

No. 656,551.

Patented Aug. 21, 1900.

J. P. KNOBELOCH.
STAIR CARPET RETAINER.

(Application filed Mar. 10, 1900.)

(No Model.)

2 Sheets—Sheet 1.

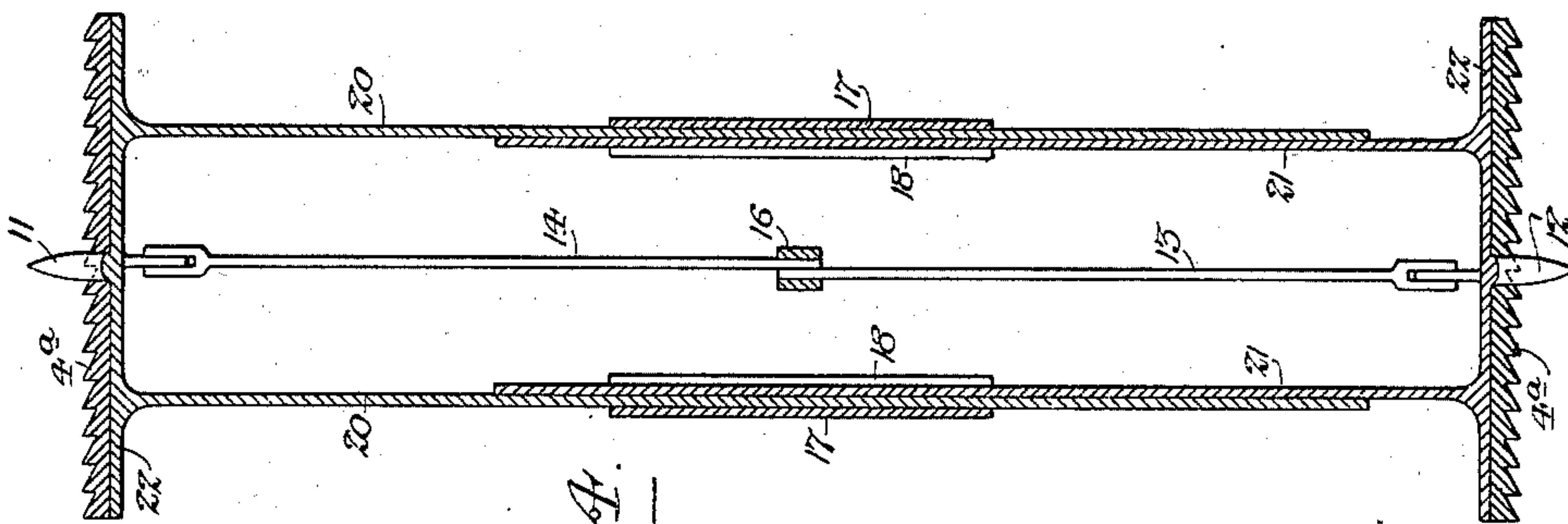


Fig. 4.

Fig. 6.

