

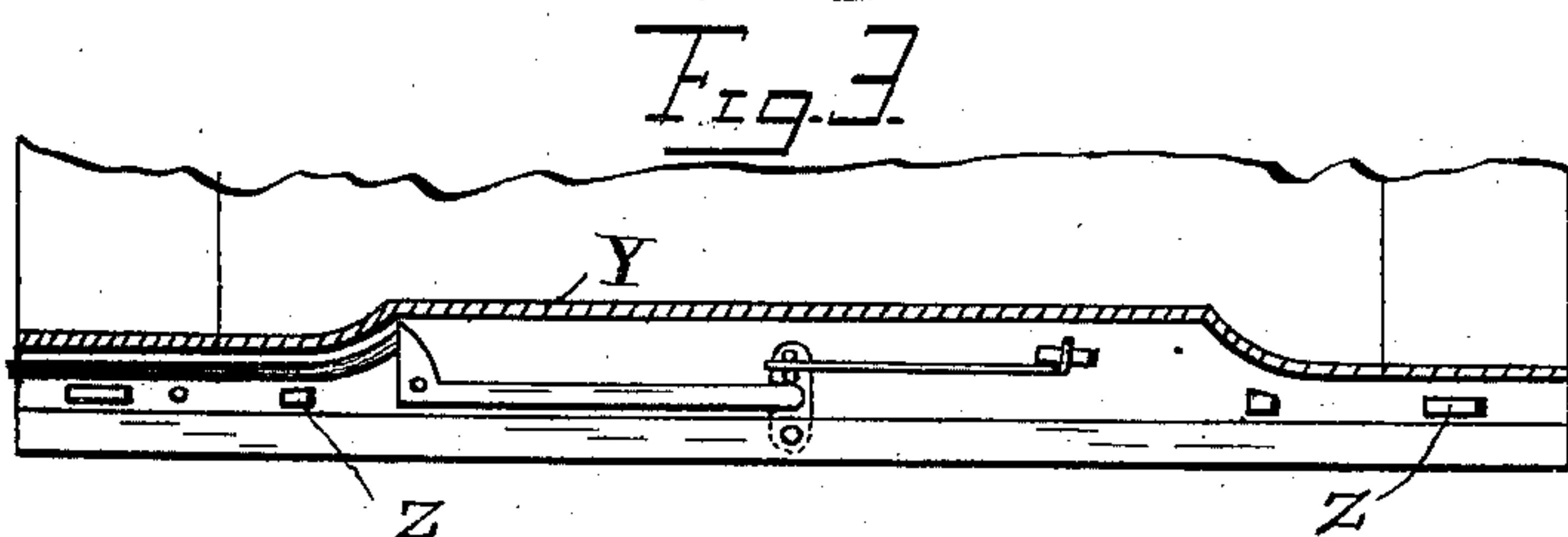
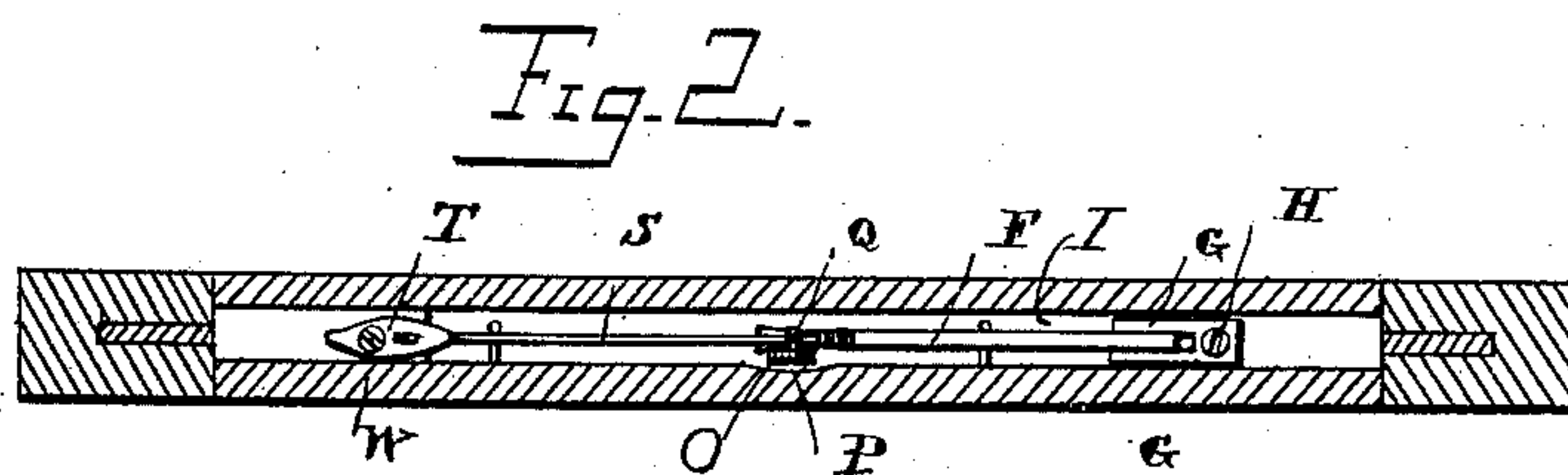
