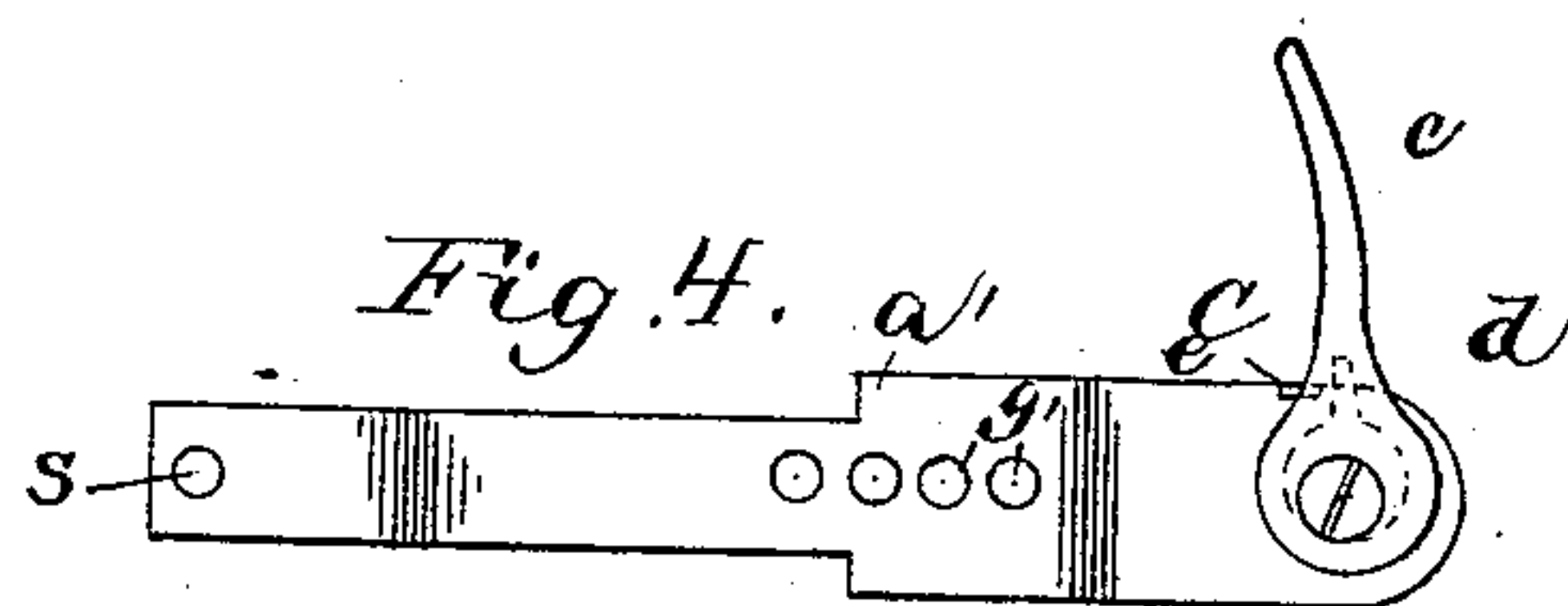
