

(No Model.)

2 Sheets—Sheet 1.

T. E. STEVENS.

BUGGY BOOT.

No. 369,567.

Patented Sept. 6, 1887.

Fig. 1.

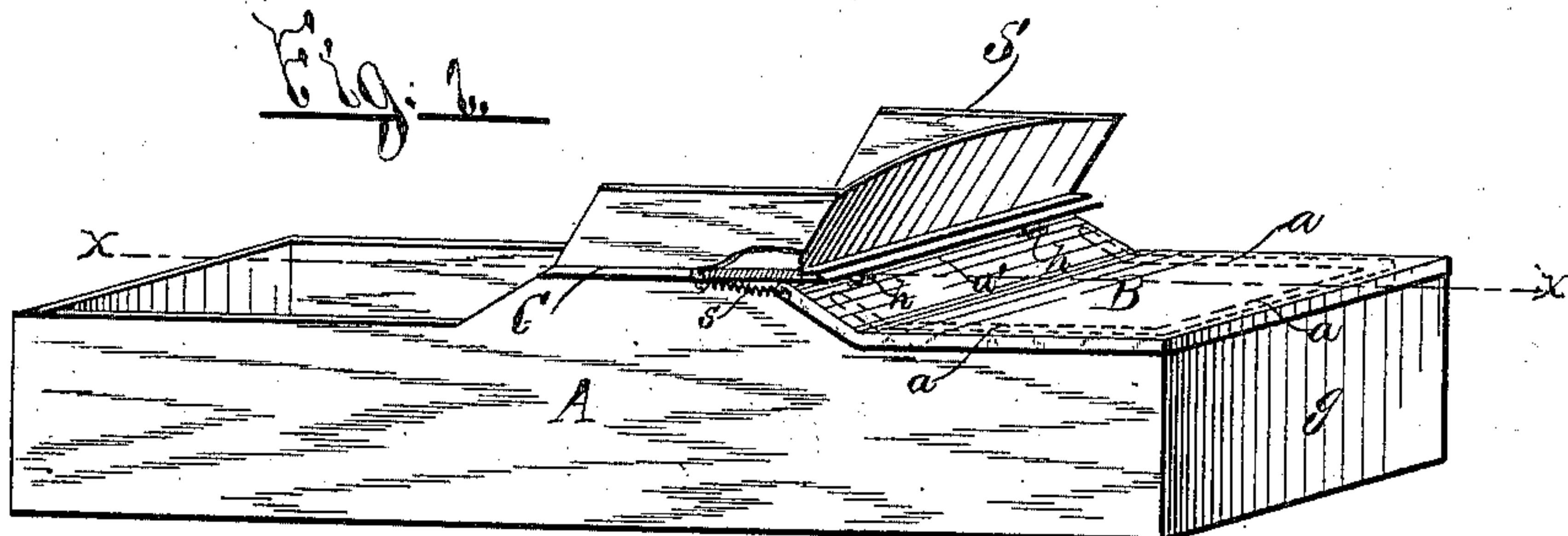


Fig. 2.