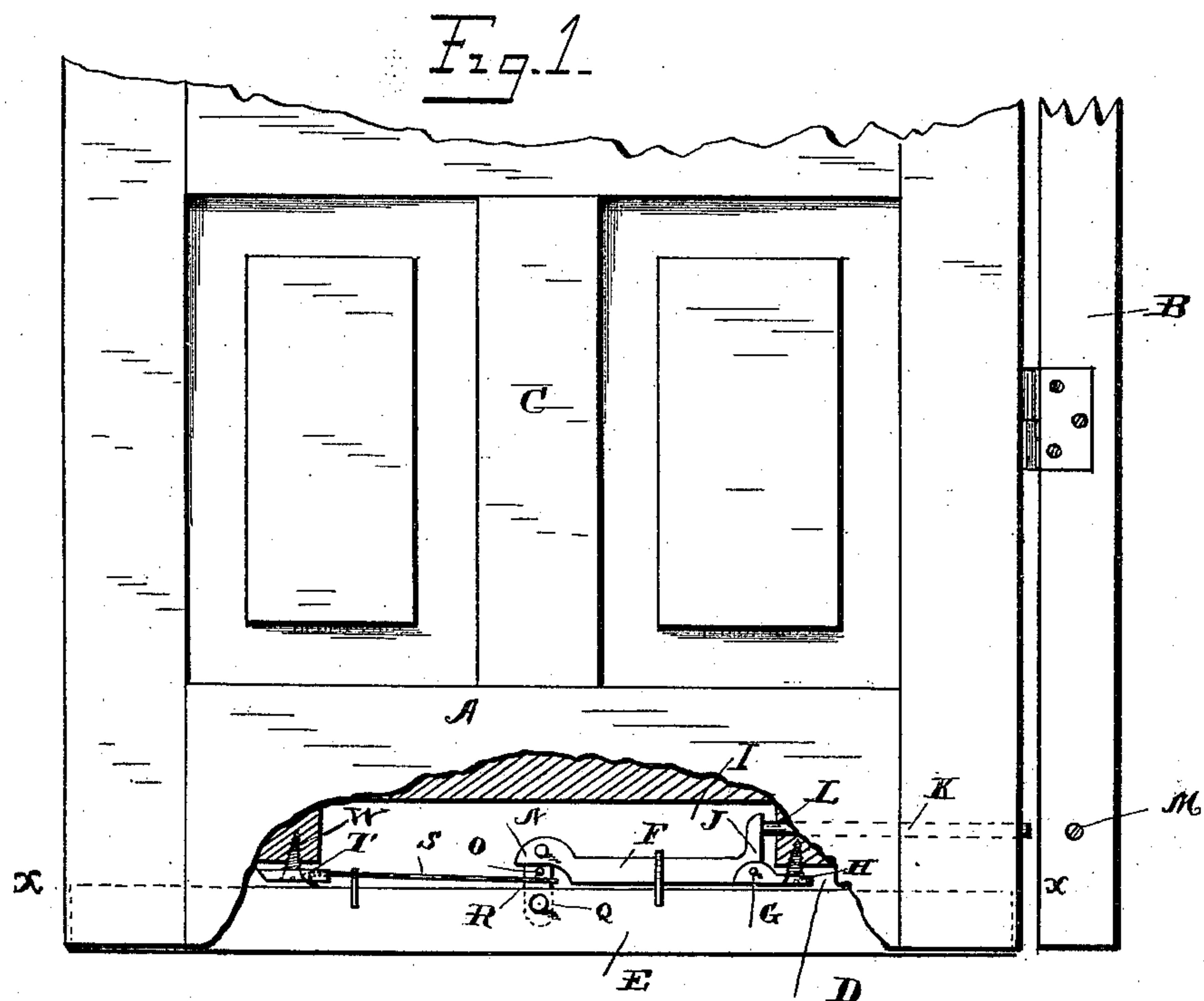
(No Model.)

