

No. 754,819.

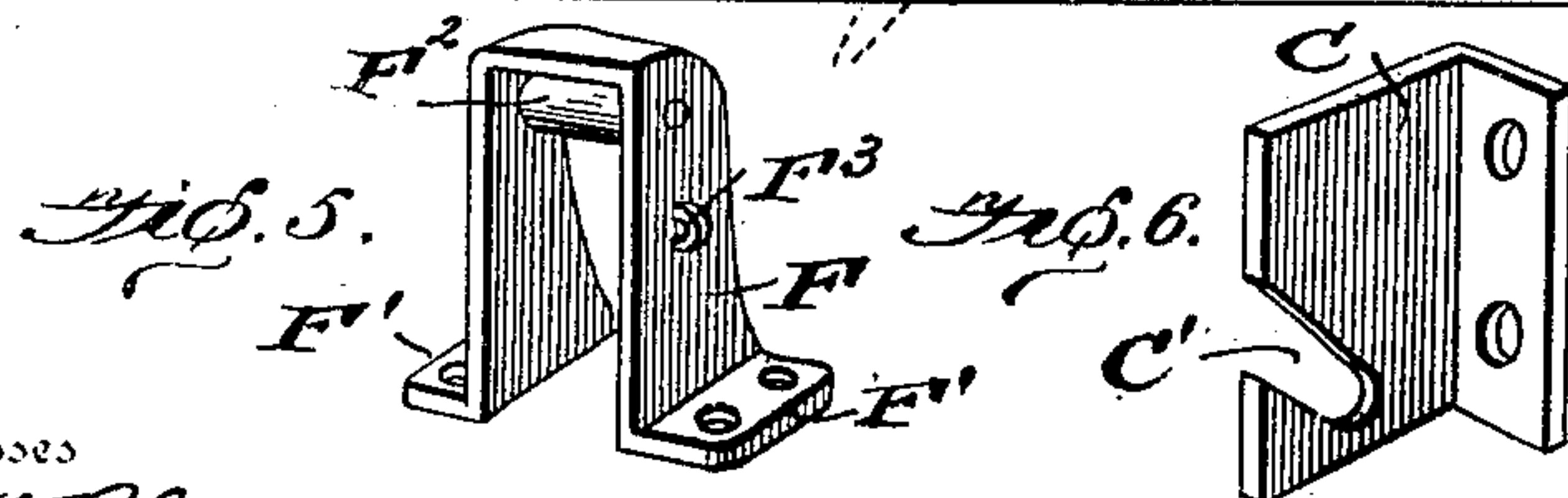
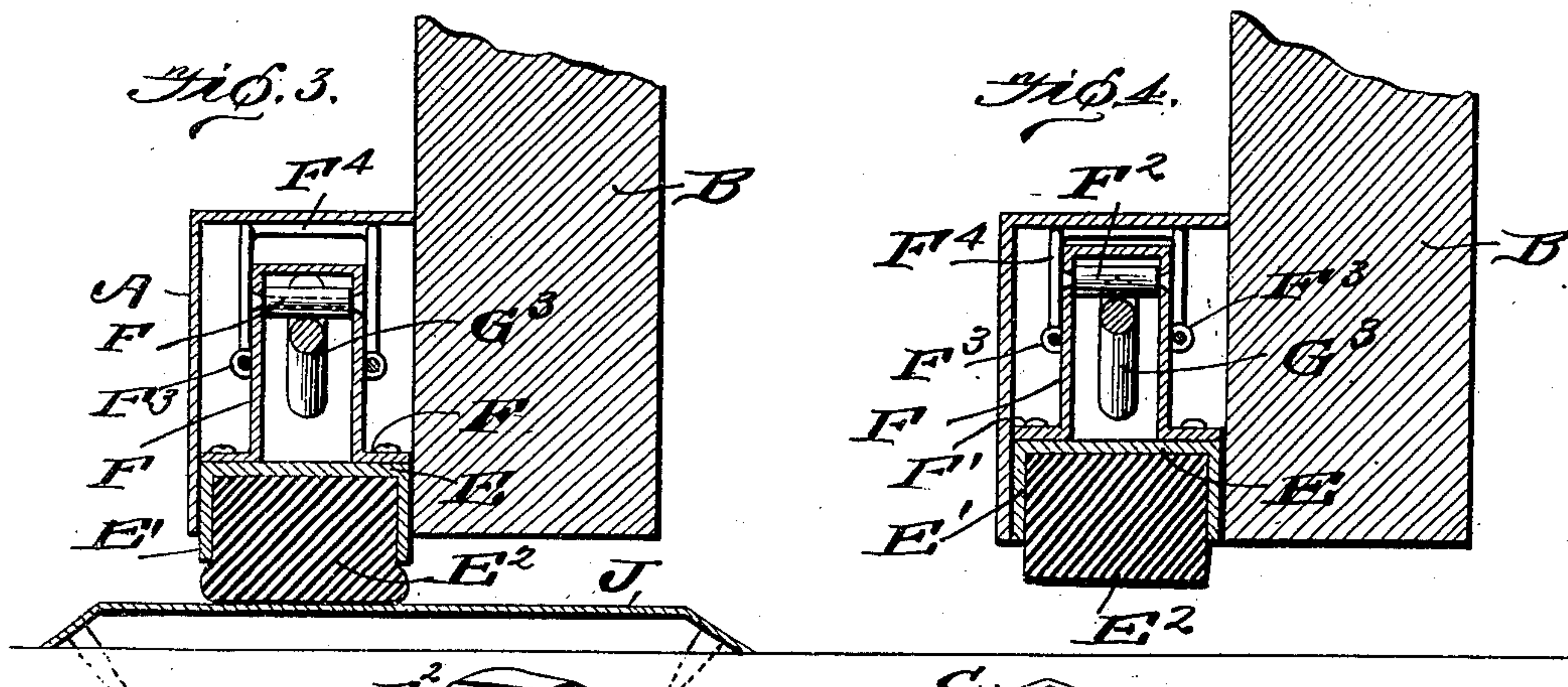