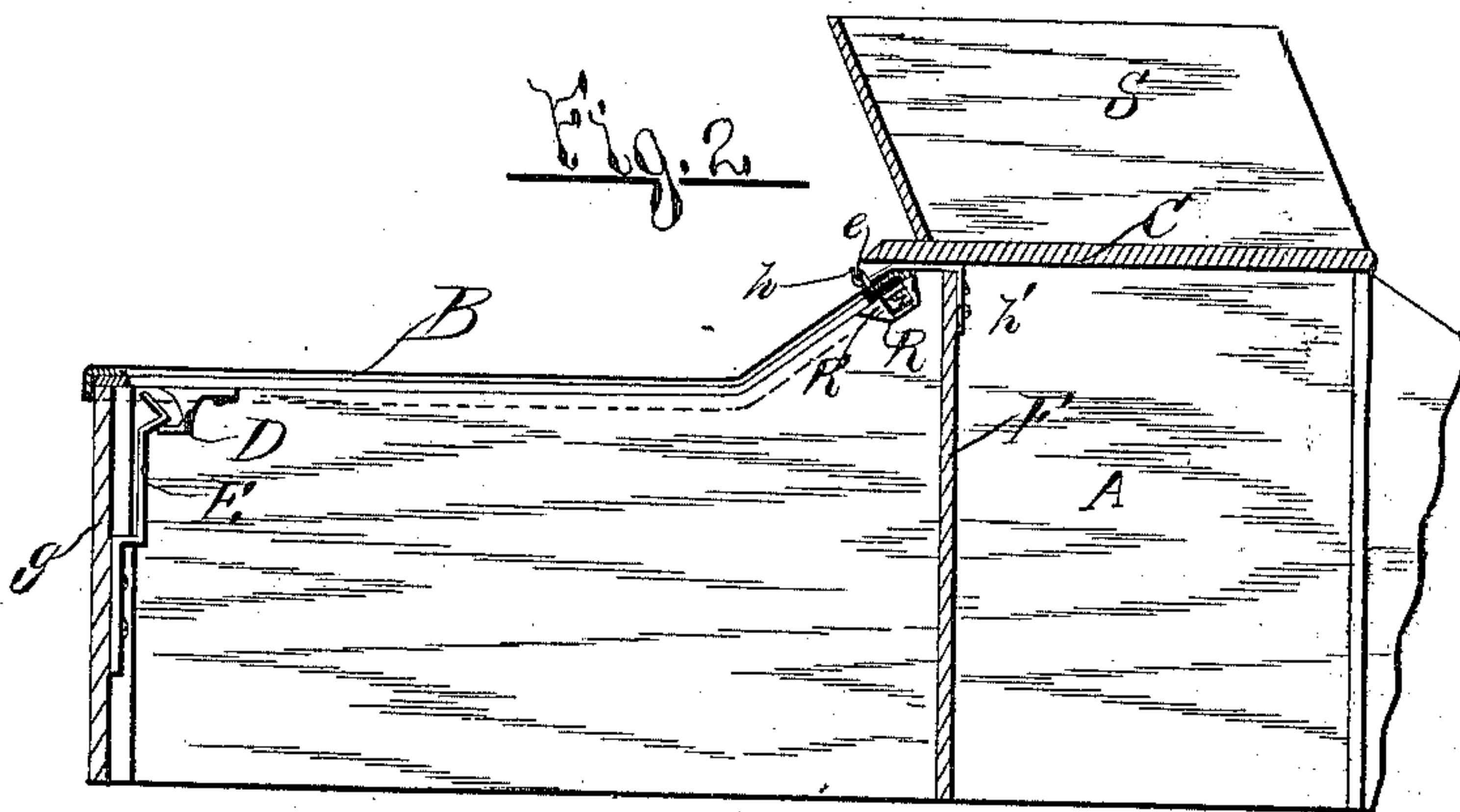


Fig. 3.

