

Feb. 28, 1939.

C. BAUER

2,149,157

FLEXIBLE BLIND AND AWNING

Filed Oct. 25, 1937

2 Sheets-Sheet 1

Fig. 1.

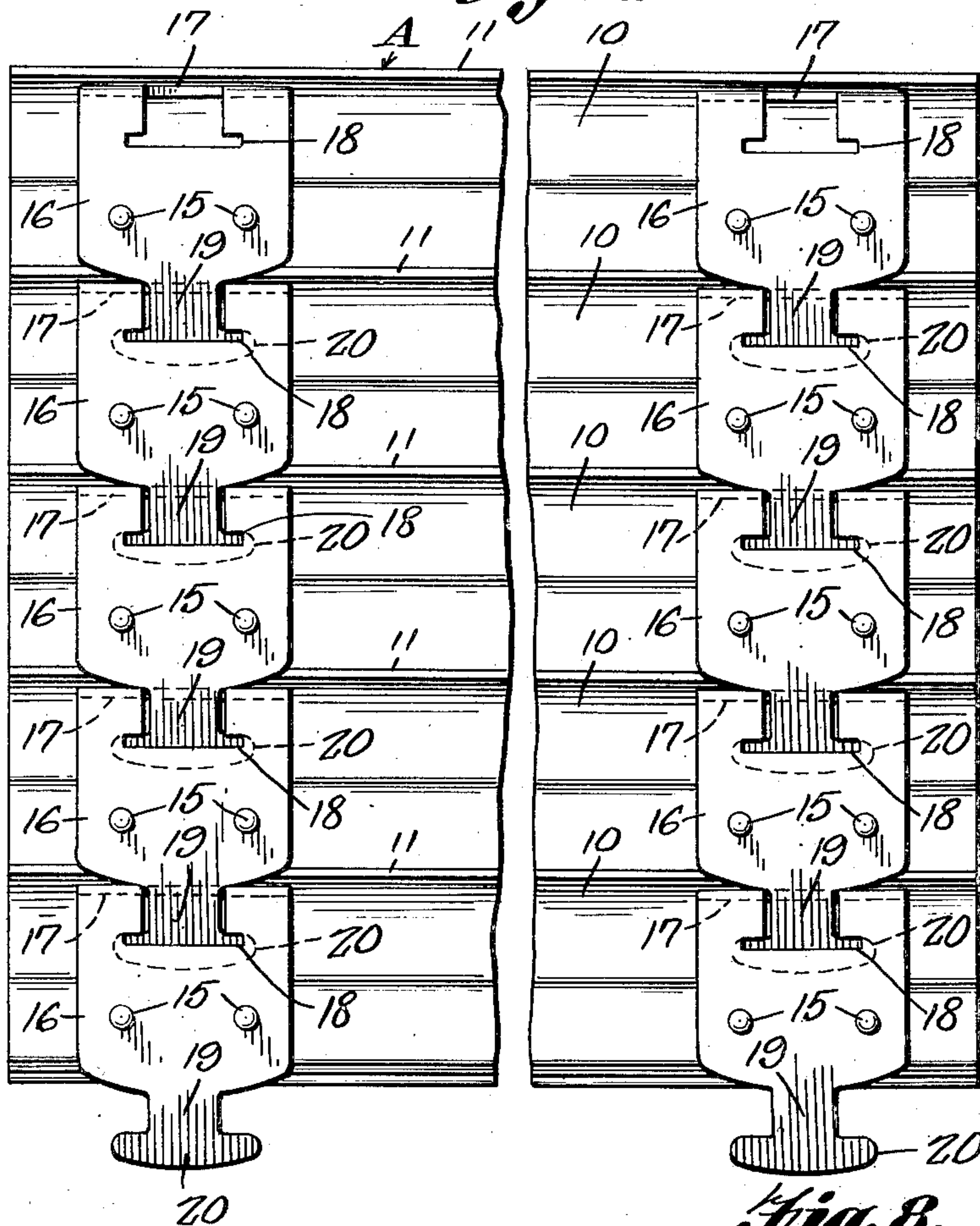


Fig. 2.