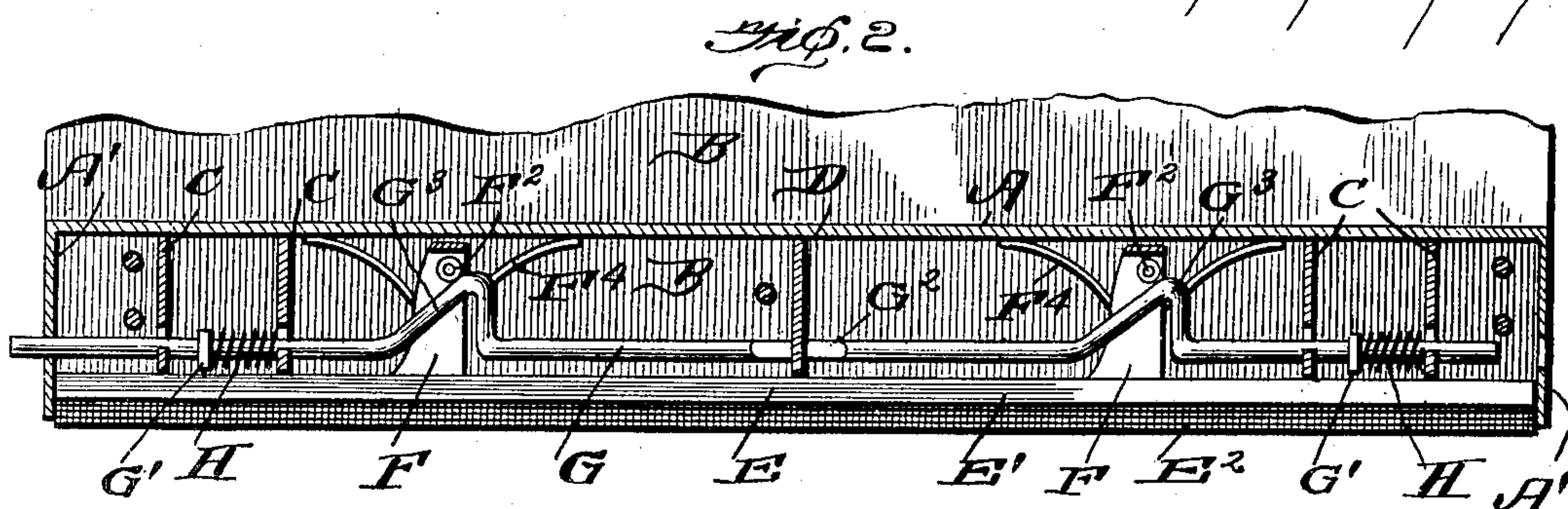
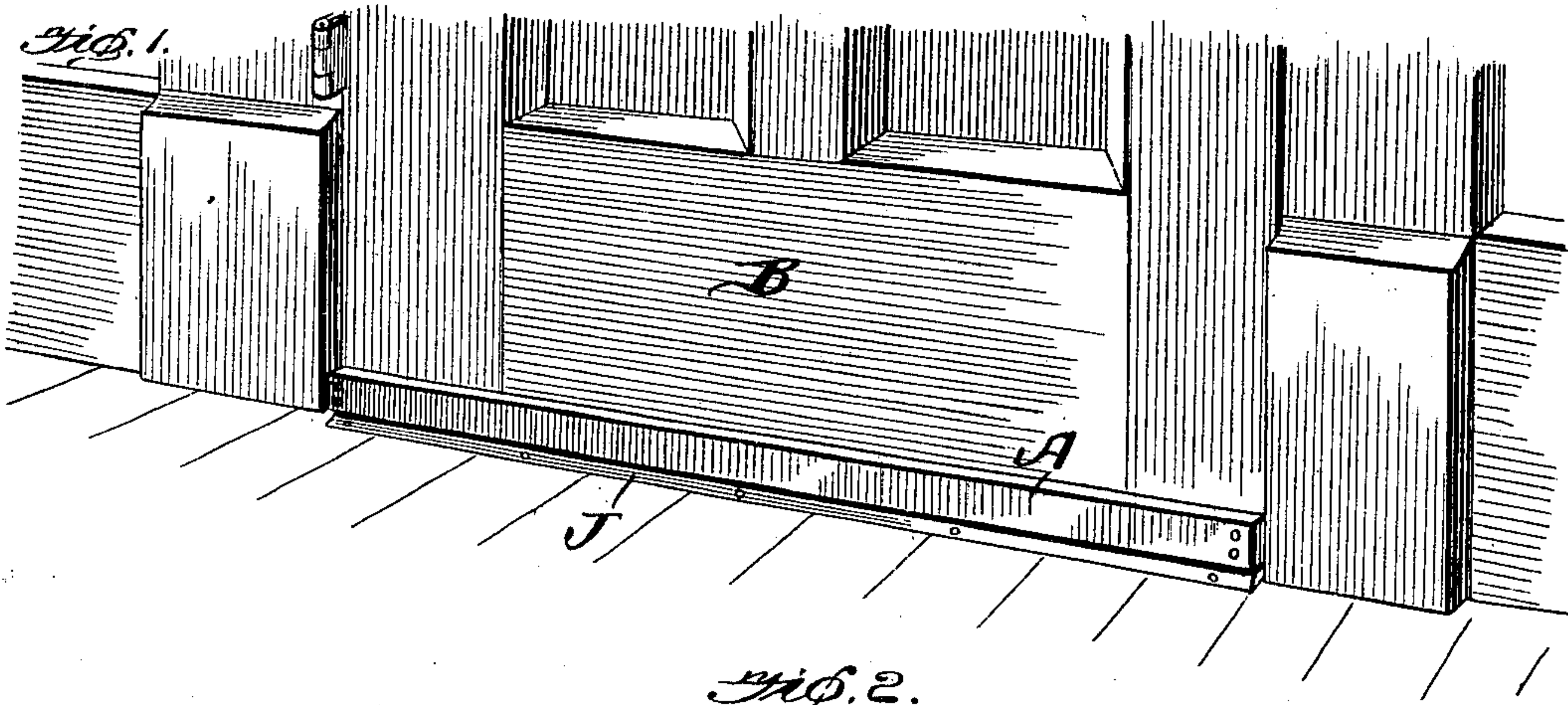
PATENTED MAR. 15, 1904.