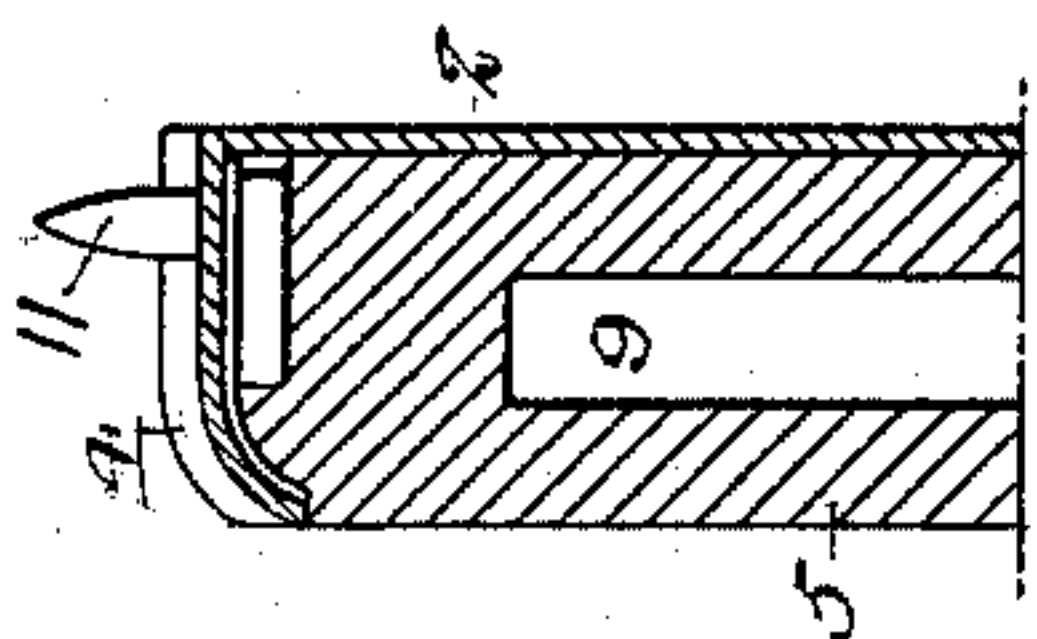


Fig. 5.