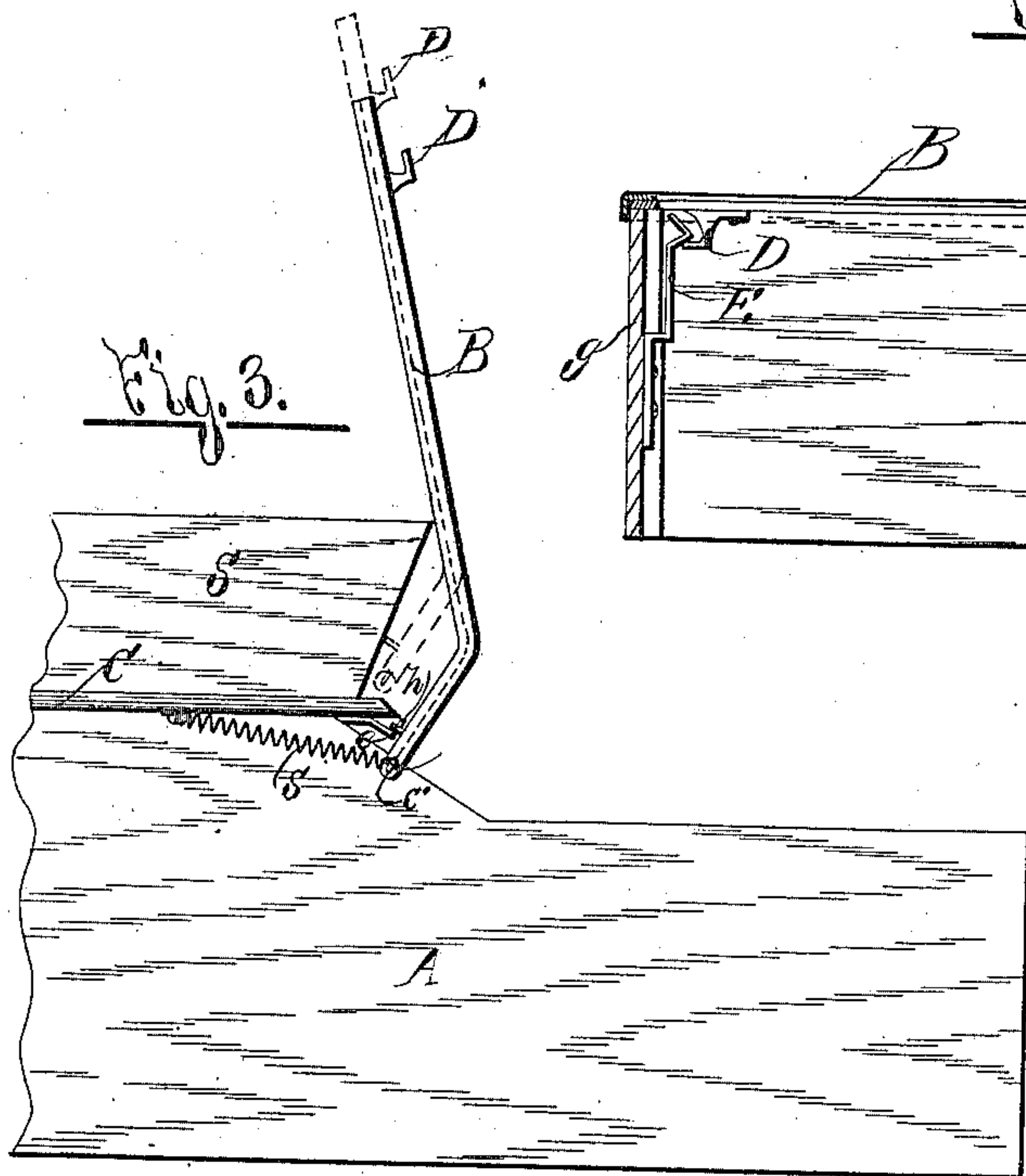
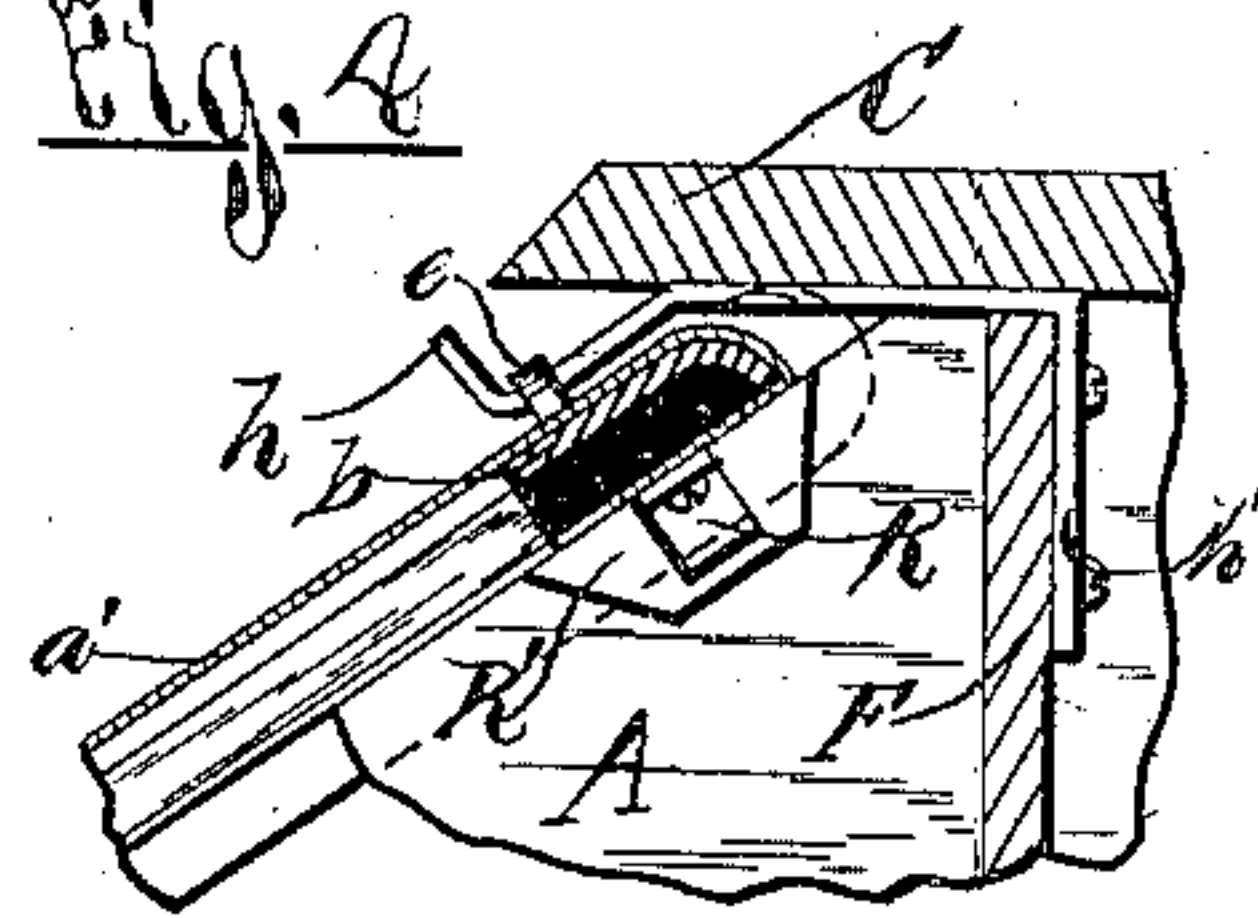


