

No. 679,497.

Patented July 30, 1901.

A. CRAIG.
WEATHER STRIP.

(Application filed Oct. 11, 1900.)

(No Model.)

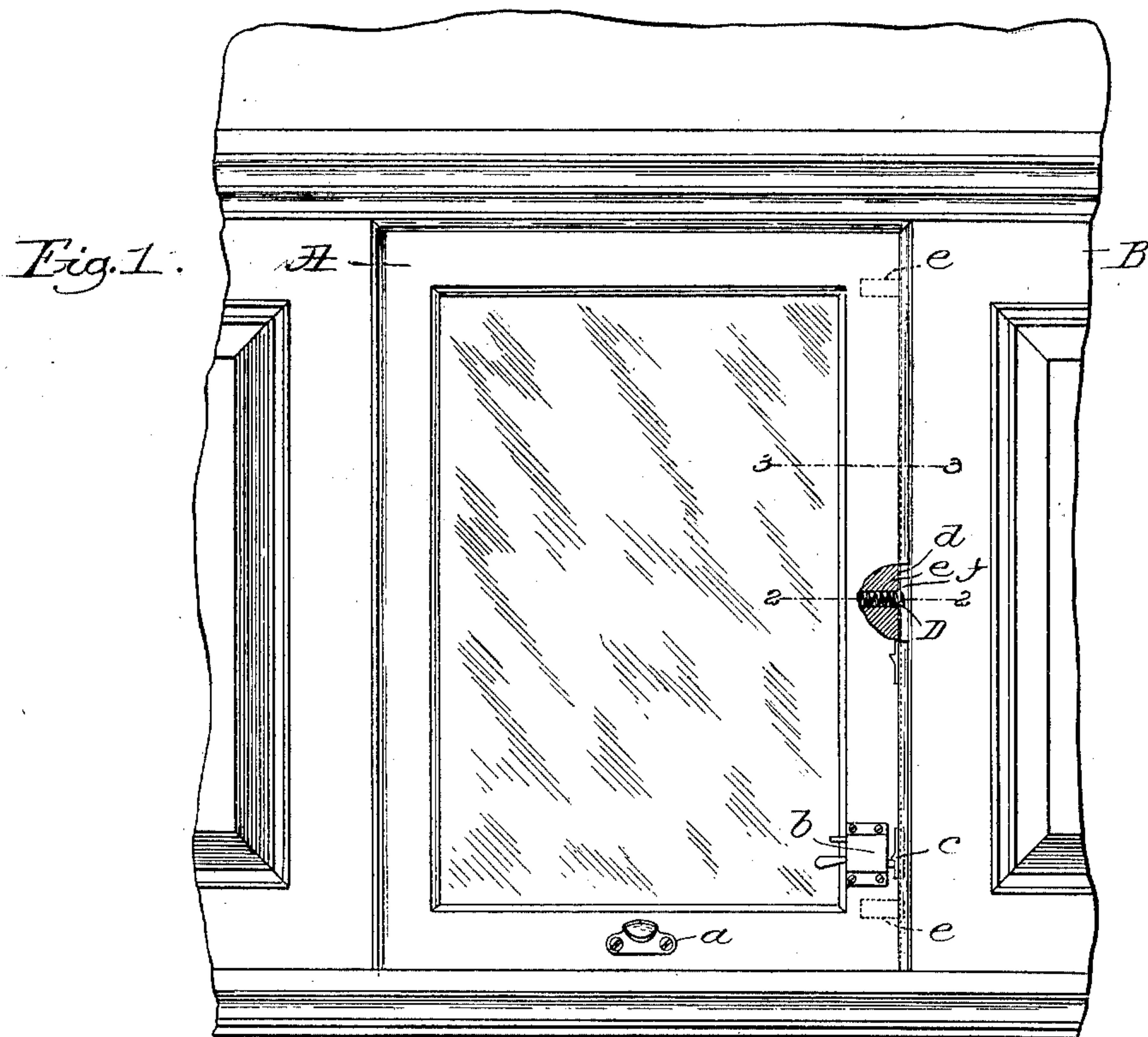


Fig. 2.