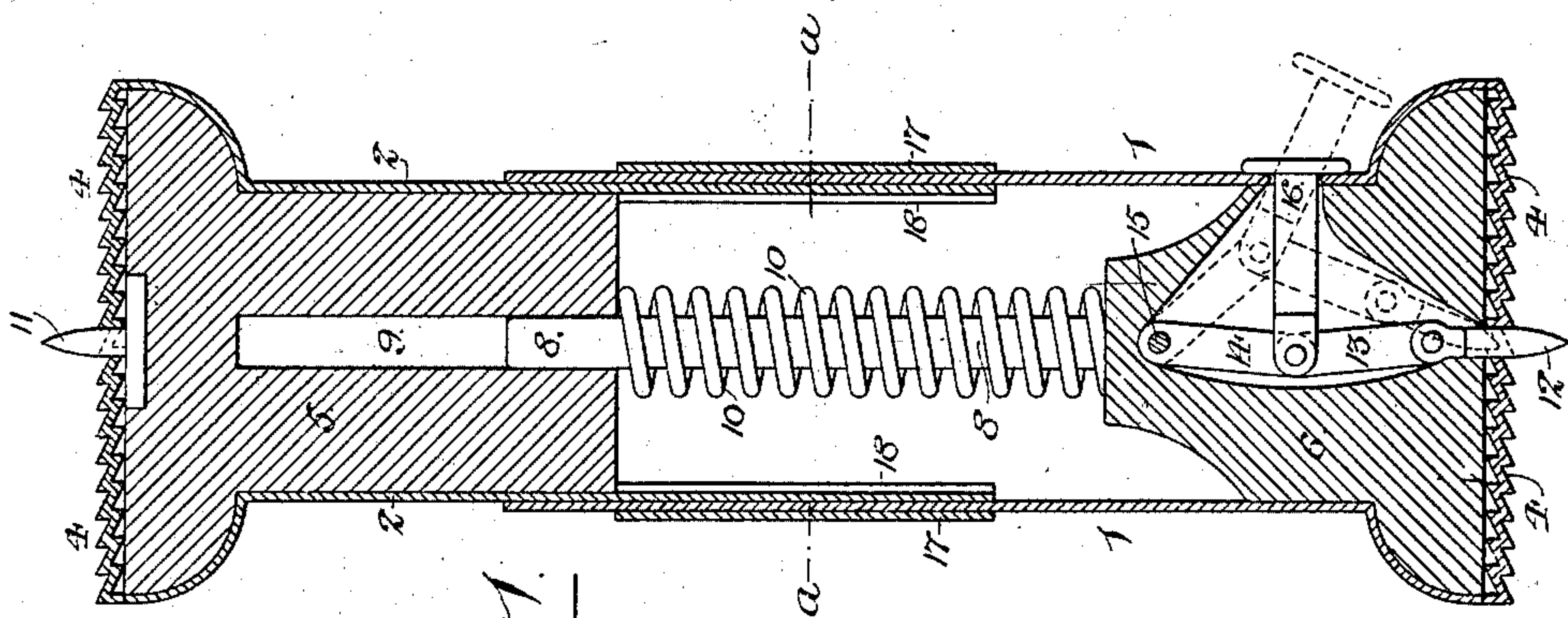
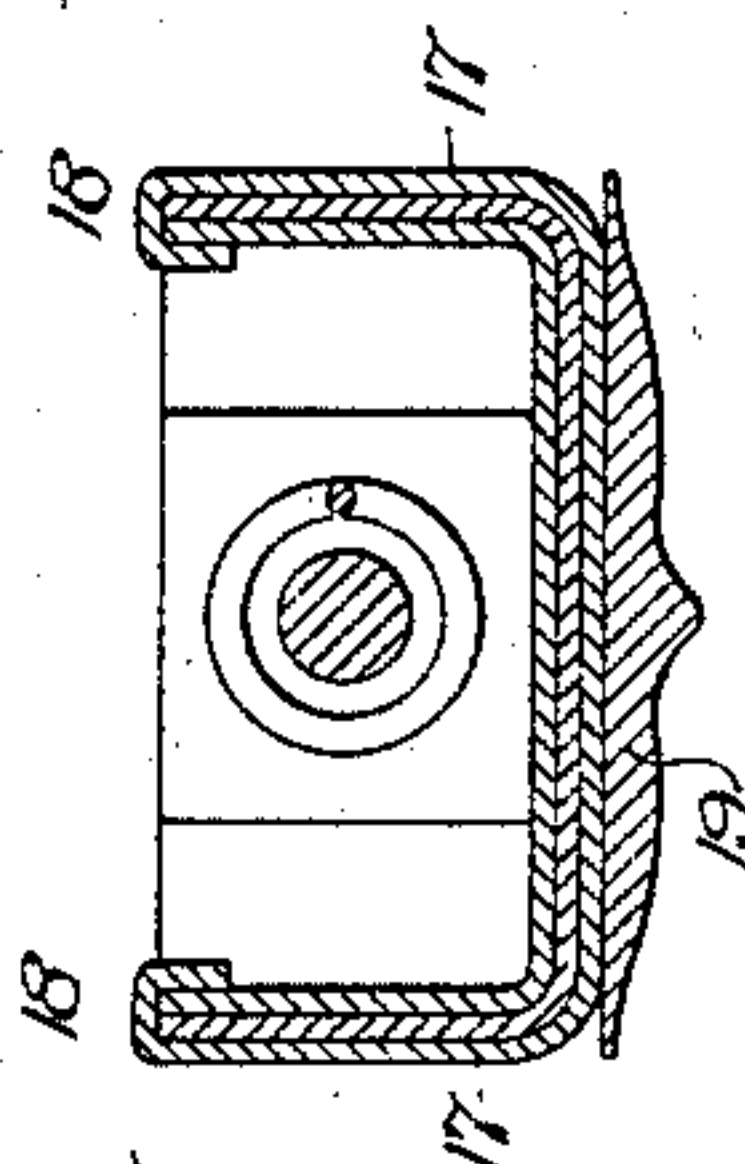