Fig. 4.



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(No Model.)

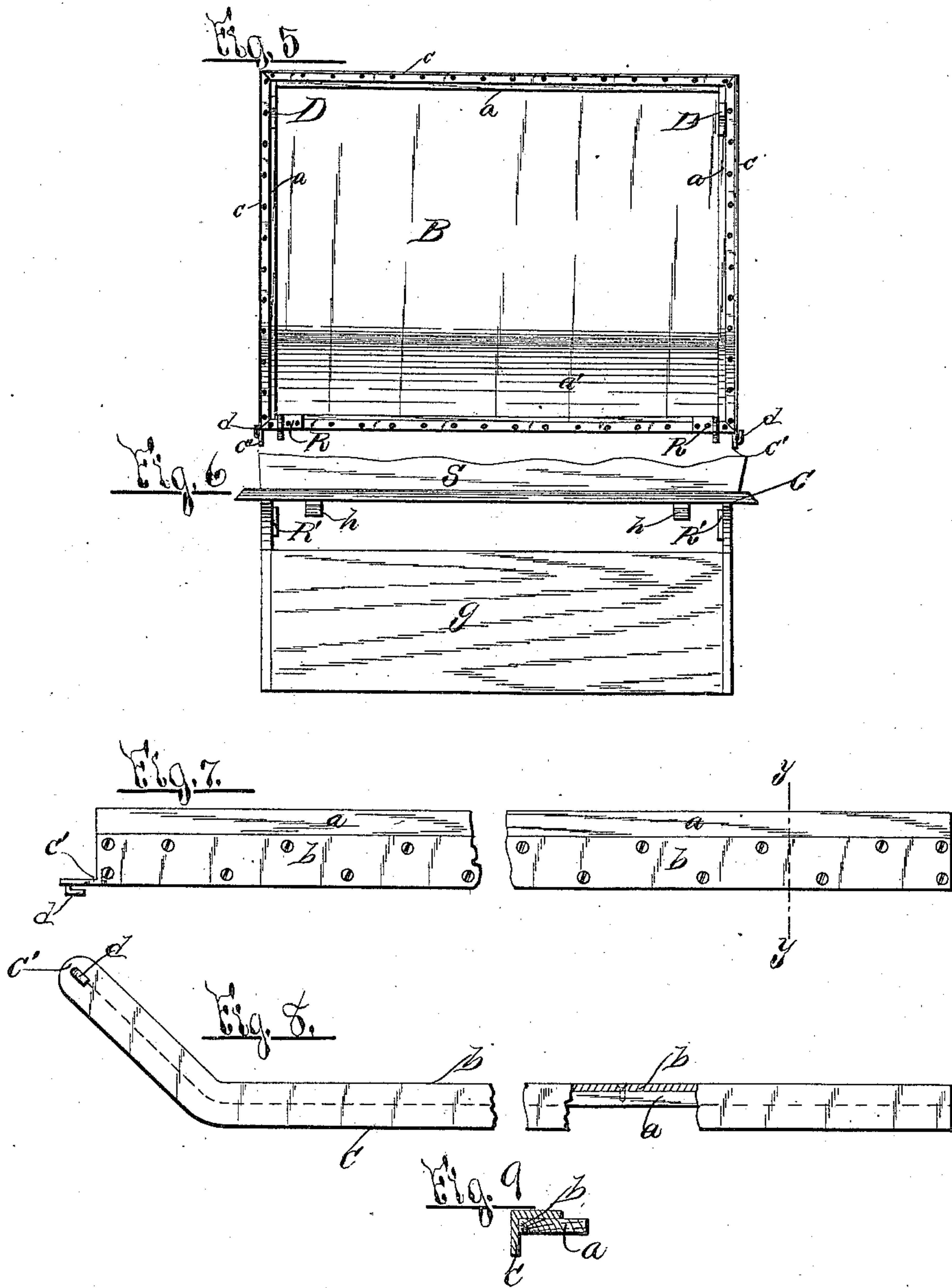
2 Sheets—Sheet 2.