J. S. SENGLAR.
WEATHER STRIP.

APPLICATION FILED FEB. 28, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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Witnesses

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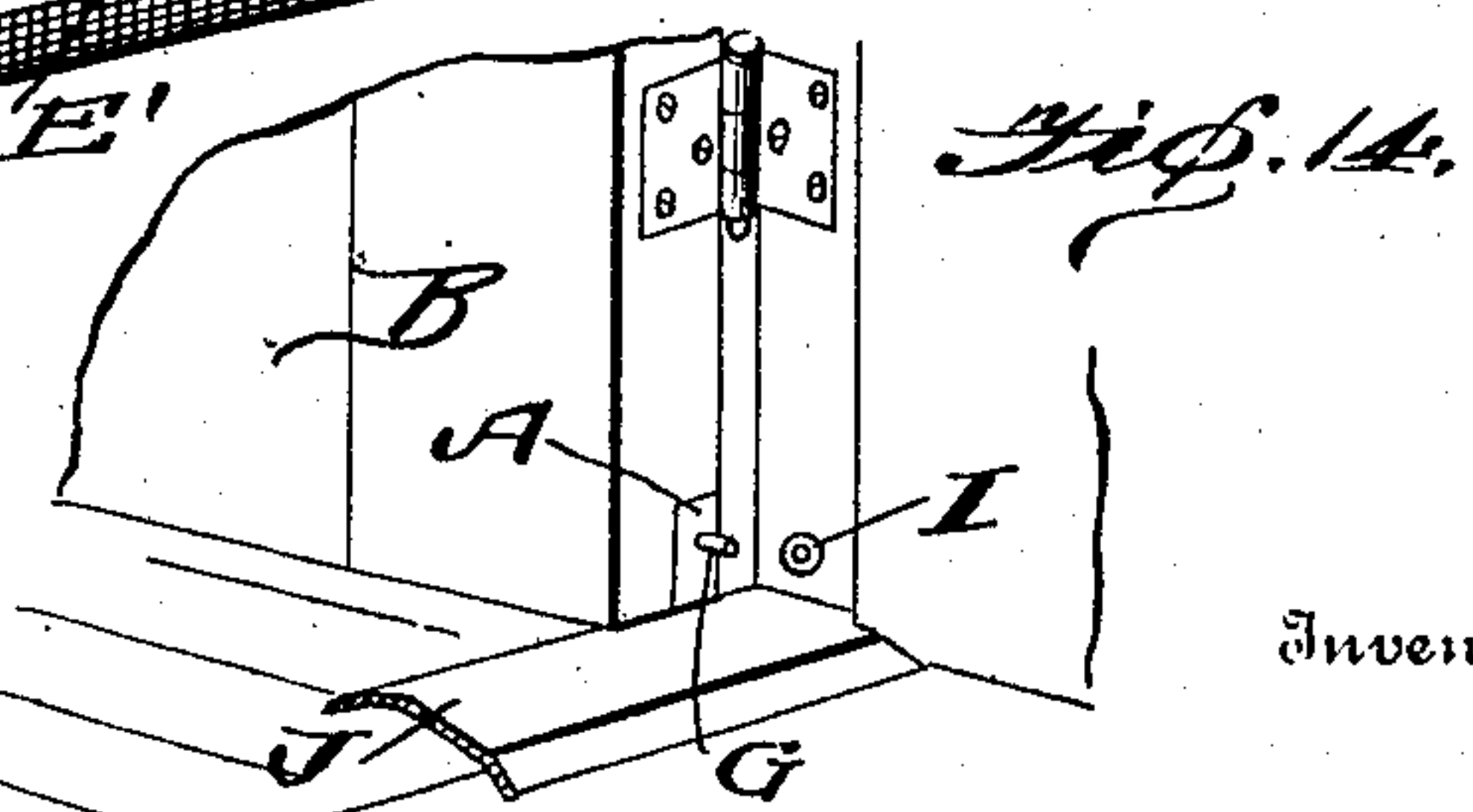
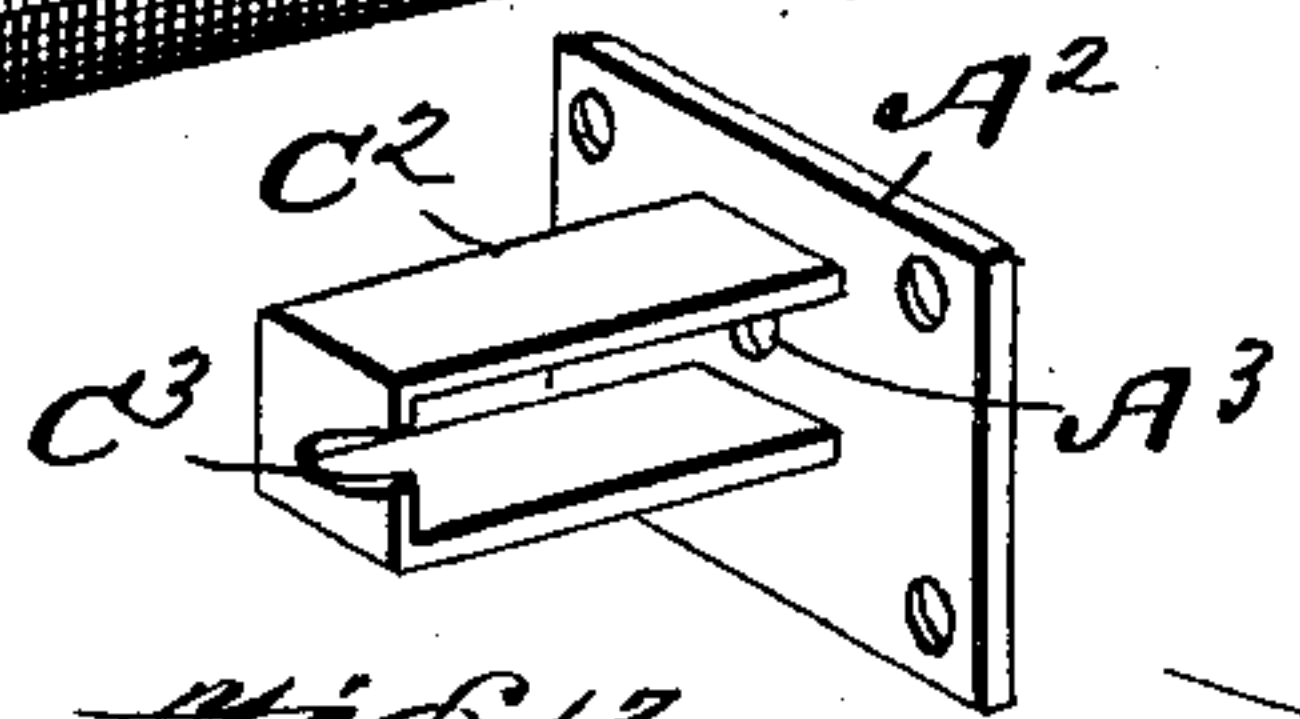