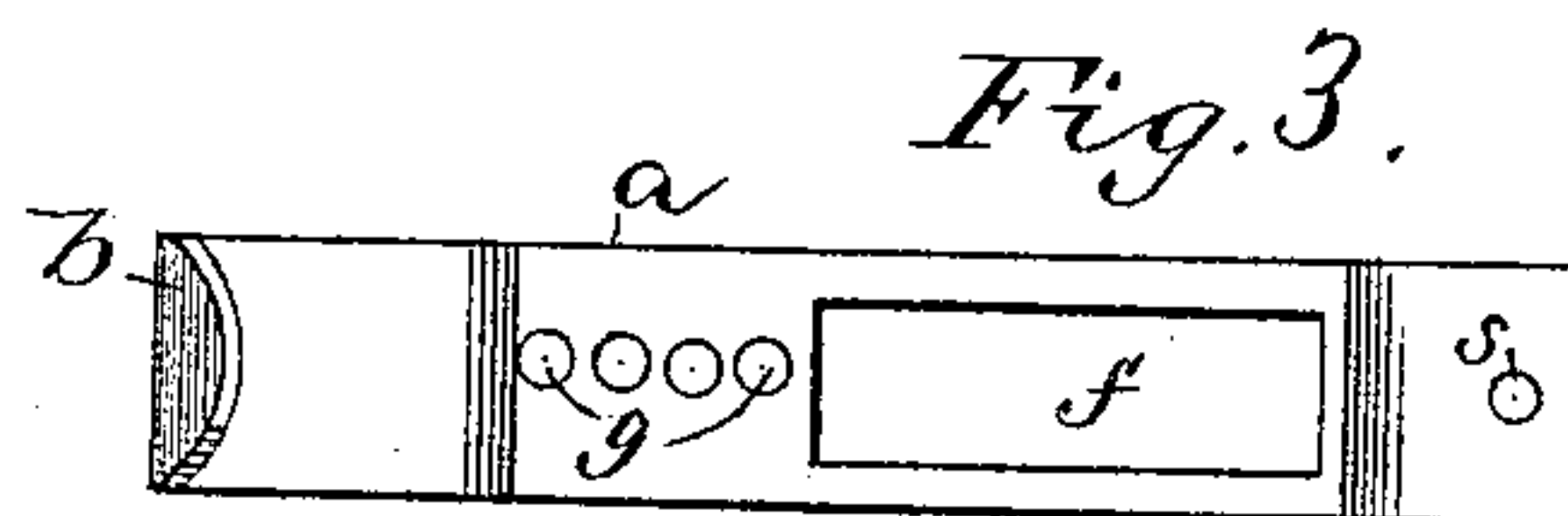
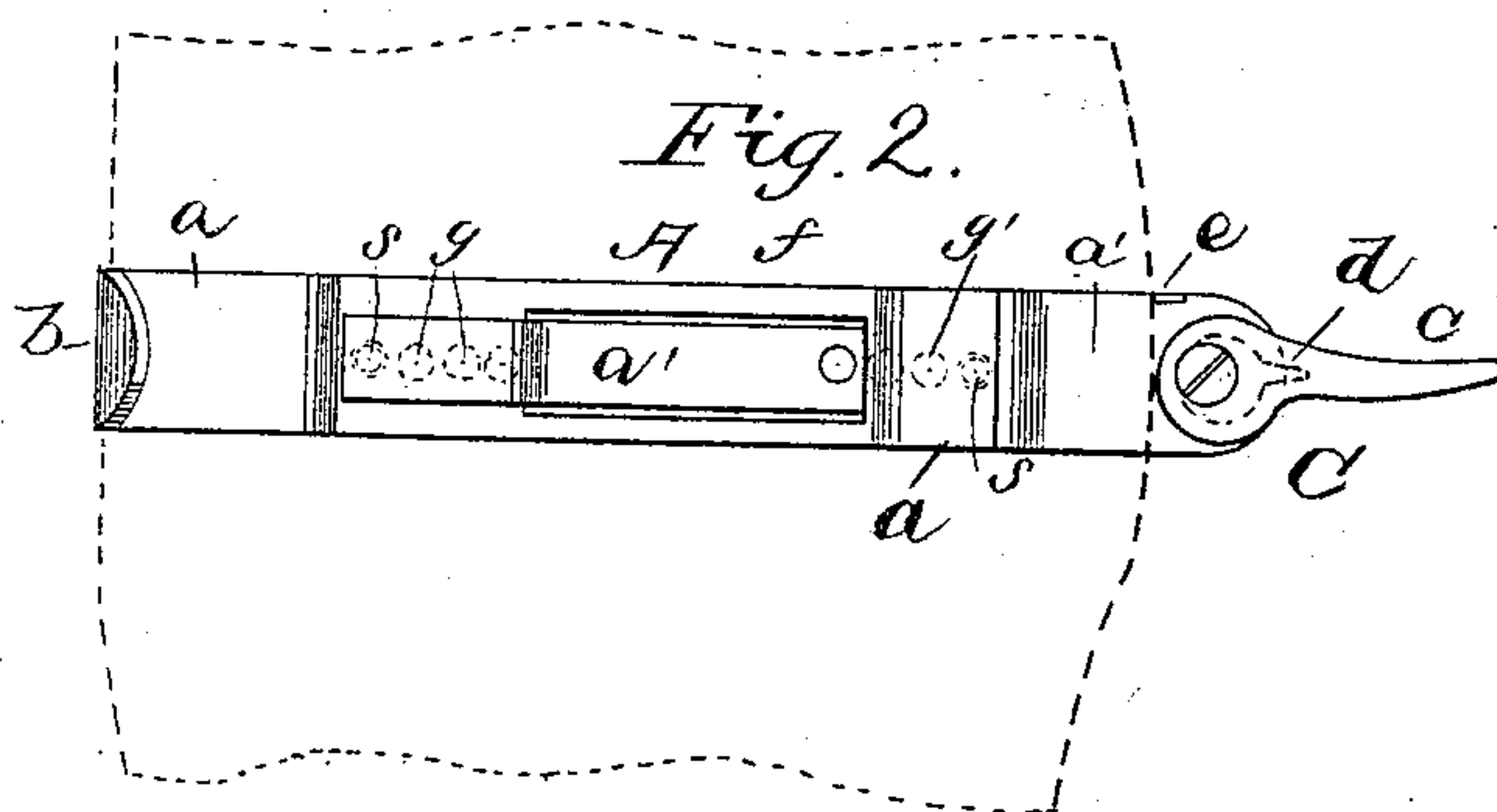