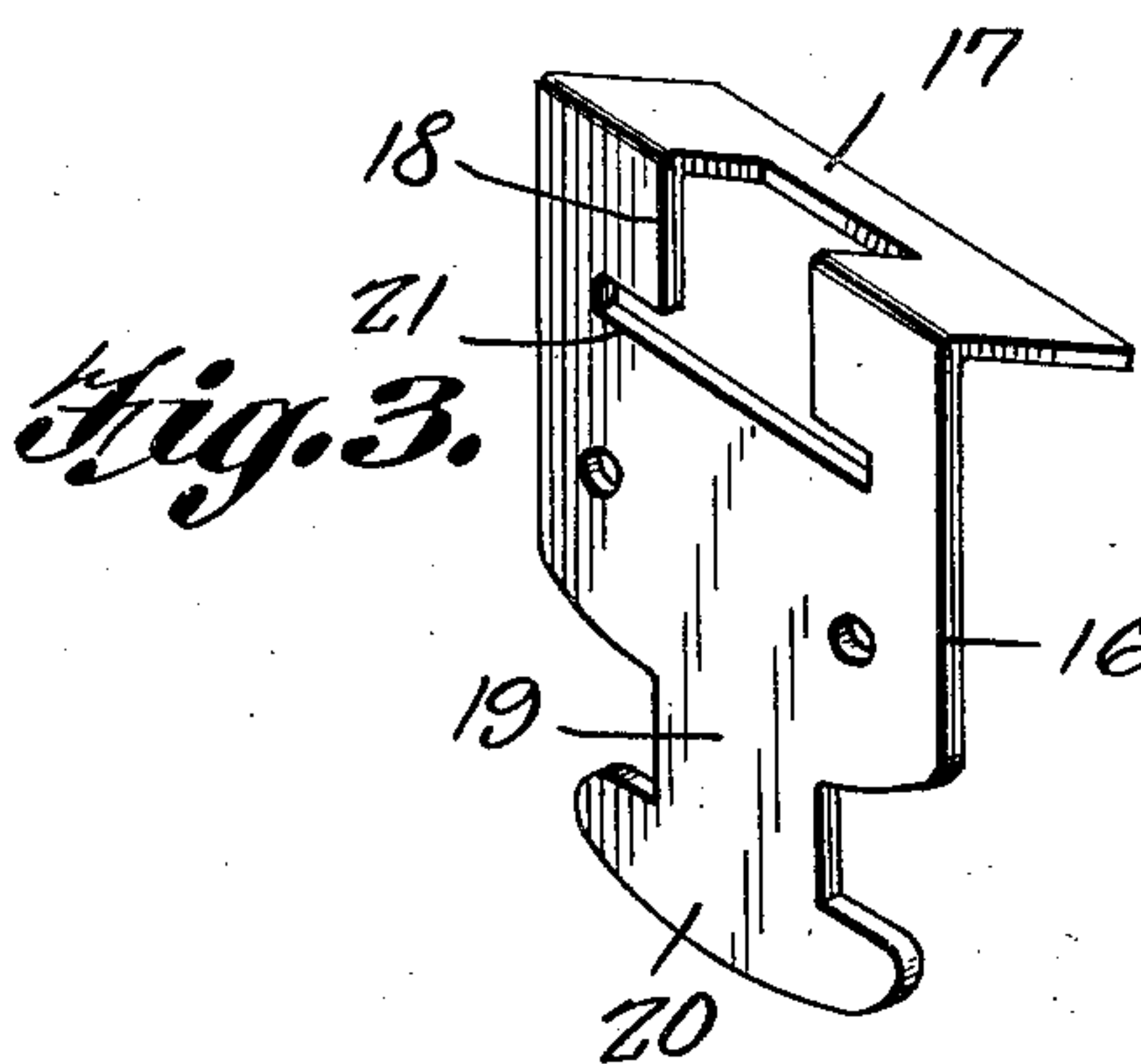
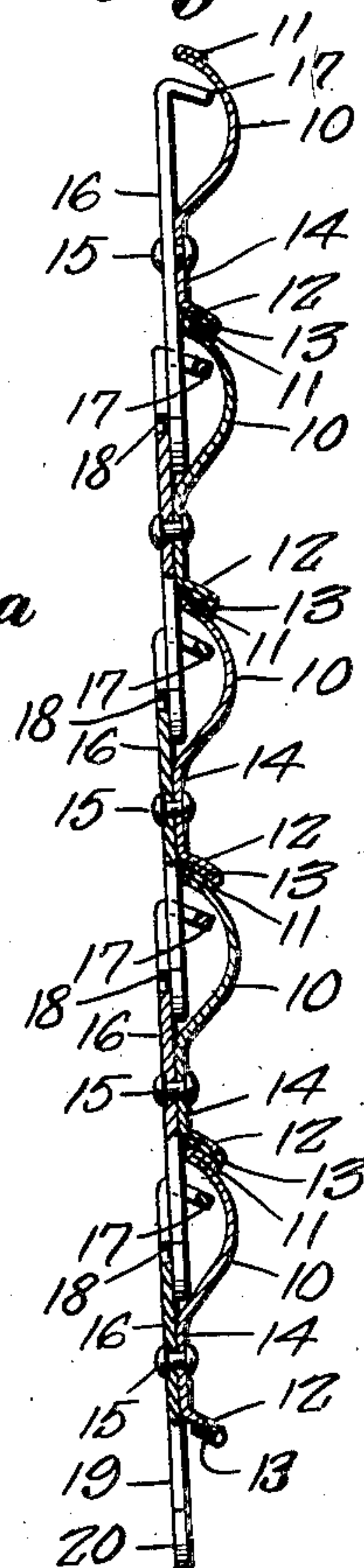


Fig. 8.