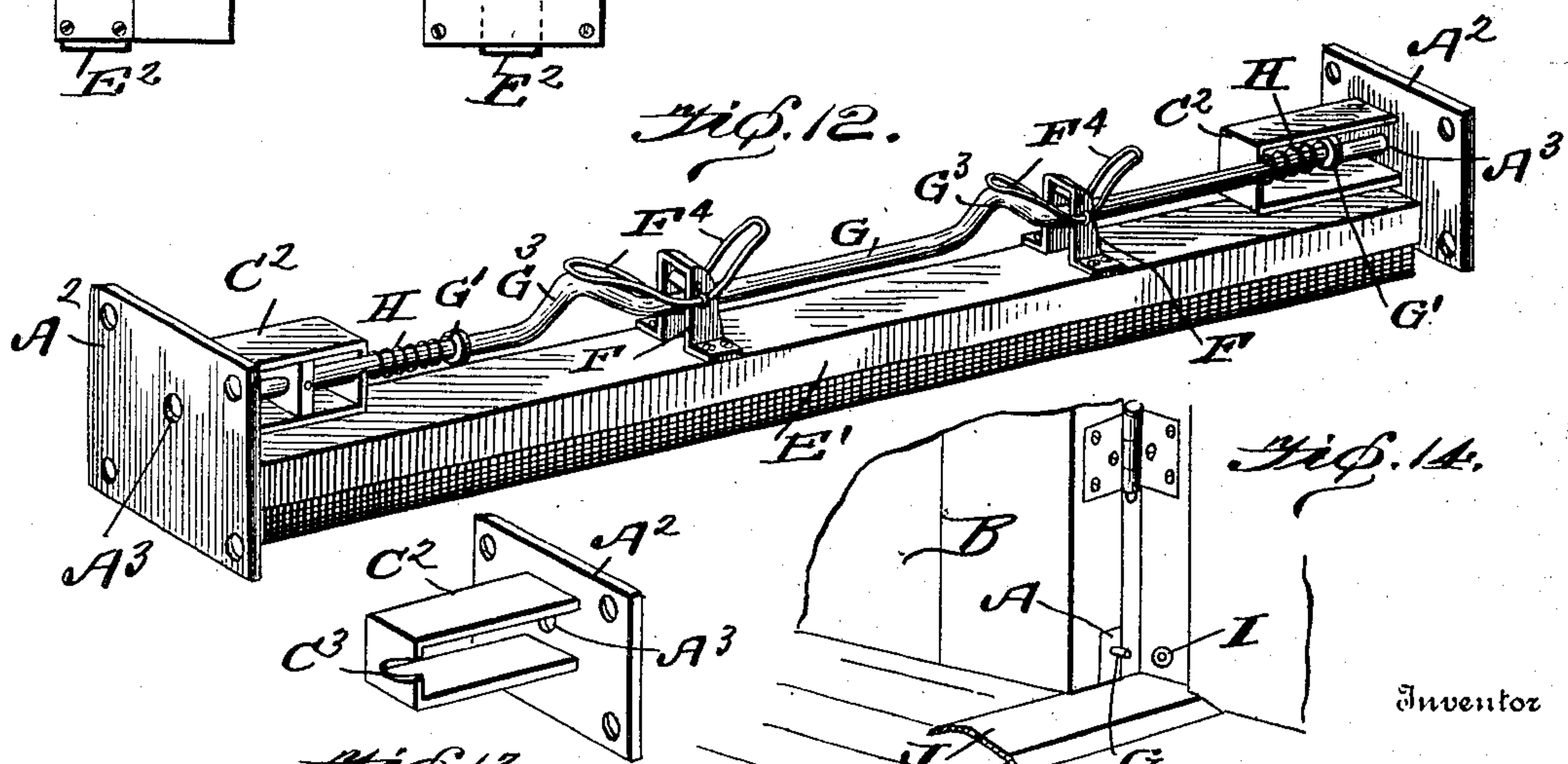
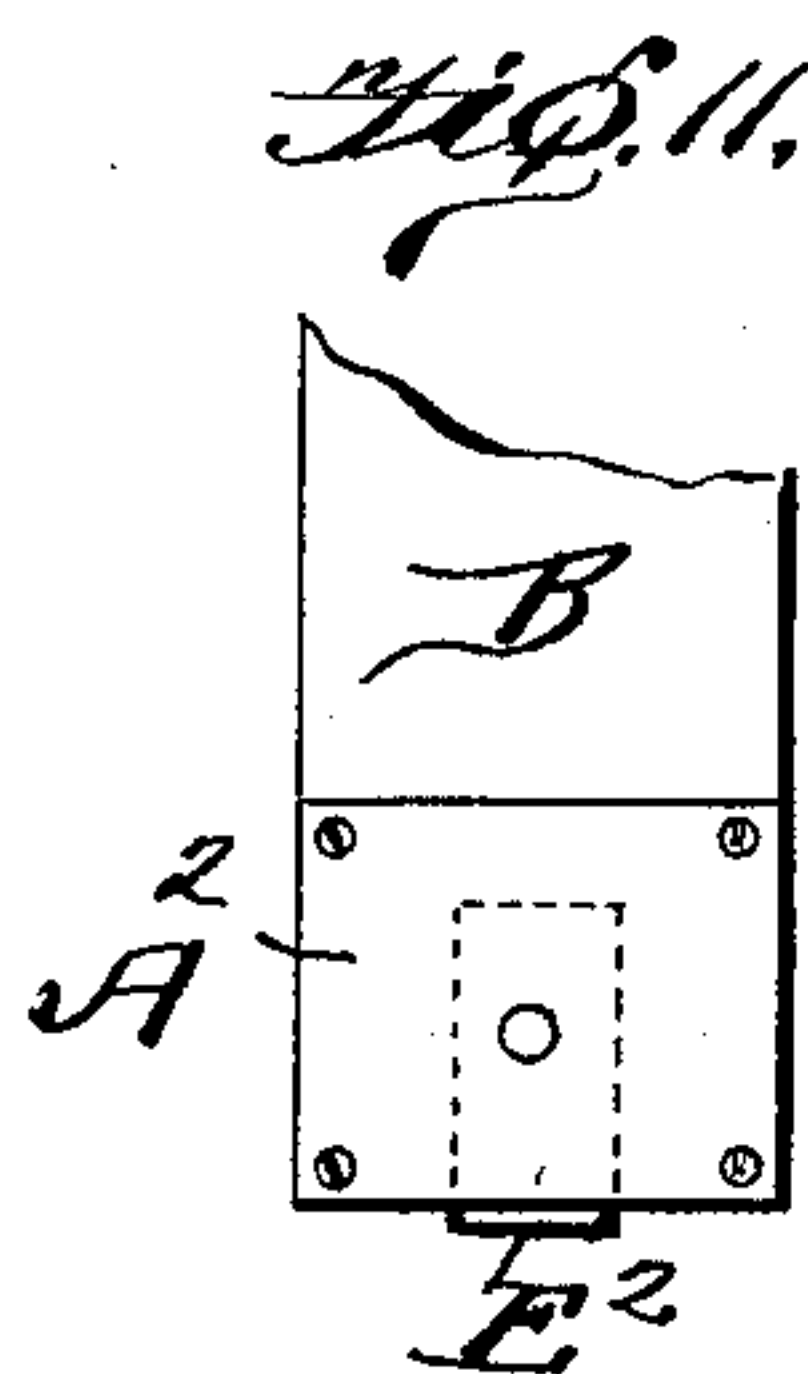
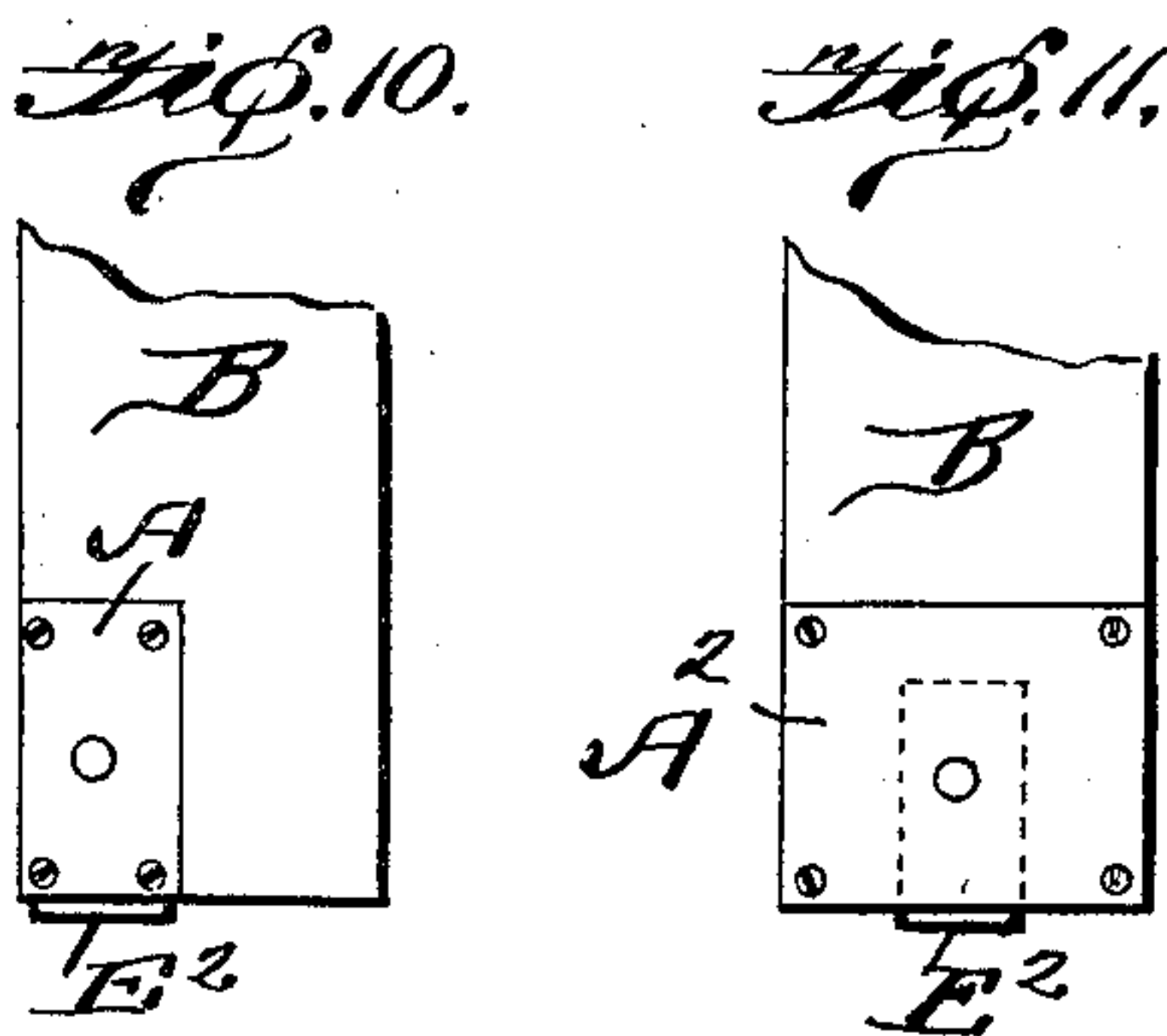
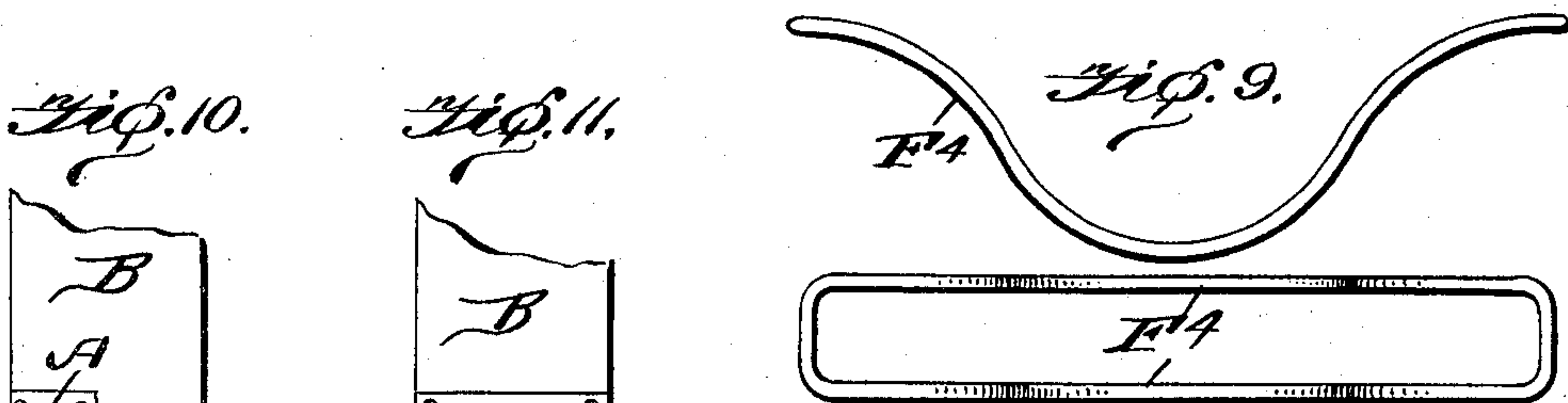
