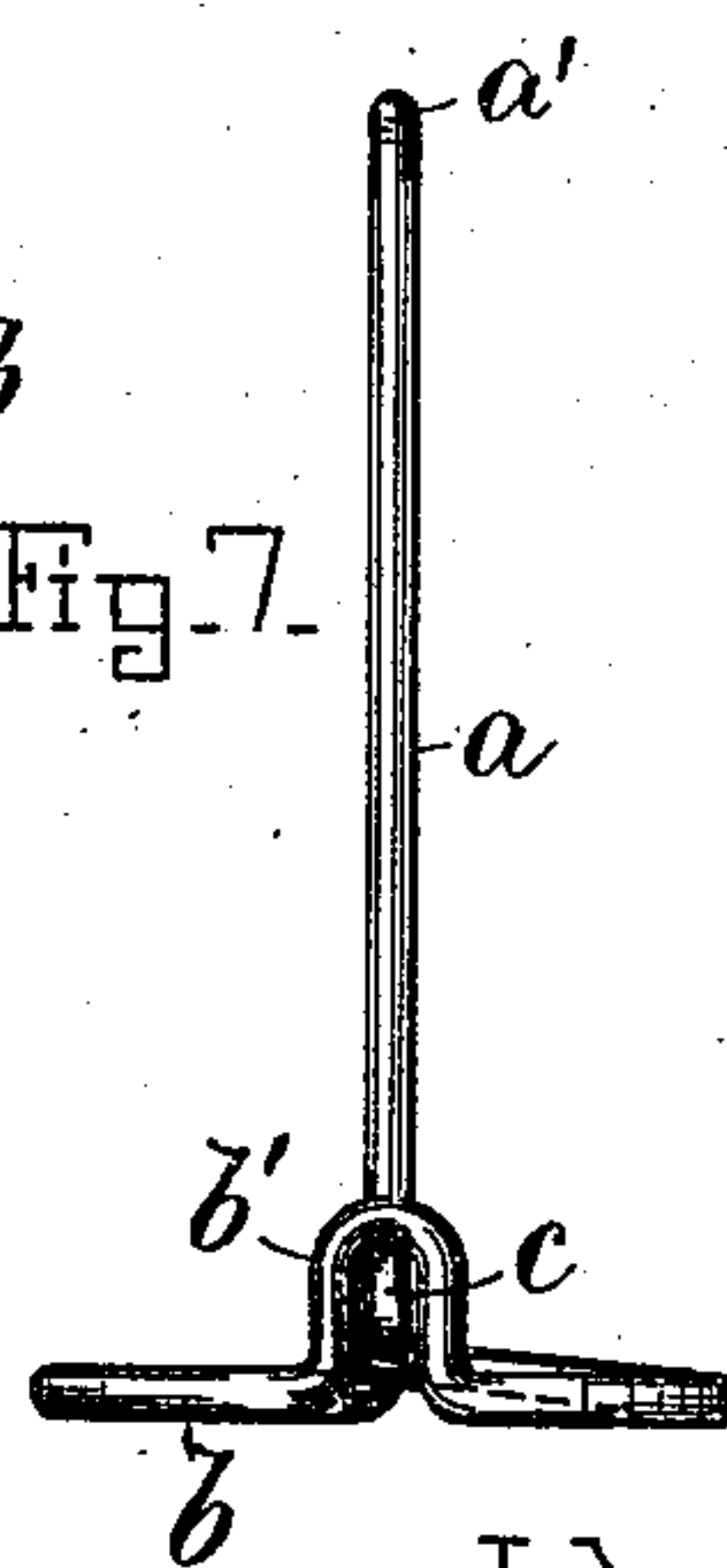


Fig. 9.



Fig. 10.



Witnesses
Charles W. Jones.
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Inventor
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his Atty.

UNITED STATES PATENT OFFICE.

CHARLES H. GILMAN, OF MELROSE, MASSACHUSETTS.

SNOW-GUARD.

SPECIFICATION forming part of Letters Patent No. 549,779, dated November 12, 1895.

Application filed March 11, 1895. Serial No. 541,290. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. GILMAN, a citizen of the United States, residing at Melrose, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Snow-Guards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in snow-guards for roofs and in that class of guards which are made of wire bent into the desired form and inserted in the shingles or slates on the roof, or soldered to the roof when made of metal, having upwardly-projecting snow-stops adapted to support or retain the snow on the roof until it melts and is carried off through the conductors.