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WITNESSES:

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UNITED STATES PATENT OFFICE.

THEODORE E. STEVENS, OF SYRACUSE, NEW YORK.

BUGGY-BOOT.

SPECIFICATION forming part of Letters Patent No. 369,567, dated September 6, 1887.

Application filed April 30, 1887. Serial No. 236,610. (No model.)

To all whom it may concern:

Be it known that I, THEODORE E. STEVENS, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Buggy-Boots, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in buggy-boots, and has for its object the production of a strong, light, and economical boot, so connected to the vehicle-body and seat-frame as to be readily raised or lowered or removed without the necessity of unscrewing or removing any of the fastening appliances; and to this end the invention consists, essentially, of detachably connecting the boot to the vehicle-body by means of hooks and eyes secured, respectively, to the body and boot, as more specifically described hereinafter.

It consists, also, in the detail construction and arrangement of the detachable connecting means; also, in combining the frame with a spring-connection for drawing the boot forward under the seat-frame; also, in the detail construction and arrangement of the parts, all as hereinafter more fully described, and pointed out in the claims.

In specifying my invention reference is had to the accompanying drawings, forming a part of this specification, in which, like letters indicating corresponding parts in all the views, Figure 1 is an isometric view of the vehicle-body provided with my invention and showing the boot closed. Fig. 2 is a longitudinal vertical section taken on line *x x*, Fig. 1, slightly enlarged, illustrating the construction and arrangement of the attaching and securing devices for locking the boot to the body and preventing rattling, &c. Fig. 3 is an enlarged view in side elevation showing the boot raised. Fig. 4 is an enlarged sectional view illustrating the hook-and-eye connection for securing the forward end of the boot under the seat-sill or seat-frame of the vehicle-body. Fig. 5 is an inverted bottom plan of the buggy-boot, showing the manner of securing the leather covering of the boot to the frame. Fig. 6 is a rear end view of the vehicle-body, illustrating more particularly the rub-irons secured to the sides of the body to form a bearing for the

metal guard-flanges on the boot-frame, which prevent the depending side flanges of the boot-frame from marring the exterior of the sides of the vehicle-body. Fig. 7 is an enlarged detached view of the frame-pieces of the buggy-boot, illustrating more particularly the construction of the same. Fig. 8 shows an edge view of the same; and Fig. 9 shows a transverse section taken on line *y y*, Fig. 7, illustrating the bent metal re-enforcing piece with the depending flange.

A represents the vehicle-body constructed in the usual manner and provided with my improved buggy-boot B. C is the seat-frame sill. S is the seat of the vehicle, and *g* the back end-board of the vehicle-body.

The buggy-boot B is composed of framing-pieces *a a a a'*, Figs. 1 and 5, united so as to form a frame of suitable shape for the style of vehicle-body to which the boot is to be applied. The pieces *a* consist of thin strips of wood re-enforced by bent sheet-metal strips *b*, Figs. 7, 8, and 9. The sheet-metal strips are bent angularly, as best shown in Fig. 9, so as to provide the depending side flange, *c*, which extends around on three sides of the boot B—*i. e.*, the rear and two side edges being flanged, while the forward edge, *a'*, Figs. 1 and 5, has no flange. The depending flange *c* shuts over the outside of the buggy-body, thereby presenting a neat appearance. The thin bent sheet-metal re-enforced piece *b*, with its depending flange *c*, is fastened securely to the thin wooden strip *a* by screws, nails, or any other suitable fastening means.