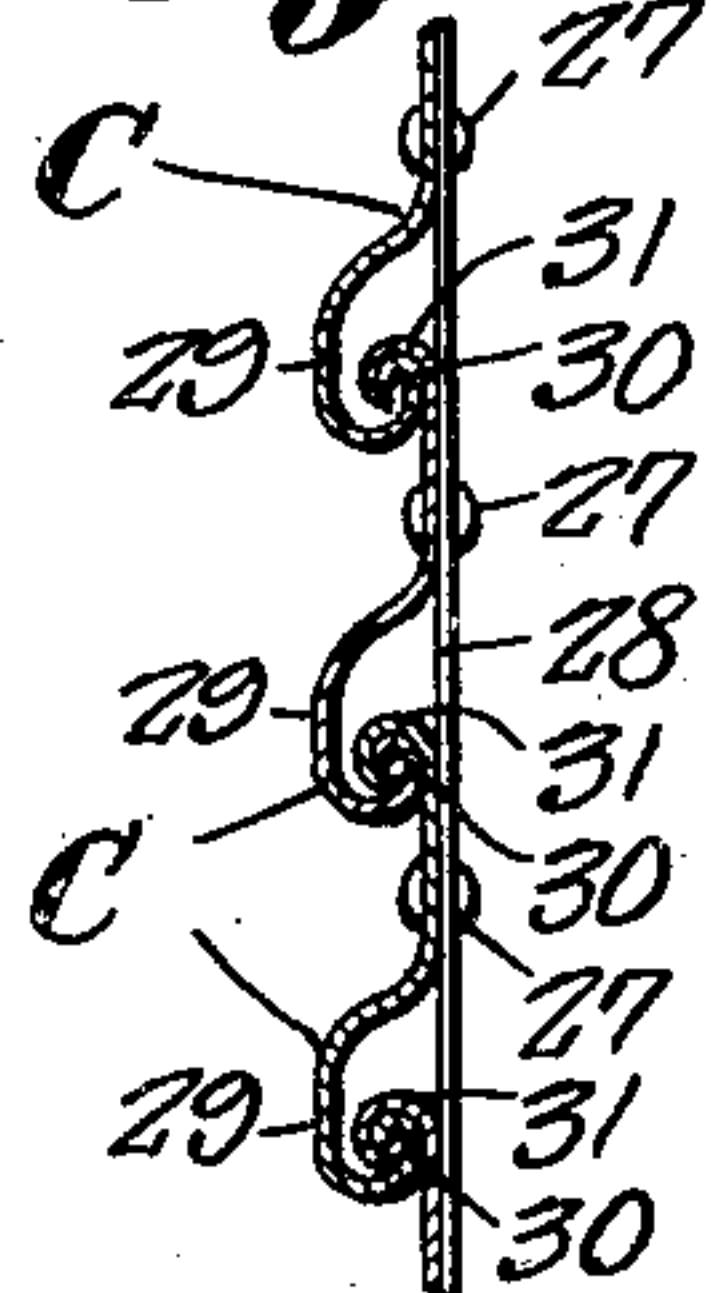
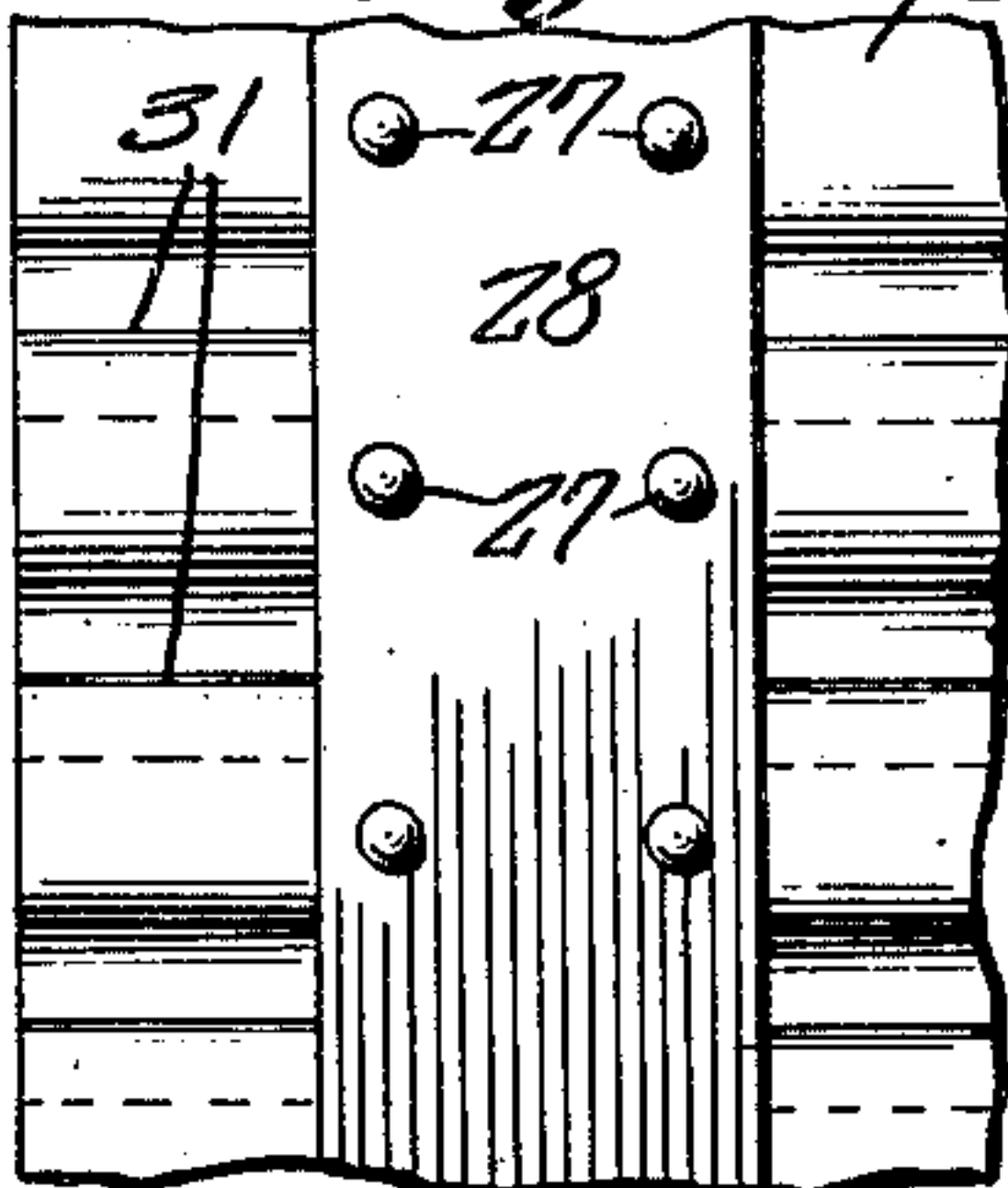