Fig. 1.

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No. 656,551.

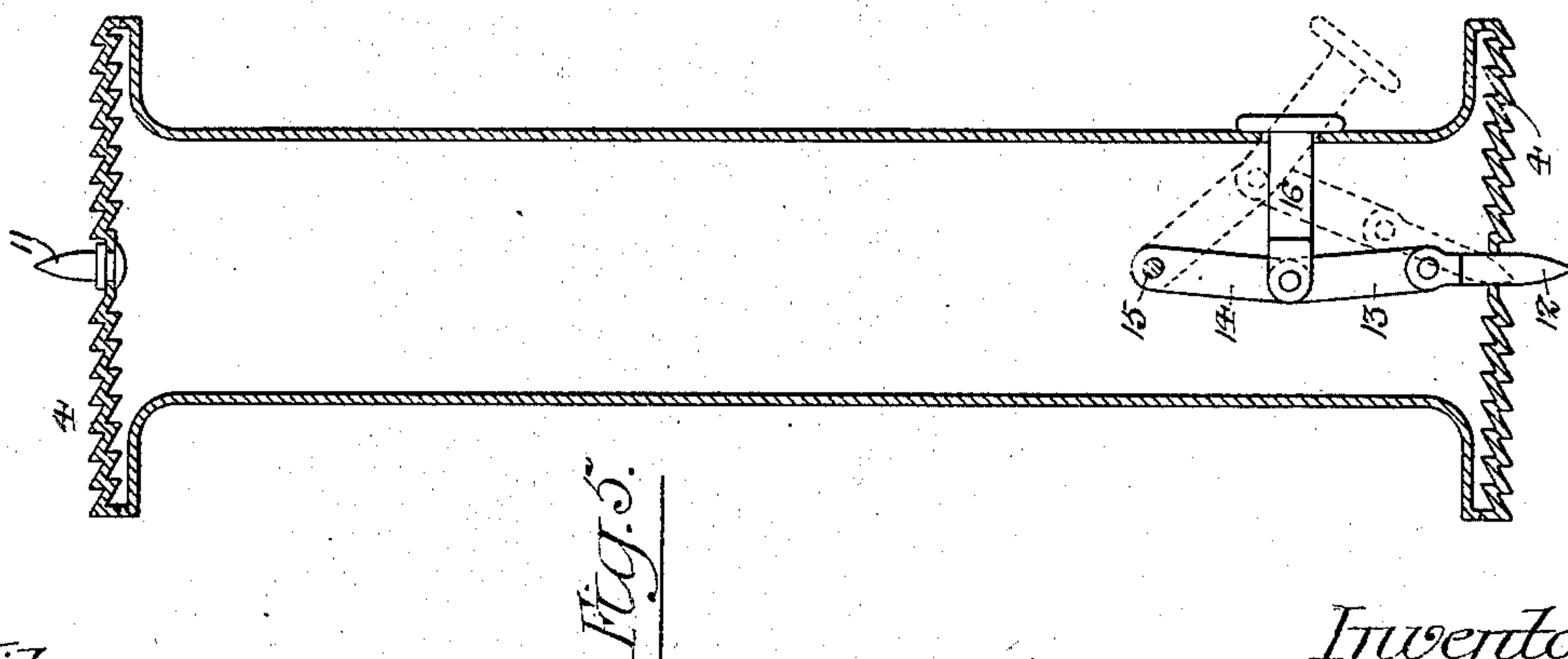