2 Sheets—Sheet 1.

K. S. BLANCHARD.
ADJUSTABLE WEATHER STRIP.

No. 343,429.

Patented June 8, 1886.



WITNESSES
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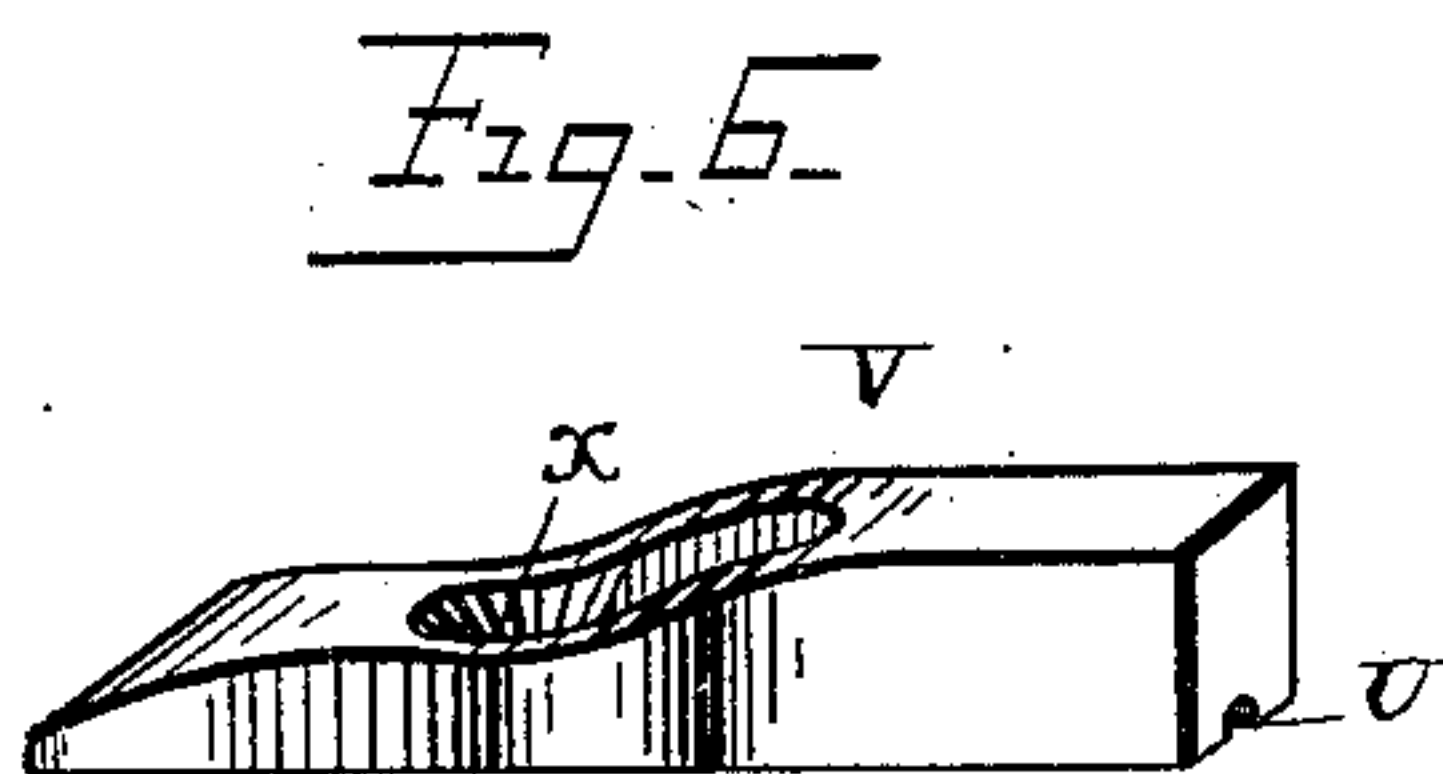