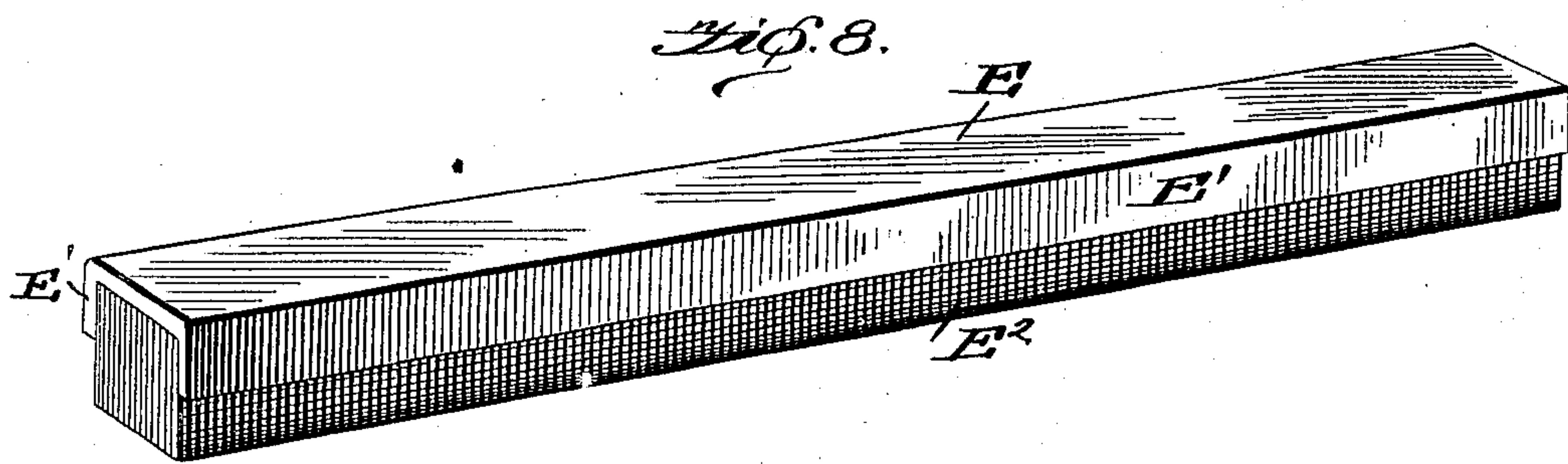
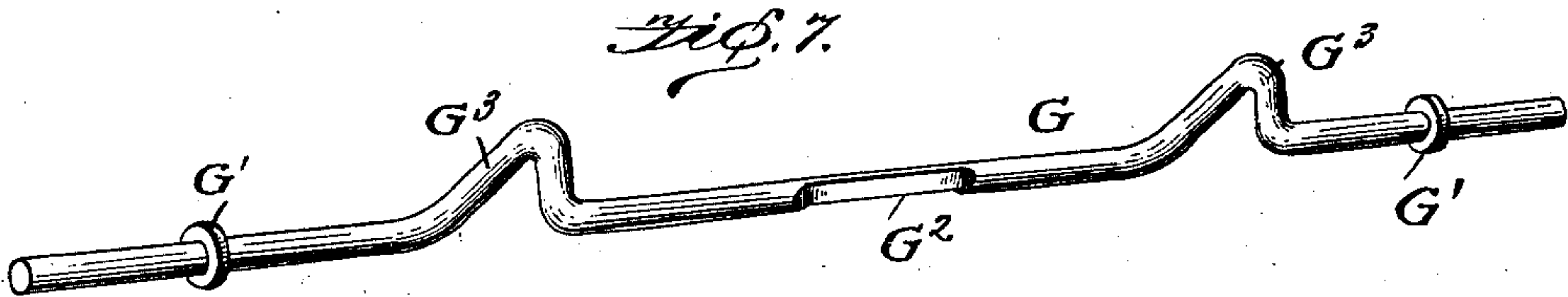
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NO MODEL.