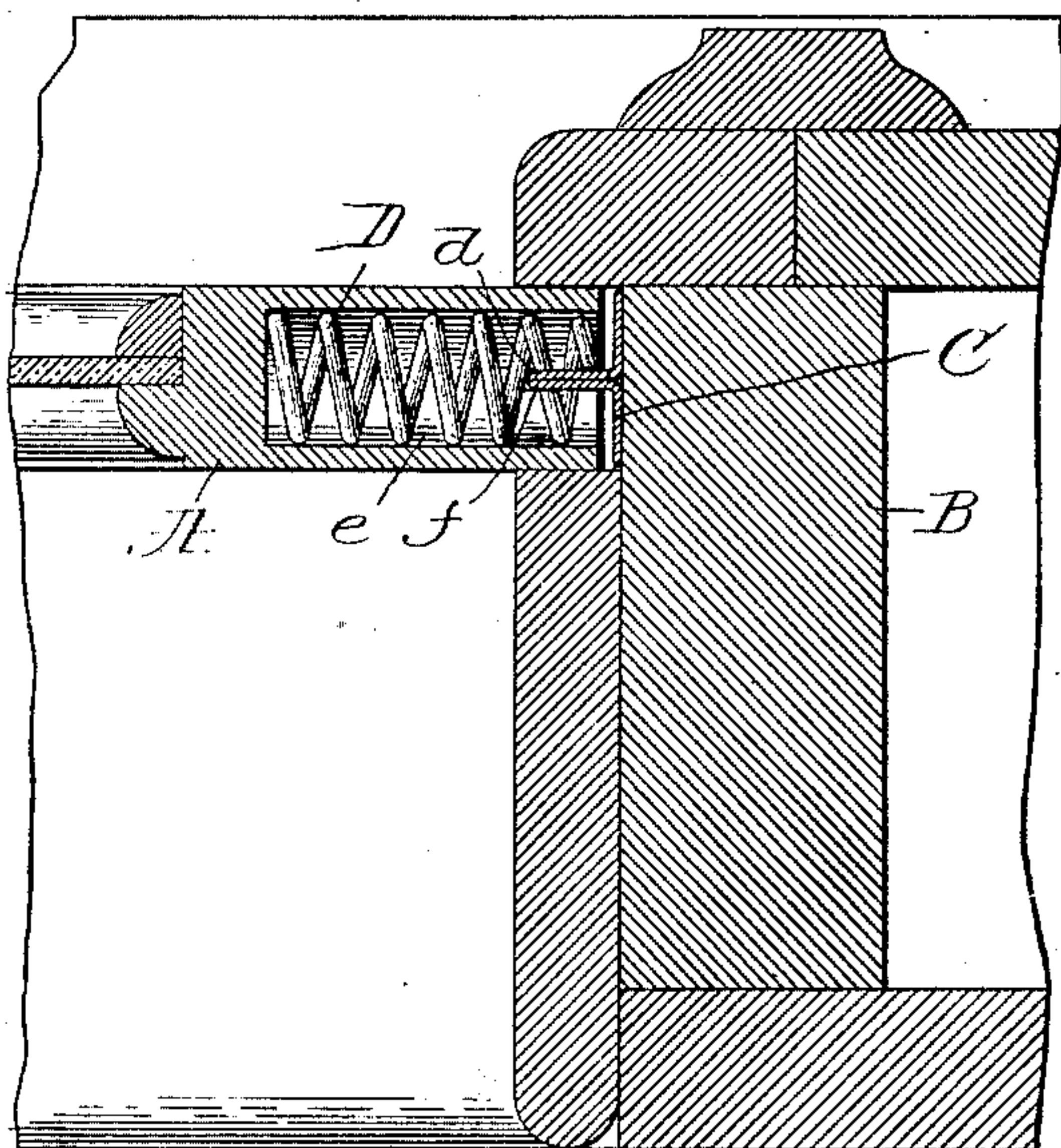


Fig. 3.