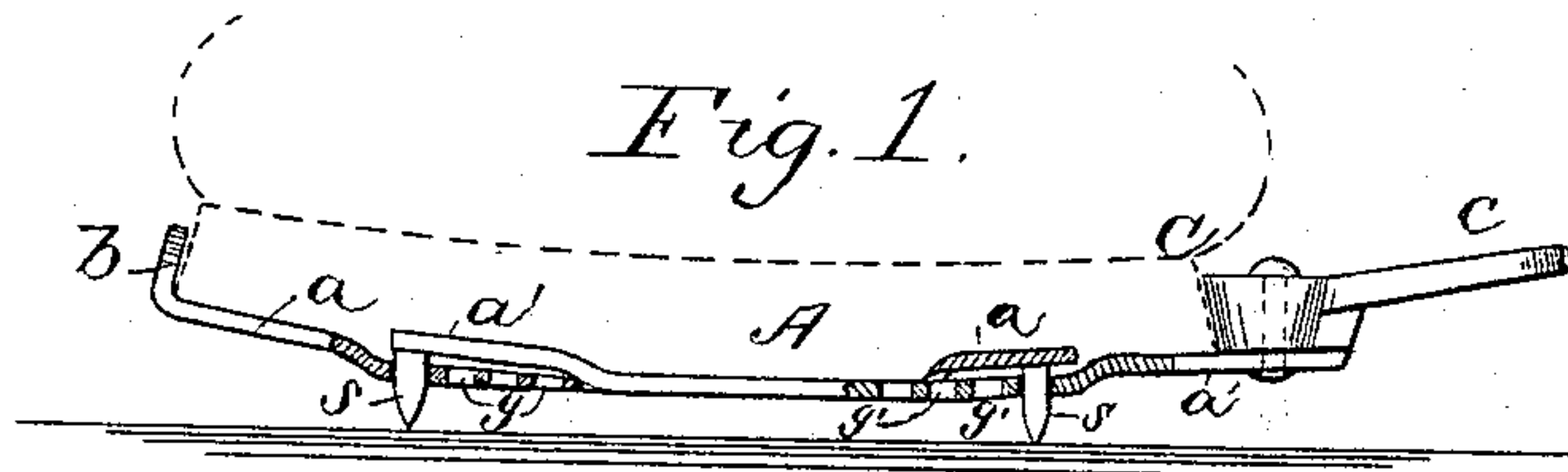