Fig. 9. c



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2 Sheets-Sheet 2

Fig. 4.

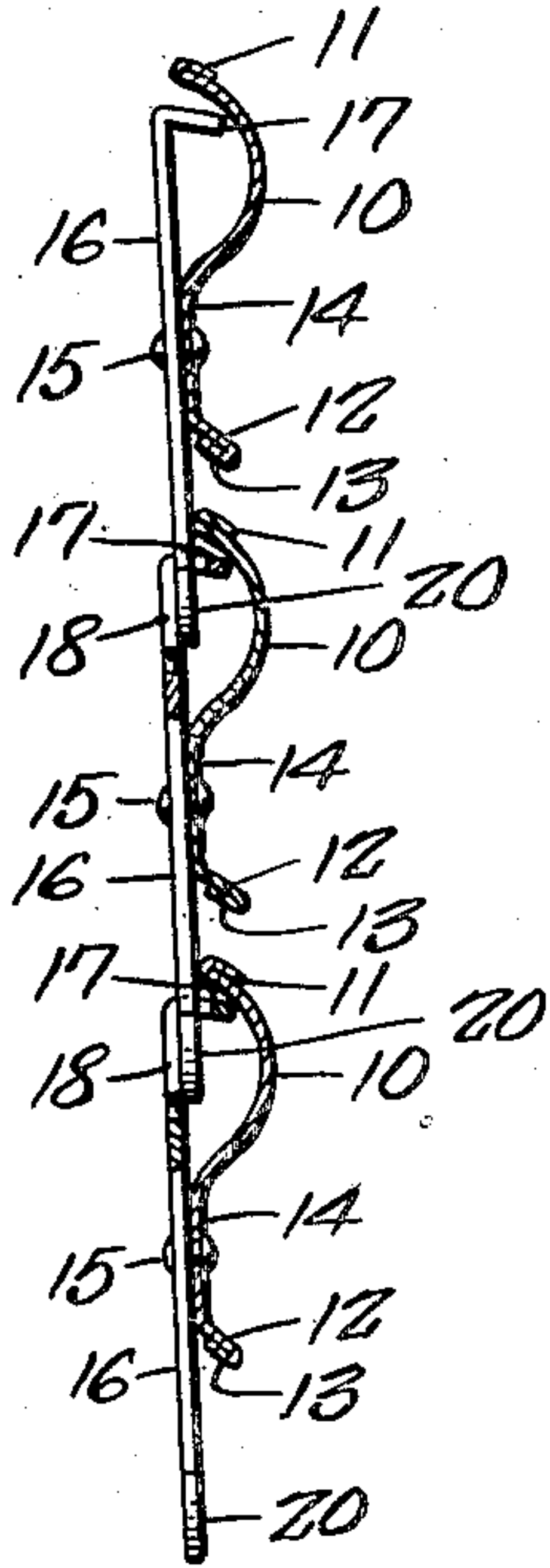


Fig. 5.

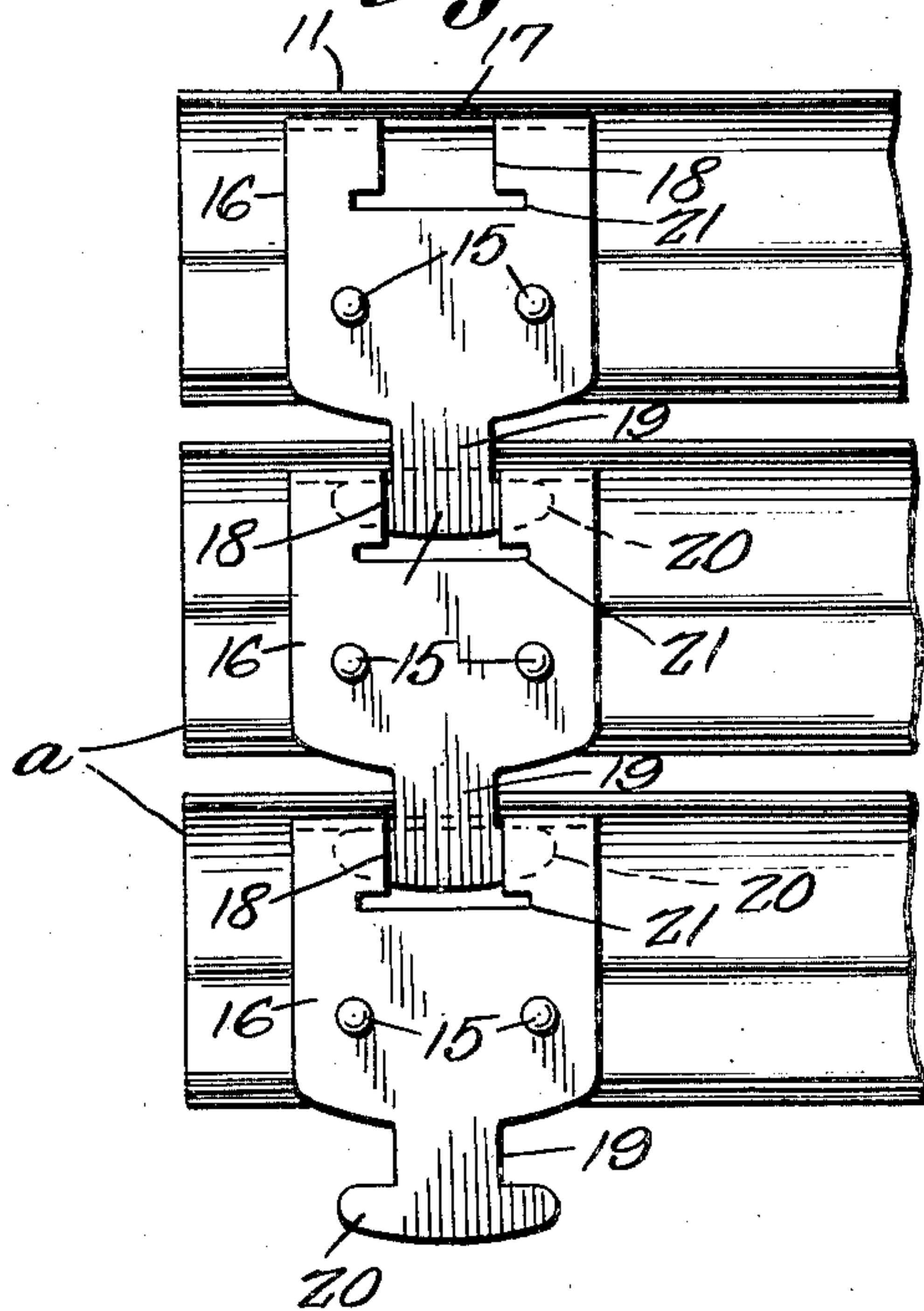


Fig. 6.