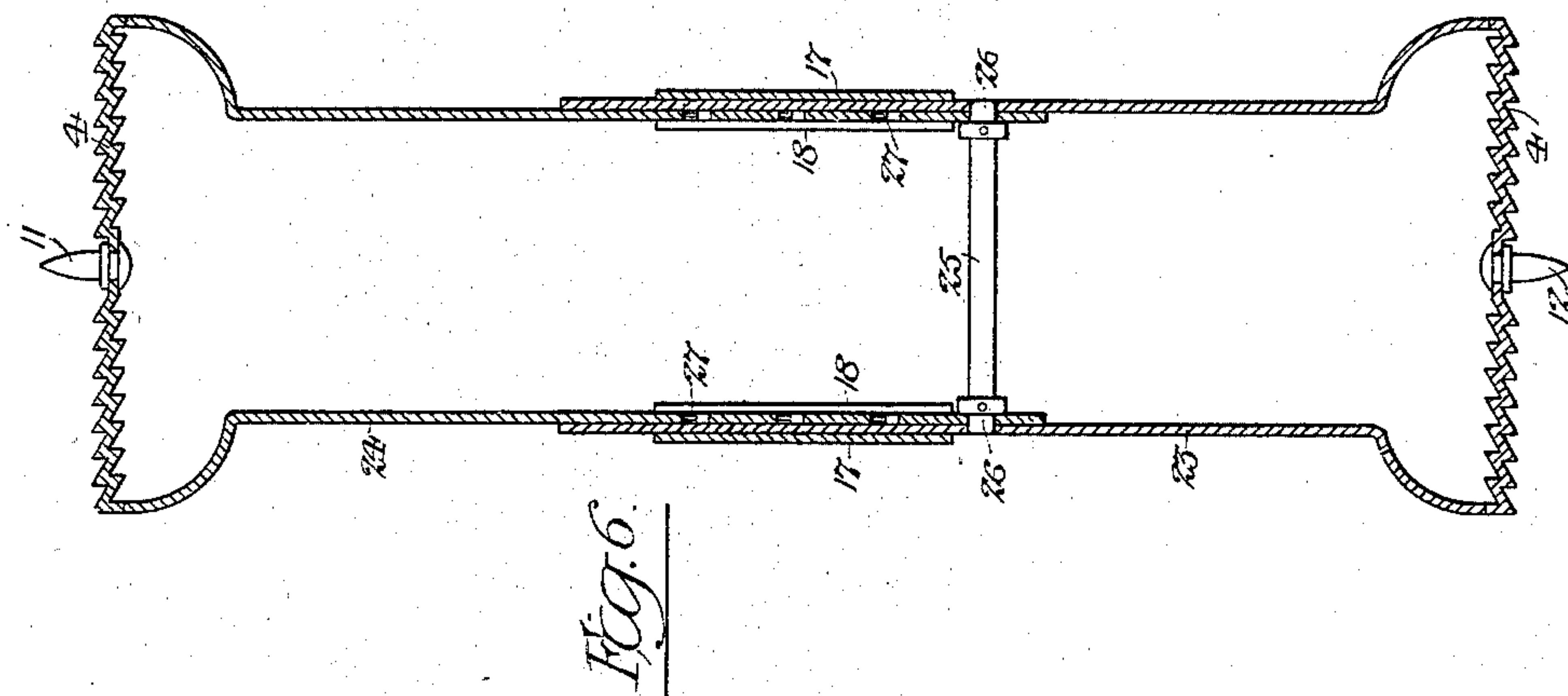
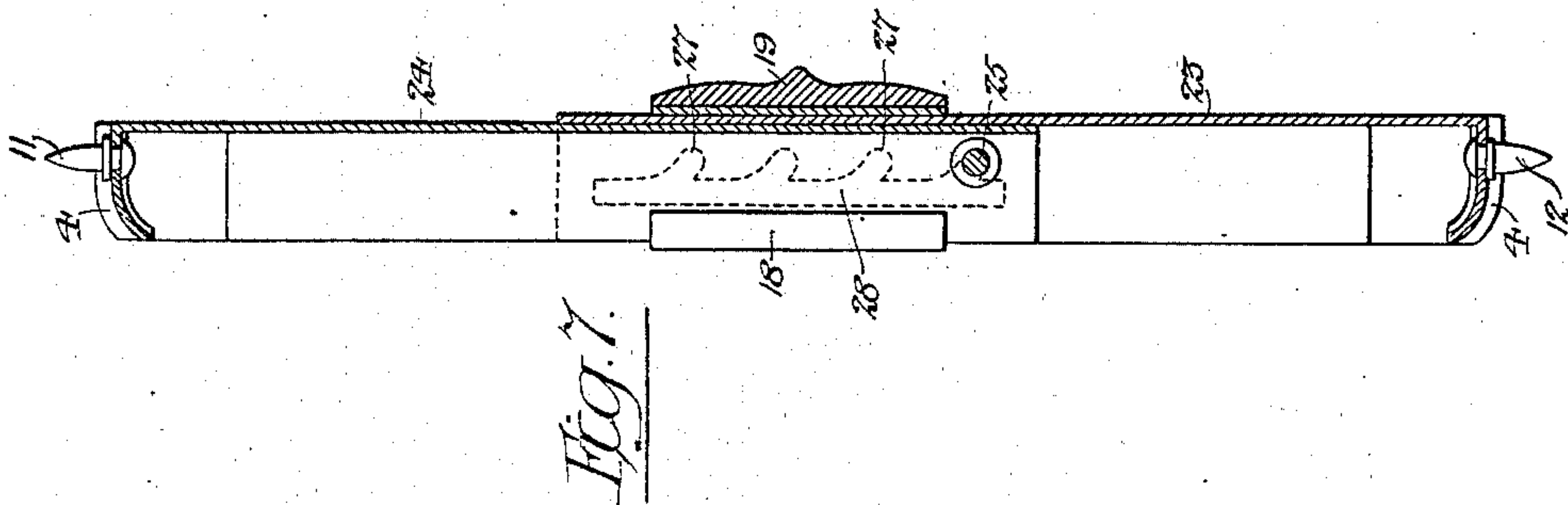
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