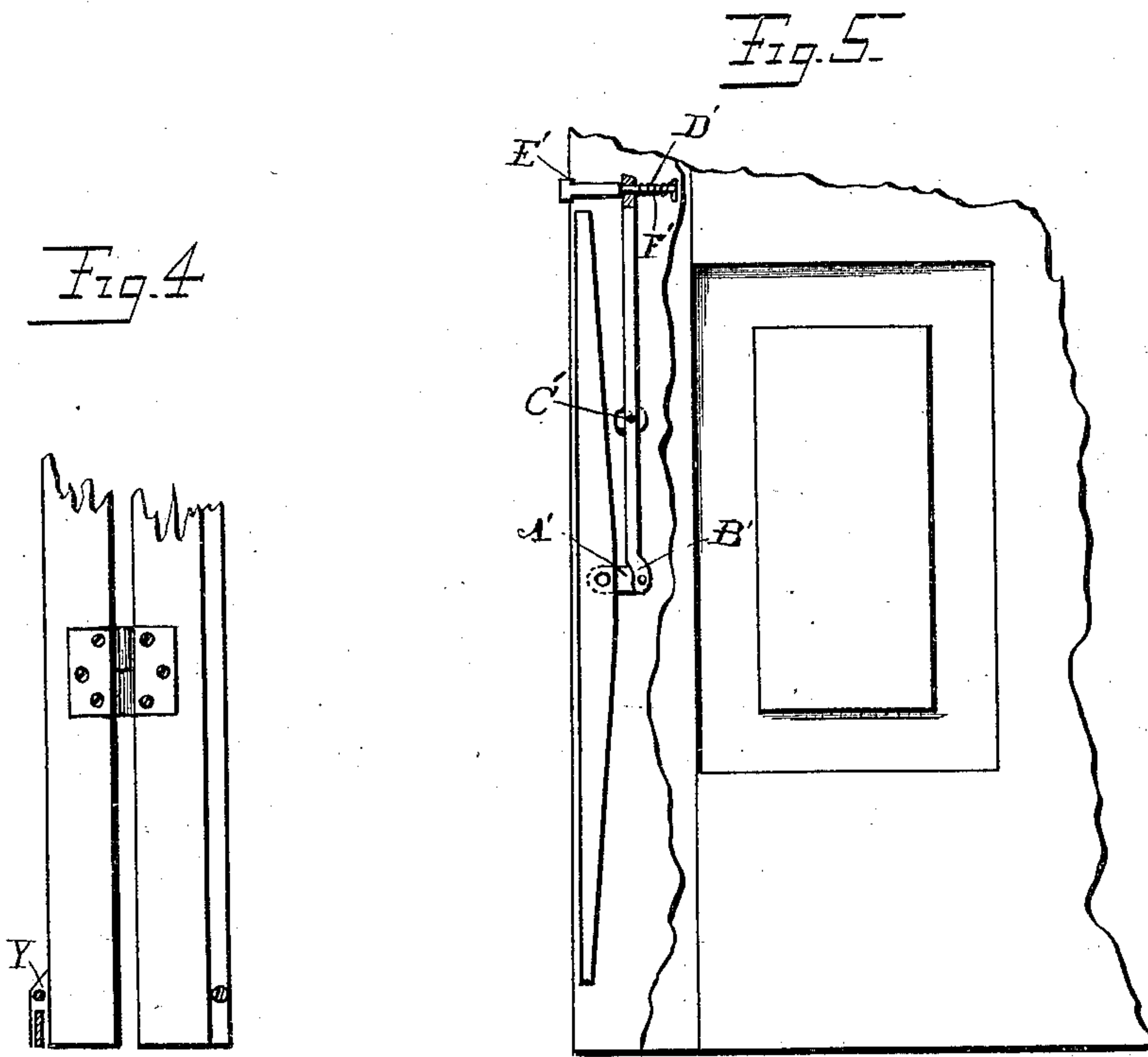
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WITNESSES
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UNITED STATES PATENT OFFICE.