The advantages of a boot-frame constructed in this manner are that much thinner material can be employed in the construction thereof and a very light frame produced possessing the requisite strength for the purpose. If wood were used solely, the frame would necessarily be heavy and bungling, whereas by combining the thin sheet-metal re-enforce pieces with the thin wooden strips the frame is light, strong, and a tasty finish can be given to the boot. Furthermore, it is of special importance in the construction of buggy-boots that the frame of the boot be made as thin as possible, since, as the boot rests on the top or upper edge of the body, if made too thick the body of the vehicle is made to appear higher

at the back end than at the front, and therefore out of proportion. Furthermore, the light wood or inner frame, *a*, of the boot is designed not only to make, in combination
5 with the metal re-enforce strip *b*, a thin, light, and durable boot-frame, but it affords, also, a suitable base upon which to nail the covering of the boot on the inner side, thereby making
10 a neater-appearing and at the same time cheaper boot than when stitched on, as in the usual construction.

The sheet-metal depending flange on the outer edges of the frame, as will be observed, extends slightly below the top of the vehicle-
15 body, not for the purpose of inclosing the back ends of the body, but sufficiently to cover any defect in the perfect fit of the boot-frame to the top edge of the body, thus adding to the neat appearance.

20 In applying the covering of the boot to the boot-frame constructed as described above, the covering material is stretched over and around the depending flanges *c*, Figs. 5 and 9, and nailed to the under side of the thin wooden
25 strip *a*, as best illustrated in Fig. 5 of the drawings.

As stated above in describing the construction of the boot-frame, the facility with which the covering can be secured to the wooden
30 strip by tacking greatly cheapens the construction of the boot, while at the same time the neat appearance of the boot is not sacrificed, since the covering of the boot-frame is stretched over and around the flanges in the manner described.
35

In order to prevent the depending flanges from marring the sides of the vehicle-body, I provide guard-irons *R R*, which are angular in shape and secured to the boot-frame at the
40 forward end thereof, as best shown in Fig. 5, and upon the inner sides of the vehicle-body, as best shown in Fig. 6, I secure rub-irons *R' R'*, which are engaged by the guard-irons *R R* on the boot-frame, and such engagement prevents lateral motion of the buggy-boot when
45 the vehicle is run and effectually accomplishes the desired result, since when the boot is locked in position on the vehicle-body, by means presently explained, it cannot sway laterally, and
50 the flanges therefore do not come in contact with the sides of the vehicle-body.

The buggy-boot is secured to the vehicle-body by means of a hook-and-eye connection at its forward end, said hook-and-eye connection coming under the seat frame or sill of the
55 vehicle-body, and by an interlocking spring-connection at the rear extremity of the boot.

The forward connection is composed of the hooks *h h*, the hooks *h h* being secured at *h'*,
60 Figs. 2 and 4, to the framing-piece *F* of the vehicle-body and depend from the seat-frame sill *C*, as best shown in the enlarged detached section, Fig. 4.

The hook *h* is preferably made of spring
65 metal, for the purpose which will be presently explained. The eyes *e* are secured, preferably,

ably, in the forward frame-piece, *a'*, of the buggy-boot *B* in position to engage the hooks *h*, and are hung onto the hooks *h*, as best shown in Figs. 1, 2, and 4.

70 It will be observed that the eyes or staples *e* are inserted into the buggy-boot frame at a point somewhat in rear of the forward end, *c'*, of the buggy-boot side frame-pieces, Fig. 3, the object being to so connect the buggy-boot
75 *B* to the vehicle-body that the boot *B* may be raised clear of the vehicle-body, as best shown at Fig. 3, and the hook connected to the eye at the point in the rear of the end *c'* forms a
80 rolling-joint connection, which permits the forward end of the boot to slide rearward as the boot *B* is raised, and thus allows the boot to be raised to a greater extent than if the boot were
85 hinged to the vehicle-body, as in the devices of this character heretofore made. Furthermore, it will be observed that the boot is simply hung onto the hooks *h*, and may be readily detached therefrom without removing or
90 in any wise displacing any of the fastening attachments. The spring metal of the hooks also exert a downward pressure on the forward end of the boot, and thereby presses the forward end of the boot securely down against the upper edge of the vehicle-body.