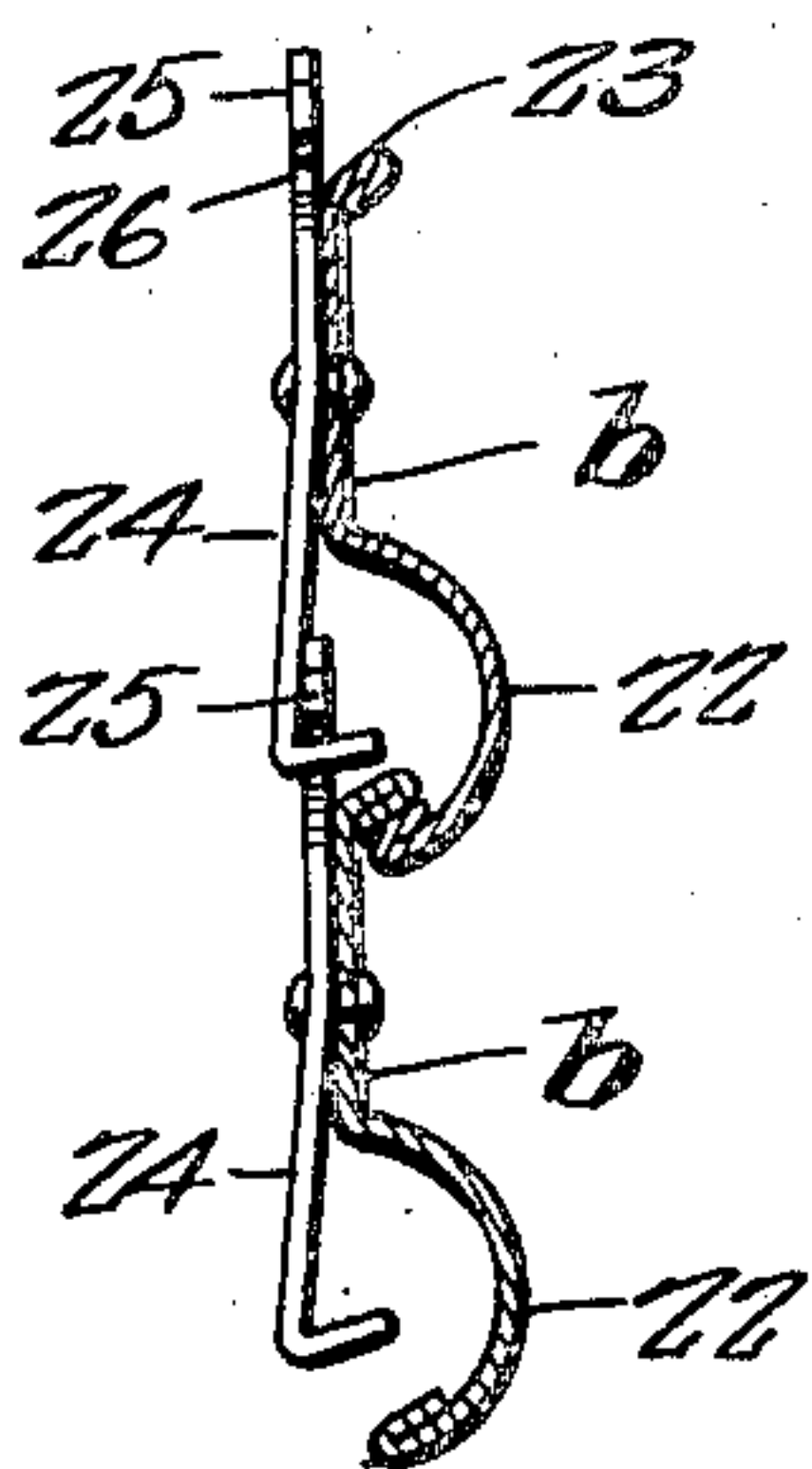