The object of the invention is to strengthen the snow-stop so as to prevent it from being bent down flat to the roof; and it consists in providing the shank of the guard with a loop or projection which is engaged by the snow-stop or an extension from the snow-stop in order to brace or strengthen the stop, so as to prevent it from being bent downward by persons or snow on the roof. It is carried out substantially as illustrated in the accompanying drawings, which form an essential part of this specification, and wherein—

Figure 1 represents a plan view of the preferred form of my invention, showing its application to a roof. Fig. 2 represents a side elevation of the same form of my improved guard, showing it applied to a roof, which has been shown in section. Fig. 3 represents an end view of the same guard removed from a roof, as seen from the end of the guard having the snow-stop. Fig. 4 represents a plan view of another form of my guard. Fig. 5 represents a side elevation of the same guard. Fig. 6 represents an end view of the same guard. Fig. 7 represents a plan view of still another form of my improved guard. Fig. 8 represents a side elevation of the same guard. Fig. 9 represents an end elevation of the same guard. Figs. 10 and 11 represent, respectively, side and end elevations of still another form of the lower end of the guard.

Similar letters refer to similar parts wher-

ever they are shown on the different parts of drawings.

The guard is formed with a shank portion *a*, preferably provided with a drive end *a'*, which is made by bending the upper end of the shank portion at right angles to the shank and pointing such drive end, so that it may be driven into the roof to hold the guard in its proper position, or the guard may be provided with any other and common means which are now employed in similar guards to attach them to the roof, and I do not wish to confine myself to any particular form of the means employed to attach them. The shank portion is provided near its lower end with the snow-stop *b*, which projects substantially at right angles to the shank portion and to the roof when the guard is in position for use. This snow-stop is made by bending the wire into the desired form, as, for instance, a loop, as shown on the drawings, or it may be in any other desired form, as, for instance, triangular, square, &c.

The shank portion of the guard is also provided near the lower end with an upward bend forming a loop *c*, and the end of the wire after forming the snow-stop and after being returned in the direction of the shank *a*, as shown in Figs. 1 and 4, engages the loop *c*, by either being bent around the upper side of the loop, as shown in said figures, or through the loop as shown in Fig. 10. When the end of the wire is so bent around the upper side of the loop *c*, said loop is preferably formed so as to overhang such wire, as shown in Figs. 2 and 5. The end of the wire after the stop *b* has been formed may cross the shank portion just above the snow-stop before returning in the direction of the shank portion, as shown in Fig. 1, or it may be returned without crossing said shank portion, as shown in Fig. 4.

By the construction of the snow-stop with the free end returned to and engaging the loop formed on the shank portion, it will be seen that said stop is firmly braced and supported against any pressure on the stop which may tend to flatten the stop downward against the roof and that in order to flatten said stop to the roof sufficient pressure must be applied thereto to overcome the strength of the bends in two wires, whereas in snow-guards of this

class now in common use there is but the strength of a single bend in one wire to be overcome in order to flatten the stop and render it useless.

5 By making the return in the wire of my improved guard parallel to but above the level of the shank portion no extra space is required between the shingles or slates on the roof than when similar guards now in com-
10 mon use which have only the shank portion above the snow-stop are used.

In Figs. 7, 8, and 9, I have shown a form of my improved guard in which the loop which forms the snow-stop engages the loop *c* on the shank portion by being bent together, as at *b'* in Fig. 9, and carried forward to engage the loop *c* on the shank portion, as shown in Fig. 8. In such a form of my guard the bent portion *b'* of the snow-stop not only strengthens the stop to
20 resist pressure but presents more surface to hold the snow. In this form of my guard after forming the snow-stop I prefer to carry the end of the wire across the shank portion of the guard and have it rest against the up-
25 perside of the opposite side of the snow-stop, as shown in Fig. 9.

If so desired, the loop *c* on the shank portion may be of sufficient size to extend upward nearly if not quite to the level of the top
30 of the snow-stop, so as to present a greater resistance to the snow, as shown in Fig. 11; but such a construction is thought not to be necessary to the proper working of the guard, and I do not wish to confine myself to any di-
35 mension of the loop *c*.

Having thus fully described the nature, construction, and application of my invention, I wish to secure by Letters Patent and claim—

1. In a wire snow guard for roofs made of a

single piece of wire, a shank portion, a snow 40 stop projecting at right angles to the shank and a loop on the shank portion above the snow stop, a portion of the snow stop engaging said loop to support the snow stop, and a fastening device to attach the guard to the roof, 45 for the purpose set forth.

2. In a wire snow guard for roofs, a shank portion, a loop on the shank, a snow stop projecting at right angles to the shank, the end of the wire after forming the snow stop being 50 returned in the direction of the shank and engaging the loop thereon to support the snow stop, and a fastening device to attach the guard to the roof, for the purpose set forth.

3. In a wire snow guard for roofs, a shank 55 portion, a loop on the shank, a snow stop projecting at right angles to the shank having a portion thereof engaging the upper side of the loop on the shank portion and said loop over-
60 hanging the portion of the snow stop which engages it to retain it in position so as to support the snow stop and a fastening device to attach the guard to the roof, for the purpose set forth.

4. In a wire snow guard for roofs, a shank 65 portion, a snow stop projecting at right angles to the shank, the end of the wire after forming the snow stop being returned in the direction of the shank and secured thereto, and a fastening device to attach the guard to the 70 roof, for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES H. GILMAN.

Witnesses:

HENRY CHADBURN,

FRANK E. GREENWOOD.