2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH S. SENGLAR, OF ST. LOUIS, MISSOURI.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 754,819, dated March 15, 1904.

Application filed February 28, 1903. Serial No. 145,558. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. SENGLAR, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented
5 a new and useful Weather-Strip, of which the following is a specification.

My invention is an improvement in weather-strips; and the object of my invention is the construction of a strip of this character adapted
10 to be permanently secured to the lower edge of a door and to fit closely against the sill, thus preventing a draft under the door.

A further object of my invention is to provide means for raising the strip when the door
15 is opened, thereby preventing the lower surface of the strip dragging across the floor as the door swings back.

Briefly stated, my invention consists of a downwardly-open casing attached to the lower
20 end of a door, a weather-strip adapted to have vertical movement within and projecting below said casing, and means within the casing for forcing it downward when the door is closed and lifting it when the door is opened,
25 which means are fully shown in the drawings, and particularly pointed out in the specification and claims.

In the accompanying drawings, Figure 1 is a perspective view showing my weather-strip
30 attached to a door. Fig. 2 is a longitudinal section through the casing and strip, the operating-rod being in elevation. Fig. 3 is a transverse section showing the position of the parts when the door is closed. Fig. 4 is a similar sectional view showing the position assumed by the parts when the door is opened. Fig. 5 is a detail perspective view of one of the lifting-brackets. Fig. 6 is a detail view of one of the slotted angle-plates. Fig. 7 is a
40 detail perspective view of the operating-rod. Fig. 8 is a detail perspective view of the weather-strip detached from the remaining parts. Fig. 9 is a detail view showing the retaining-spring in elevation and also in plan.
45 Fig. 10 is a detail elevation showing the rear edge of a door and the end of the casing set therein. Fig. 11 is a similar view showing a slight modification, the weather-strip being positioned in a groove formed along the lower
50 edge of the door. Fig. 12 is a perspective view of the device, showing the construction

and arrangement of the parts when set in the groove. Fig. 13 is a detail perspective view showing one of the end plates of Fig. 12 detached. Fig. 14 is a perspective view showing
55 the means for actuating the operating-rod.

In the practical construction of my device I employ a casing A equal in length to the width of the door and downwardly open. As
60 shown in Fig. 2, this casing is secured to the door B in any suitable manner, the door forming the rear wall of the casing.