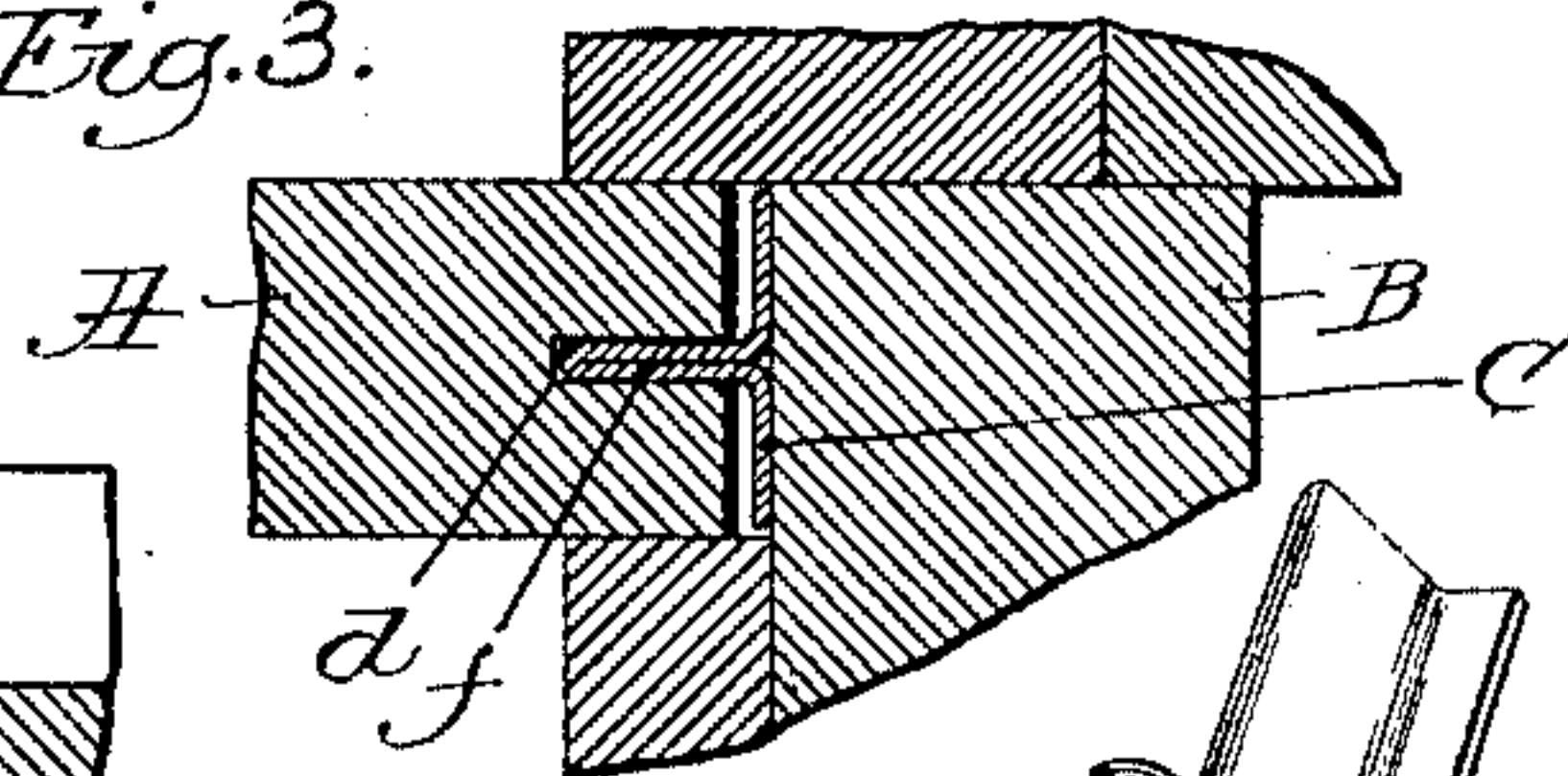