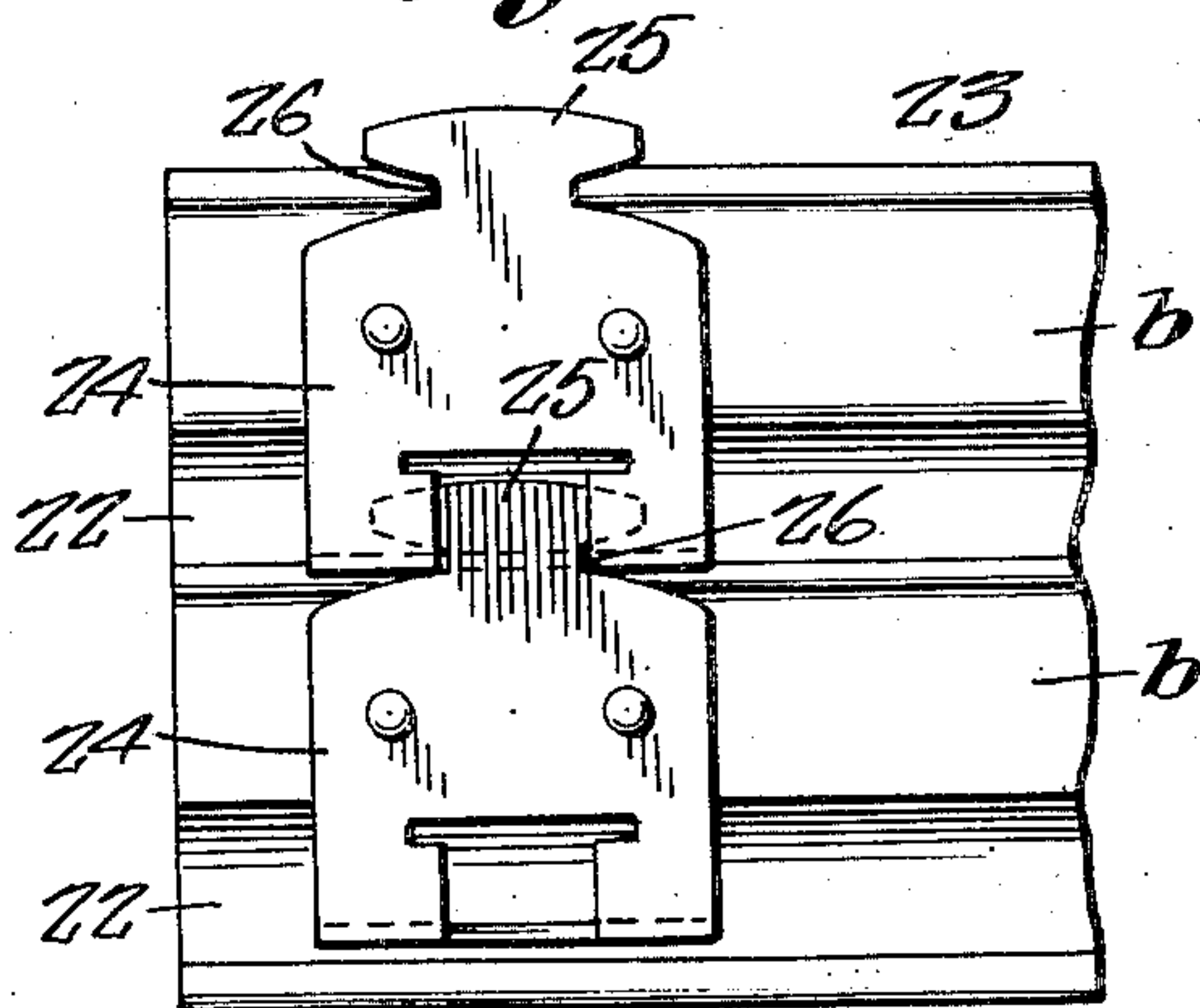