JOHN P. KNOBELOCH, OF PHILADELPHIA, PENNSYLVANIA.

STAIR-CARPET RETAINER.

SPECIFICATION forming part of Letters Patent No. 656,551, dated August 21, 1900.

Application filed March 10, 1900. Serial No. 8,151. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. KNOBELOCH, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Stair-Carpet Retainers, of which the following is a specification.

The object of my invention is to so construct a stair-carpet fastener that the same will be securely held in position on the stairs, will confine the carpet closely thereto, and will keep said carpet tightly stretched laterally, the retainer, furthermore, being readily applied or removed and expanded or contracted.

In the accompanying drawings, Figure 1 is a vertical sectional view of a stair-carpet fastener constructed in accordance with my invention. Fig. 2 is a transverse section of the upper part of the same. Fig. 3 is a section on the line *a a*, Fig. 1, and Figs. 4, 5, 6, and 7 are views illustrating other forms of stair-carpet fastener in which certain features of my invention are embodied.

The fastener shown in Figs. 1, 2, and 3 comprises a pair of U-shaped sheet-metal bars 1 and 2, the bar 2 being somewhat less in cross-sectional dimensions than the bar 1 and sliding telescopically within the same. Into the lower end of the bar 1 is inserted a plug 5, preferably of wood, and the upper end of the bar 2 also has inserted in it a plug 6 of like material, the outer portion of each plug and of the bar containing it being by preference enlarged or expanded laterally, so as to provide increased surface for bearing upon the carpet and each of these bearing-surfaces being provided with teeth preferably facing toward one side of the plug, as shown in Fig. 1. The teeth are formed upon transversely-bent portions 4 of the bars 1 and 2, which cover the plugs, (see Fig. 2,) or the teeth may be formed upon metal or rubber plates and secured to the plugs by means of nails, screws, or other fastenings or by any suitable cement, or, if desired, the teeth may be formed directly upon the plugs. The lower plug 5 has an upwardly-projecting central rod or stem 8, which is guided in a central opening 9 in the plug 6, and between the two plugs and surrounding the stem 8 is a coiled spring 10, the tendency of which is to

force the plugs 5 and 6 apart from each other. The upper plug 6 has a centrally-projecting pointed spur or pin 11 and the lower plug has a similarly-pointed spur or pin 12, which, however, can be projected and retracted by means of toggle mechanism contained in a recess in said plug 5 and comprising a pair of jointed arms 13 and 14, pivoted together where they meet, the arm 13 being hung to the stud 12 and the arm 14 being hung to a pin 15 in the plug 5. A rod 16, extending laterally beyond the bar 1 and provided with a suitable knob or head at the outer end, is connected to the jointed ends of the arms 13 and 14, so that when said rod is pushed inwardly the toggle will be straightened and the pin 12 will be projected, as shown by full lines in Fig. 1, while when the rod is pulled outwardly the toggle will be bent and the pin 12 retracted, as shown by dotted lines in said figure. When the holder is applied to the stairs, it is pressed inwardly toward the riser of the step at a point adjacent to the edge of the carpet and while the two sections of the retainer are held in the retracted position, the teeth facing outwardly or toward the edge of the carpet. When the carpet has been pressed snugly against the riser of the step, the sections of the retainer are permitted to expand, thus forcing the pin 11 into the projecting portion of the upper tread and the pin 12 into the lower tread. The toothed upper and lower faces of the retainer at the same time firmly press the carpet against these portions of the stairs. The pins 11 and 12 prevent either lateral or longitudinal displacement of the retainer, and the teeth take such a hold upon the carpet as to prevent any pulling inward of the same laterally, such as might take place if the pins alone were relied upon to prevent such inward movement. By this means the objectionable rising of the central portion of the carpet due to looseness of the same in a lateral direction is effectually overcome. The release of the retainer is facilitated by first retracting the pin 12, although this retractible pin is not absolutely necessary to this form of retainer, and fixed pins may be carried by both plugs, if desired. A slide 17 embraces the overlapping portions of the bars 1 and 2,

the opposite sides of this slide terminating in bent clips 18, which overlap said bars, as shown in Fig. 3, this slide serving to keep the bars 1 and 2 in line, and having on the face an appropriate ornament 19. This slide can be adjusted vertically on the bars 1 and 2, so as to occupy a central position thereon irrespective of the extent of expansion or contraction of the retainer, whereby the symmetrical appearance of the latter will be preserved.