Vertically arranged within the casing and adjacent each end thereof are a plurality of angle-brackets C, the narrower faces being per-
65 forated and fastened by suitable bolts or screws to the case, their wider faces extending transversely and vertically across the casing and having rearwardly and downwardly inclined slots C' extending from their forward edges
70 to a point adjacent their lower edges. The top of the casing A rests on the upper edge of these brackets, and in addition to acting as a support for the casing they have other uses, which will appear hereinafter. Arranged cen-
75 trally and transversely in the casing is an angled bracket D, secured to both the door and the front wall of the casing, having a narrow straight-edged slot extending to the lower
80 edge of the bracket.

A metallic flanged strip E, adapted to slide vertically within the casing, holds between its
downwardly-extending flanges E' a weather-
85 strip E², which may be of rubber, leather, or other suitable material.

On the upper surface of the strip E are secured two stirrups F, having laterally-projecting flanges F', by which they are secured to the strip, and a cross-piece F² connects the two side members of the stirrup adjacent their
90 upper ends. On the outer faces of these side members are eyes F³, through which pass the central bow portions of the loop-springs F⁴. The construction of these springs will be readily understood, the ends of the loops be-
95 ing bent upward and their side members being secured in the eyes F³.

The stirrups F are so arranged on the strip E that when the strip is placed in position within the casing they will come one on each
100 side of the bracket D.

The ends A' of the casing A are perforated,

and running lengthwise of the casing is an operating-rod G of peculiar formation. Adjacent each end of the rod is secured a collar G', and in its central portion the cylindrical rod is reduced, being flattened on one side, as at G², and on each side of the reduced portion is bent upward and then back again into the plane of the reduced central portion. These shoulder portions G³ toward the rear end of the rod are bent at a right angle to the straight portion and then gradually inclined downwardly and forwardly. When placed in position, the rod lies above and out of contact with the strip E, its reduced portion being held in the slot of the bracket D, by which it is held against rotation, though free to move horizontally or vertically. Its end portions rest loosely in the slots C', the collars G' lying between the brackets C, which are arranged in pairs at each end of the casing. The rod passes through the stirrups and beneath the upturned ends of the loop-springs F⁴, the inclined members of the bent portions being adapted to engage the cross-pieces F². When the parts are all arranged in the position described, the ends of the springs F⁴ would bear against the upper wall of the casing and their bow portions would bear downwardly on the stirrups F, thus forcing the weather-strip downward against the threshold. To lift this strip against the tension of these retaining-springs, there are arranged adjacent each end of and around the rod coiled springs H, each bearing at one end against one of the collars G' and at its opposite end against one of the brackets C. These springs project the rod forward through the perforated end, the portions G³ engaging the cross-pieces F², and thereby lifting the stirrup and weather-strip. By perforating the casing at each end it can be used on either a right or left door and on either side, it being only necessary to reverse the rod G. A wear-plate I is placed adjacent the hinged edge of the door in a position to engage the forward projected end of the rod G when the door is closed, thus forcing the rod inward and permitting the springs F⁴ to force the weather-strip downward on the threshold J. As soon as the door is opened the springs H will project the rod G outward and lift the strip, as heretofore described.

In the description above given the device has been considered as secured to the side of the door adjacent the lower edge. It is not essential, however, that the device should be secured in this position. The lower edge of the door on one side may be broken away and the casing set in, as diagrammatically indicated in Fig. 10.

In Fig. 11 the dotted lines indicate the outline of a groove formed along the lower edge of the door, the strip E² projecting below the door. When positioned in a groove, it is obvious that the casing A, which forms the top and sides, would be unnecessary, as the walls

of the groove would be equivalent to said casing, it being only necessary to close the ends of the groove.

In Fig. 12 I have shown the device in perspective ready to be placed in the groove.

In Fig. 13 is shown detached a view of one of the end plates. The plates A² are equal in width to the thickness of the door and are set in so that their outer faces will be flush with the side edges of the door, to which they may be secured by suitable countersunk screws. Integral with and projecting inward from each plate are the rectangular brackets C², the ends of the brackets being slotted at C³, these frames being equivalent to the brackets C. The end plates are perforated at A³, the rod G working through the slots C³ and through the forward plate. The springs H bear against the collars and slotted ends of the brackets, the forward collar working within the bracket at the forward end and the rear collar being without the rear bracket, it being understood that the forward end of the rod is the end that engages the wear-plate I adjacent the hinged edge of the door.

The above description will show that a number of minor changes can be made in my invention without in any way departing from the spirit of same or changing its main parts, mode of operation, or results obtained.

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

1. A device of the kind described comprising a horizontal strip, adapted to move vertically, brackets carried by a door adjacent its lower edge and having diagonal slots formed in them transverse to the said strip, stirrups secured to said strip, a rod having shoulders thereon, said rod passing through the slots of the brackets and the stirrups and adapted to engage the stirrups and lift the said strip when actuated in a forward direction, and means for actuating said rod.

2. A device of the kind described comprising a weather-strip, stirrups having eyes on their sides secured to said strip, spring-wire loops having their ends bent upward and their side members engaging said eyes, the said spring-loops being adapted to bear downward on the stirrups, slotted brackets carried by a door adjacent its lower edge, a rod having shoulders and collars formed thereon, said rod passing through the slots of the brackets and the stirrups, coiled springs around said rod, said springs bearing at one end against a collar and at the opposite end against a bracket, respectively, and adapted to force said rod forward and bring the shoulders into engagement with the stirrups, and means for returning the rod to its normal position.

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