In order to tension the rolling joint formed
95 by the hook-and-eye connection, as described, I provide the spirals *s*, Figs. 1 and 3, one end of which is attached to the hook *d* at the extreme forward point, *c'*, of the boot-frame, while the other end of the spiral is attached to
100 the seat-frame *C* at a point forward of and above the point of attachment to the boot-frame. The office of this spring, as stated, is to tension the rolling joint, and it also serves to draw the boot-frame forward under the projecting seat frame or sill *C*.
105

If the springs *s* were omitted, it would be necessary to crowd the frame of the boot forward in closing it; but by means of the springs
110 *s*, connected in the manner described, the frame is drawn forward to proper position automatically as the boot is lowered upon the vehicle-body.

The advantage accruing from attaching the spring *s* to the extreme forward point of
115 the boot-frame and securing the other extremity to the seat-frame *C* at a point forward and beyond the point of attachment to the boot-frame lies in the fact that as the boot-body is raised the tension on the spring is exerted in
120 a straight line, thus securing its greatest tension with the least amount of strain.

I am aware that spiral springs have been employed heretofore on buggy-boots; but in
125 all of the cases the spring has been connected to the boot, so that when the boot is raised the spring is twisted, so as to strain the same unduly, and its efficiency thereby defeated. I preferably employ the springs *s* in the manner
130 described, for the reason that they afford an automatic tension device for drawing the boot forward into its position when the boot is

closed, and the spring applied in the manner described may be substituted for the hooks *h* and eye *e*.

The rear extremity of the boot is locked to the vehicle-body by means of depending rigid catches *D*, Fig. 2, which are secured to the under side of the frame of the boot *B*, as shown in Fig. 5. These depending catches *D* collide with spring-catches *E*, secured to the end-board *g* of the vehicle-body, as illustrated in Fig. 2, and interlock with said spring-catches, the spring-catches *E* being formed on an incline or *V* shape, so as to disengage easily when it is desired to lift or raise the boot *B*.

It will be observed that the boot *B* is secured at its forward extremity to the vehicle-body by the spring-hooks *h* and at the rear extremity by the depending spring-catches *D* *E*, and that consequently the tendency to rattling, due to the motion of the vehicle in use, is overcome, since the boot is interlocked with the vehicle-body at its opposite extremities and locked against lateral motion by the guard-irons *R* *R*, resting against the rub-irons *R'*, which, as previously stated, prevents the depending flanges *c* of the boot-frame from coming against and marring the sides of the vehicle-body.

The operation of my improved boot will be readily understood from the foregoing.

It will be observed that the boot is detachably connected to the vehicle-body by means of the hooks and eyes, as stated, it being simply necessary to unhook the spiral springs from their connection with the seat-frame *C*, when the boot may be removed at once by simply raising it off from the hooks *h*, and it may be as readily applied when closed down. The depending rigid fasteners *D* interlock with the spring-catches *E*, thus securely confining the boot in place.

The device, as stated, is simple, economical to manufacture, very neat in appearance, and very durable in use.

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

1. A boot for vehicles detachably connected by spring-hooks depending below the seat-sill, engaging eyes secured to the boot in rear of the forward end thereof, in combination with means, substantially as described, to secure its rear extremity to the vehicle-body, substantially as and for the purpose set forth.

2. The combination of the buggy-boot, secured to the body by a hook-and-eye connection, with spiral springs connected at one end to sides of the boot-frame and at the other to the frame of the seat, substantially as and for the purpose specified.

3. The combination of a buggy-boot and vehicle-body with spiral springs attached to the extreme ends of the sides of the boot-frame, and to the seat-frame at a point forward and above the point of attachment to the boot-frame, substantially as and for the purpose set forth.

4. In a buggy-boot, the combination of the side bars of the frame with the guards *R* *R*, for preventing lateral movement of the boot, substantially as specified.

5. The combination of the buggy-boot frame, provided with depending rigid catches, with the vehicle-body provided with springs shaped to engage the catches on the boot and automatically interlock therewith when the boot is closed, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 27th day of April, 1887.

THEODORE E. STEVENS.

Witnesses:

FREDERICK H. GIBBS,
E. C. CANNON.