KIRK S. BLANCHARD, OF CLARENDON, NEW YORK.

ADJUSTABLE WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 343,429, dated June 8, 1886.

Application filed March 29, 1886. Serial No. 196,962. (No model.)

To all whom it may concern:

Be it known that I, KIRK S. BLANCHARD, a citizen of the United States, residing at Clarendon, in the county of Orleans and State of New York, have invented certain new and useful Improvements in Adjustable Weather-Strips; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a front view of the lower portion of a door provided with my improvement, showing parts broken away. Fig. 2 is a horizontal sectional view on line *x x*, Fig. 1, looking upward. Fig. 3 is a vertical sectional view of a slight modification of the device. Fig. 4 is a vertical cross-section of the same. Fig. 5 is a front view of a door with portions broken away, showing the device applied to the side edge of a door; and Fig. 6 is a perspective detail view of the casting for holding the end of the spring.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to that class of weather-strips in which a strip is held within a longitudinal groove or recess in the lower edge of the door or in a casing along the lower edge or side edge of the door, and in which the strip may be forced out of the groove or casing when the door is closed; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the bottom rail of the door-frame. B B are the jambs, and C is the door. The lower edge of the door is formed with a longitudinal groove or recess, D, extending from the hinge-edge of the door to the latch-edge, and a strip, E, of wood, rubber, or wood having a rubber strip in its lower edge, fits within this groove or recess, sliding up and down within the same. An elbow-lever, F, is pivoted at its bend between two lips, G G, projecting from a block or plate, H, which is secured in the bottom of the groove or recess by

means of a screw or nail near one end of the groove, and the bottom of the groove is provided with a recess, I, for the accommodation of the elbow-lever. A bore, K, extends from the hinge-edge of the door to the upper end of this recess, and a bolt, L, slides within this bore, bearing with its inner end against the upwardly-projecting arm J of the elbow-lever, and projecting beyond the edge of the door with its outer end. A screw, M, having a large flat head, is secured in the door-jamb, for the purpose of forming an abutment for the projecting end of this bolt. The inwardly-projecting arm N of the elbow-lever is pivoted to a short bar, O, which slides in a vertical groove, P, in the side of the longitudinal groove, and the lower end of this bar has a projecting stud, Q, by which the strip is pivoted to the bar, the stud passing through the strip near its upper edge. The bar has still another stud, R, against which the inner free end of a spring, S, bears, serving to raise the strip, and the outer end of this spring is secured in a casting, T, near the latch-edge of the door in the groove in the lower edge of the door. This casting is formed with a groove in one side, the spring fitting in the said groove U, and the end of the spring is drawn down through a perforation, V, in the casting, extending from the groove and secured by being bent at the under side of the casting, the groove being in the upper side of the casting. The casting is secured to the bottom of the longitudinal groove by means of a screw, W, which passes through the block in a perforation, X, parallel with and connecting with the perforation for the end of the spring, so that the screw will hold the end of the spring.