In that form of retainer which I have shown in Fig. 4 there are employed two U-shaped sheet-metal bars 20 and 21, sliding telescopically one within the other after the manner of the bars 1 and 2, each of these bars having a laterally-projecting end plate 22, with plate 4^a secured thereto, and having laterally-facing teeth, each end plate also having a central projecting pointed spur or pin 11 or 12. The projection and retraction of the telescopic sections of this retainer are effected by toggle mechanism of substantially the same character as that employed for effecting the retraction and projection of the lower spur or pin 12 of the retainer shown in Fig. 1, and a slide 17 18 19 is employed in connection therewith, as with the retainers shown in Fig. 1.

In Fig. 5 I have shown a retainer consisting of a single bar having at the top a fixed projecting pointed spur or pin 11 and at the bottom a pointed pin 12, which is capable of being projected and retracted by toggle mechanism similar to that shown in Fig. 1 in connection with the pin 12 there illustrated.

In Figs. 6 and 7 I have shown still another embodiment of my invention, the retainer in this case comprising two U-shaped bars 23 and 24, the bar 24 being adapted to slide telescopically within the bar 23 and having at its inner end a cross-wire 25, the projecting ends of which form pawls 26, each pawl being adapted to engage with any one of a series of notches 27, formed in one edge of a vertical slot 28 in one of the sides of the bar 23, so that the bar 24 can be projected or retracted and held in its different positions of adjustment. It will be observed that the notches in each side wall of the outer U-shaped bar communicate with a slot closed at the ends, so that when the two bars are once connected they cannot be disconnected, for when the ends 26 of the pin or wire 25 are removed from the notches they still remain in the slot, thus preventing the separation of the bars from each other. The outer ends of the bars 23 24 are expanded laterally, as in Fig. 1, and the outer end of each bar is toothed, the end of each bar also having a projecting pointed spur or pin. The slide 17 18 19 serves to prevent bending or buckling of the retainer after the same has been projected to the desired extent.

The term "U-shaped" as herein used is intended to cover such modifications of a true

U shape as semicircular, rectangular, or the like.

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

1. A stair-carpet retainer consisting of a two-part expansible and contractible rod or bar, whereby it can confine the carpet between the tread of one step and the projecting tread of a step above it, each end of the bar having a series of teeth facing laterally outward and serving to prevent lateral inward movement of the carpet, substantially as specified.

2. A stair-carpet retainer consisting of a bar adapted to confine the carpet between the tread of one step and the projecting tread of a step above it, said bar having end portions for engaging the carpet, each of such engaging portions consisting of a series of teeth and a central pointed stud projecting beyond said teeth, substantially as specified.

3. A stair-carpet retainer consisting of a pair of U-shaped bars fitting one within the other, the outer bar having in its sides slots and notches and the inner bar having a transverse pin with projecting ends forming pawls for engagement with said notches, substantially as specified.

4. A stair-carpet retainer, consisting of a pair of U-shaped bars sliding telescopically one within the other, and a slide embracing said bars and having portions overlapping the same, and maintaining them in line with each other, substantially as specified.

5. In a stair-carpet retainer, the combination of two substantially U-shaped bars fitting one within the other, each bar constructed at its outer end to engage and retain the carpet, one of the bars having side walls provided with notches communicating with longitudinal slots closed at the ends and the other bar having side walls with projecting teeth or pawls for engaging with said notches, said pawls or teeth, when disengaged from the notches, lying within the longitudinal slots and preventing the separation of the bars from each other, substantially as described.

6. A stair-carpet retainer consisting of a pair of U-shaped bars sliding telescopically one within the other, means for holding said bars in various positions of longitudinal adjustment, and a slide embracing said bars and having portions overlapping the same, and maintaining them in line with each other, substantially as specified.

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

JOHN P. KNOBELOCH.

Witnesses:

F. E. BECHTOLD,
JOS. H. KLEIN.