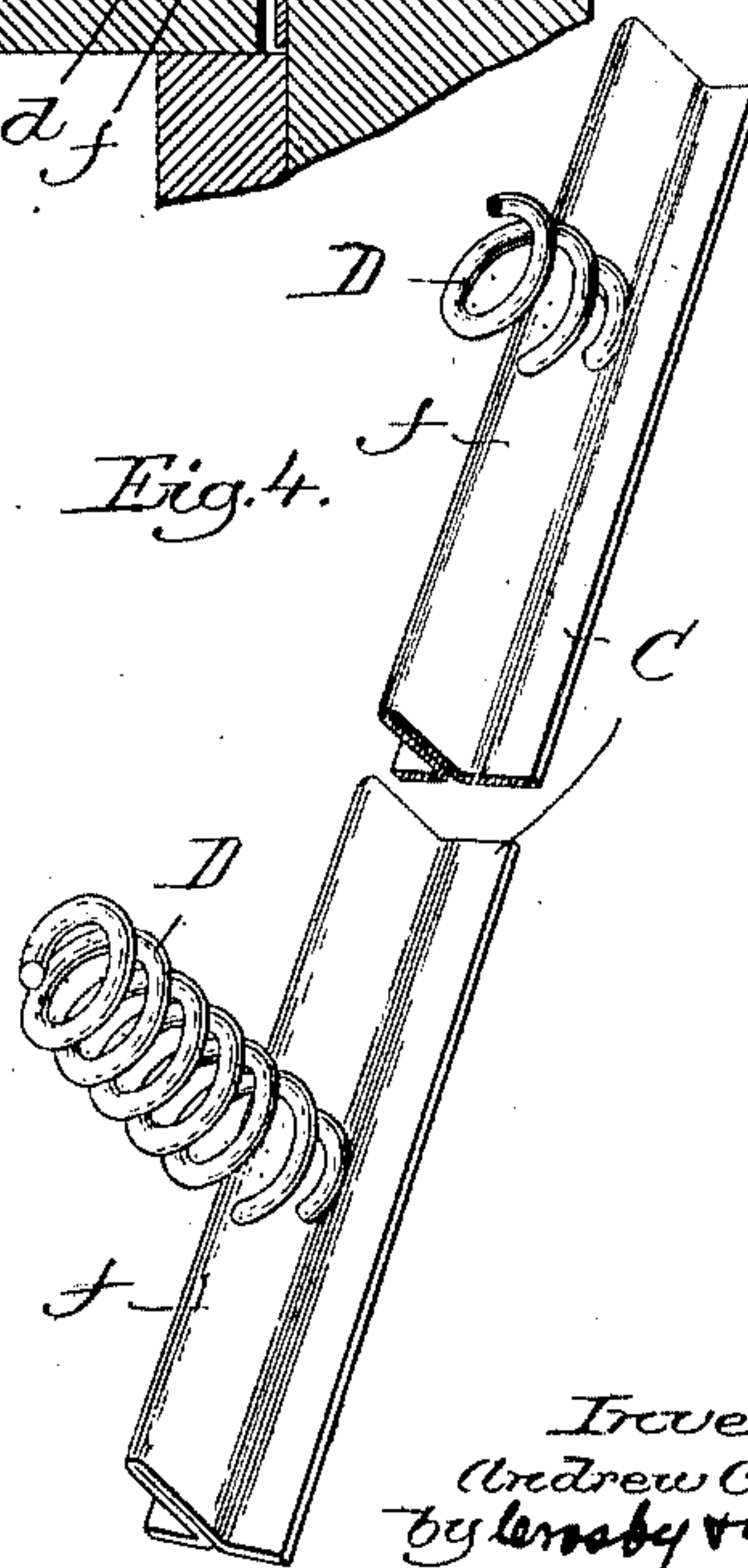