(No Model.)

R. A. CAMP.
ICE CREEPER.

No. 450,503.

Patented Apr. 14, 1891.



WITNESSES:
Fred G. Dieterich
Chas. Wright

INVENTOR:
Rollin A. Camp
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ATTORNEYS

UNITED STATES PATENT OFFICE.

ROLLIN A. CAMP, OF SAGINAW, MICHIGAN.

ICE-CREEPER.

SPECIFICATION forming part of Letters Patent No. 450,503, dated April 14, 1891.

Application filed December 9, 1890. Serial No. 374,035. (No model.)

To all whom it may concern:

Be it known that I, ROLLIN A. CAMP, of Saginaw, in the county of Saginaw and State of Michigan, have invented a new and useful
5 Improvement in Ice-Creepers, of which the following is a full, clear, and exact description.

This invention relates to devices for preventing pedestrians from slipping on ice or
10 frozen surfaces; and it consists in an ice-creeper of novel construction, substantially as hereinafter described, and more particularly pointed out in the claims, and which is cheap, simple, and effective, and can readily
15 be put on or taken off the boot or shoe, also can be applied over a rubber or other over-shoe.

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

Figure 1 is a partly sectional longitudinal elevation showing the improvement applied to a boot or shoe shown only in part by
25 dotted lines; Fig. 2, an inverted plan view of the same, and Figs. 3 and 4 plan views of the sections detached.

A represents a plate of steel or other suitable material formed of two sections $a a'$, adjustably secured together, as hereinafter described, and provided with small spikes or spurs s , projecting therefrom. One end of the plate a is bent upward, as at b , to engage the outer side of the sole, and the plate a' is
35 provided at one end with a cam or eccentric C, having an attached operating-lever c . This cam is united by an upright rivet to the plate, so as to turn thereon, and is so set that when the lever c is turned toward the heel of
40 the boot or shoe, as illustrated by full lines in Fig. 2, it will bind on the inner side or margin of the sole and lock the plate A firmly to the sole; but when said lever is turned half-way round in an opposite direction—
45 that is, toward the toe end of the shoe, as shown by dotted lines in Fig. 2—then the cam C is relieved from grip or pressure on the sole, which admits of the ice-creeper being readily removed. The lever c should be ad-
50 justed to this latter position when putting the ice-creeper on the boot or shoe, and to facilitate this adjustment the cam C is provided with a lateral projection d , which, when the
55 cam-lever is turned to its unlocking position,

cam-carrying end of the plate A. The gripping-surface of the cam C is made beveling or tapering downward to bring the plate A more firmly up against the sole after the whole creeper has been slid to its place along
60 the sole toward the heel as far as it can or should go, and the cam-lever then turned backward to lock the ice-creeper to the boot or shoe.

The section a is provided with the slot f in
65 it for the inner reduced end portion of the section a' , which carries the cam C and its lever, to pass up through. The section a of the plate has a series of holes g in it for a spike or spur s , attached to the section a' to
70 pass through, and the section a has at or beyond the other end of the slot f an attached spur s , adapted to pass through any one of a series of holes g' in the section a' of the plate,
75 and accordingly as these spur-holding portions of the plate are adjusted to project their respective spurs through certain of the holes g or g' , the ice-creeper will be extended or contracted, as required.

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

1. An ice-creeper comprising a plate formed in sections, one section being slotted and provided with a flange and the other provided
85 with a cam, each section being provided with a series of apertures and a spur, the spur of one section projecting through one of the apertures of the other section, substantially
90 as described.

2. In an ice-creeper, the combination of the section a , provided with the flange b , the longitudinal slot f , the apertures g , and the spur
95 s , and the section a' , having one end reduced and provided with a spur on the reduced end, the downwardly-tapering cam C, having the lever c at the opposite end, and the apertures g' , substantially as herein shown and described.

3. The ice-creeper plate A, having a projecting stop e at its one end, in combination
100 with the locking-cam C and its lever c , provided with a lateral projection d for operation in relation with said stop, substantially as specified.

ROLLIN A. CAMP.

Witnesses:

CHRIS. P. STREET,
F. E. SMITH.