Fig. 7.



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2,149,157

FLEXIBLE BLIND AND AWNING

Conrad Bauer, Pittsburgh, Pa.

Application October 25, 1937, Serial No. 170,926

2 Claims. (Cl. 189—56)

The invention relates to blind and awning structures and more especially to refinements over the subject matter of United States Letters Patent No. 1,912,817 issued June 6, 1933.

5 The primary object of the invention is the provision of a structure of this character, wherein the slats or louvers are made from metal and are linked with each other for free flexing action so that such blind or awning can be rolled and
10 unrolled in an easy manner and also that the said structure will be susceptible of maximum strength to resist high winds and to withstand loads resultant from the accumulation of snow, and sleet and avoids the trapping of rain and water there-
15 by thus assuring maximum life to such blind or awning structure.

Another object of the invention is the provision of a structure of this character, wherein the same is assured of maximum serviceability and is of
20 endurance for withstanding heavy loads, being neat in appearance, easy of installation, assured of long life and will withstand all kinds of storms and inclement weather, resisting corrosion as moisture is relieved thereon and allows for venti-
25 lation in its use, being freely flexible for rolling purposes and is possessed of maximum strength.

A further object of the invention is the provision of a structure of this character, wherein there is embodied refinements over the subject
30 matter of United States Letters Patent No. 1,912,817 issued June 6, 1933, and is devoid of rigid connectors between the slats or louvers while free flexibility is maintained and assured.