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

ANDREW CRAIG, OF LAWRENCE, MASSACHUSETTS.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 679,497, dated July 30, 1901.

Application filed October 11, 1900. Serial No. 32,701. (No model.)

To all whom it may concern:

Be it known that I, ANDREW CRAIG, a citizen of the United States, and a resident of Lawrence, county of Essex, State of Massachusetts, have invented an Improvement in Weather-Strips, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object the production of a novel weather-strip adapted more especially to be applied to sashes used in connection with railway-cars—sashes which are ordinarily thinner than the ordinary sash
15 used in house-building.

My improved weather-strip is composed of metal in the shape of a T-bar, a portion of the bar acting against the inner side of the window-frame, the rib or stem of the T entering a narrow groove cut into the sash at its edges throughout its length, the rib substantially fitting the groove in the sash, thereby excluding the passage of air into or from the car through the crevices between the sash
25 and the sash-frame.

The strip has connected with it a series of springs which may be inserted or removed with the strip, said springs being firmly secured to and so as to form a part of the strip.

30 This invention is an improvement on the strip described in my application, Serial No. 2,242, filed on the 22d day of January, 1900. In that application the strip has connected with the stem thereof a series of sockets, represented as formed by casting, the strip being
35 a cast strip, and when the strip is removed from the sash, as it frequently has to be, especially when the car-windows are being re-varnished, the springs are liable to be lost, thus making the strip not only expensive, but
40 objectionable.

Herein I have represented the strip as formed of sheet metal bent into T shape, but instead I may use a T-shaped rolled or
45 wrought-metal bar, and to the stem of this strip I have attached permanently the springs, so that under no conditions can they become detached or lost.

Figure 1 represents in elevation a window-sash in place, the sash being broken out to show my improved strip. Fig. 2 is a section

thereof in the line 2 2. Fig. 3 is a section in the line 3 3, and Fig. 4 shows part of the strip detached and broken away to save space on the drawings.

Referring to the drawings, A represents a sash such as used in railway-cars, and B part of the car-body, in which the sash is free to slide. The sash is shown as provided with a lift *a* and a lock *b*, of usual construction, the
55 bolt of the lock engaging a suitable stop, as *c*. One edge of the sash—viz., that edge carrying the lock—is grooved longitudinally throughout its length, as at *d*, and at suitable intervals said edge is provided with a series of
60 pockets *e*.

The weather-strip C is represented as composed of a strip of metal bent into T shape; but instead of bending metal to form the strip I may employ a strip rolled from steel
70 or other ductile metal. The stem *f* of the strip is made as thin and narrow as possible to substantially fit the thin groove *d*, it being necessary in a practical strip for a car-window to employ a thin stem because of the fact
75 that the car-window sash is and must be as thin as possible consistent with the necessary strength and be of hard wood to avoid great weight. The stem has permanently attached to and forming part of it a series
80 of springs D, represented herein as coiled springs, and for the best results in order to unite the springs and strip so that the springs will always occupy the same position with relation to the strip—i. e., stand with their longitudinal axes substantially at right angles
85 to the face of the strip acting against the window-frame—I prefer that a part of the stem enter the spring.

I have herein represented the springs connected with the stem of the strip in one of the best forms now known to me, and I have provided the stem with a hole or holes, into which I have entered one end of the spring, and that the spring may be held properly and
90 not strained by passing its end through the stem I have made the holes in the stem at different distances from its edge. The stem and its connected springs may be readily removed from the groove and bores in the edge
100 of the sash whenever the sash is removed from the frame, and by reason of the springs

being permanently connected with the strip there is no possibility of the springs becoming detached when the car is being repaired or varnished, so the attachment of the springs to the strip becomes a matter of very considerable importance to the railroads using the weather-strip, as otherwise they would be called upon frequently to replace lost springs, which would be a matter of inconvenience and prohibit the adoption of the strip.

This invention is not limited in all instances to the exact shape of the spring nor to the precise way represented of connecting the spring with the shank of the strip.

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

1. A readily attachable and detachable weather-strip, comprising a T-shaped bar, and a series of springs having the coil thereof adjacent said bar fixedly and permanently secured to the stem of said bar, the said springs being otherwise free.

2. A weather-strip composed of a T-shaped bar, and a series of permanently-connected spiral springs, the stem of the bar entering the end of the spring.

3. A weather-strip composed of a T-shaped

bar, provided with a series of openings to receive and hold a coil of the spring.

4. A weather-strip composed of a T-shaped bar having a series of holes arranged in pairs, one hole of each bar being farther from the edge of the stem than the other hole, and a series of springs entering said holes to thereby permanently attach the springs to the strip.

5. A sash-frame, a sash having one of its side edges provided with a narrow longitudinal groove, said groove being provided with a series of pockets at right angles to the length of the sash; combined with a T-shaped weather-strip having connected with the stem thereof permanently a series of spiral springs, said springs entering the pockets in the edge of the sash, the stem of the strip entering the groove in the edge of the sash, the strip applied to the sash preventing the passage of air between the sash and frame, the springs being removable from the sash with the strip.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANDREW CRAIG.

Witnesses:

GEO. W. GREGORY,
MABEL PARTELOW.