If the door is too thin to admit of a groove being cut in its lower edge, the device is placed upon the outer side of the door, as shown in Figs. 3 and 4, and covered by means of a casing, Y, which is secured to the face of the door and held out from the face of the door by means of studs Z, projecting between the outer side of the casing and the face of the door.

The operative parts of the device are the same as in the formerly-described form.

In Fig. 5 is shown a modification of the device applied to the side edge of a door, and in

this form the strip is pivoted at its middle to a short bar, A', which is pivoted to the lower end of a lever, B', pivoted at its middle upon a stud, C', in the groove, and the upper end of this lever is formed with a perforation, through which passes the reduced inner end, D', of a bolt, E', which projects outside of the edge of the door, and slides in a perforation in the same, and a spring, F', is coiled around the inner reduced end of the bolt and bears against the inner end of the bore, and the inner side of the upper end of the lever, forcing it and the bolt out. It will now be seen that when the door is closed the bolt is pushed inward on coming in contact with the flat-headed screw in the jamb, and the bolt will tilt the lever, so that the inner end of the lever will force the strip outward, causing it to bear against the sill or jamb of the frame, and thus preventing draft or dampness from entering between the edges of the door and the frame. When the door is opened, the spring will bear against the lever and raise the strip, drawing it into the groove or casing.

The entire device may easily be applied to any door by simply either making the groove and its recess and bore in the edge of the door, if the door is sufficiently thick to admit of their being made, or if the door is not of a sufficient thickness the casing may be secured to the face of the door together with the parts of the device which must be inserted in the groove if the door is of sufficient thickness to have the groove formed in its edge.

The lower edge of the strip may either be plain, if the strip is made either entirely of wood or metal or entirely of rubber, or it may be made with a strip of rubber inserted into the lower edge of the pivoted strip.

The strip being pivoted at its middle will be able to rock upon its pivot, so that it may bear against the sill or jamb, if the said sill or jamb is not parallel with the edge of the door, and the strip may likewise yield to any unevenness in the sill or jamb.

I am aware that heretofore doors have been provided with automatically-adjustable weather-strips, which, with their actuating mechanism, are housed in a groove in the bottom of

a door, said mechanism consisting of an elbow-lever connected to the strip and to a rod protruding beyond the edge of the door, a spring being used to retract said strip; and I do not claim such construction, broadly; but

I claim and desire to secure by Letters Patent of the United States—

1. The combination of a door having a longitudinal groove in its lower edge, formed with an upwardly-extending recess and with a vertical groove at the middle of one side, and having a horizontal bore extending from the hinge-edge to the upwardly-extending recess, a strip extending the entire length of the groove and sliding in the same, a flat bar sliding in the vertical groove and having three studs upon its face, the lower one of which is inserted into the strip at its middle, a plate secured in the bottom of the groove of the door and having two perforated ears, an elbow-lever pivoted upon a pin between said ears and having its inner end pivoted to the upper stud of the flat bar, and having its upper arm projecting in the recess of the groove, a bolt sliding in the horizontal bore in the door and bearing with its inner end against the upwardly-projecting arm of the elbow-lever, and a spring bearing against the under side of the central stud of the flat bar with its free end and secured in a casting in the bottom of the groove near the latch end of the same, as and for the purpose shown and set forth.

2. The combination of the casting having the groove in one face and two perforations connecting with each other and extending through the casting, with the spring having its inner portion resting in the groove and having its end bent and inserted through the perforation and bent at the other side, and the screw passing through the perforation bearing against the bent end of the spring, as and for the purpose shown and set forth.

In testimony whereof I affix my signature in presence of two witnesses.

K. S. BLANCHARD.

Witnesses:

W. T. PETTENGILL,
F. L. WEST.