A still further object of the invention is the
35 provision of a structure of this character, which is simple in its construction, thoroughly reliable and efficient in operation, possessed of maximum durability and life, easy of adjustment, and inexpensive to manufacture.

40 With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, which disclose the
45 preferred and modified forms of embodiment of the invention and pointed out in the claims hereunto appended.

In the accompanying drawings:

50 Figure 1 is a fragmentary broken elevation of an awning or blind constructed in accordance with the invention and looking toward the inner side thereof.

55 Figure 2 is a vertical longitudinal sectional view therethrough.

Figure 3 is a perspective view of one of the links employed in the awning or blind.

Figure 4 is an edge elevation partly in section showing the louvers or slats in open position to each other.

Figure 5 is a fragmentary elevation thereof.

Figure 6 is a modification looking toward one edge.

Figure 7 is an elevation of the structure shown in Figure 6.

Figure 8 is a view similar to Figure 6 showing a further modification.

Figure 9 is an elevation of the modified form shown in Figure 8.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, particularly Figures 1 to 3 inclusive, A designates generally a portion of the blind or awning involving refine-
20 ments over the subject matter of United States Letters Patent No. 1,912,817 issued June 6, 1933, and involves a plurality of horizontally arranged superposed slats or louvers *a*, each being made from sheet metal having the required width and
25 length. Each slat or louver *a* is formed with an outwardly bulged upper portion 10 extending longitudinally throughout the length thereof and the uppermost edge of such louver or slat is turned outwardly and downwardly as at 11 onto
30 the bulge 10 while the lowermost portion of said slat or louver is bent outwardly at an inclination as at 12, having an inturned or folded free edge 13 while created intermediate of the said bulge
35 10 and the lowermost portion 12 is a flat area 14.

In the superposed relation of the slats or louvers *a*, the lowermost portion 12 of each over-
40 hangs the bulge 10 of an adjacent slat or louver, there being an overlapped relationship between the respective slats or louvers of the blind or awning and in this way eliminates the seepage of rain or water between the slats or louvers in the use thereof.

Secured to the rearmost faces of the slats or louvers *a*, preferably by rivets 15 engaged in the
45 flat areas 14 of said slats or louvers, although other fastening can be resorted to, are flat plate-like links 16 made from metal, each formed at one end, in this instance being the uppermost end, with an outturned lip 17 equal to the width
50 of the link while cut into the latter and the said lip is an inverted T-shaped slot 18 and at the other end of this link is an extended inverted T-shaped tongue 19. The tongue 19 of one link
55 16 is adapted for separable coupling with the

slot 18 of an adjacent link, the coupling being had by passing the cross end 20 of the tongue 19 into the wider portion 21 of the slot 18 and in this manner the links 16 are interlocked with each other for flexibility and relative sliding movement one to the other so that the louvers or slats *a* can be separated or closed at the joints therebetween, this being illustrated in Figures 1 and 2 of the drawings showing the slats or louvers closed with relation to each other and in Figures 4 and 5 of the drawings with the louvers or slats open with relation to each other.

In Figures 6 and 7 of the drawings there is shown a modification wherein each louver or slat *b* has the bulge 22 lowermost thereof while the edge portion 23 folded on itself is uppermost of the slat or louver and the links 24 are reversed to the links 16 while the tongue 25 of each link 24 has a short neck 26 comparable with the neck of the tongue 19 so that the louvers or slats *b* will be permanently held in closed relation to each other and the bulge 22 overlaps and interlocks with the folded edge 23 of adjacent slats or louvers *b* thus no separation of the louvers or slats can occur yet these are flexibly linked or coupled with each other.

In Figures 8 and 9 of the drawings there is shown a further modification wherein each louver or slat *C* is riveted at 27 or otherwise fastened to a flexible metallic tape or strip 28 and each louver *C* at the lowermost bulge 29 therein is interfitted at its curled edge 30 with a curled upper edge 31 of an adjacent louver or slat so that in this manner the louvers *C* in their superposed relation are loosely hinged with each other for free flexing activity, there being closed joints between the said slats or louvers throughout the blind or awning.

A blind or awning constructed as hereinbefore set forth is susceptible for use as a fire shield or shutter, a screen or for any other purpose found desirable.

The opening and closing of the slats or louvers as before described with respect to Figures 1 to 5 inclusive, of the drawings is had in a manner corresponding to the flexible blind structure described and claimed in Letters Patent No. 1,912,817, issued June 6, 1933.

Under the linkage construction in a manner as heretofore described of the slats one with the other, it is possible for separation of a slat for replacement of a new one when found desirable, the blind or awning constructed in the manner before set forth is assured of maximum life and

durability and will withstand weather elements as well as heavy winds, being possessed of maximum strength.

It is, of course, understood that changes, variations and modifications may be made other than hereinbefore set forth and as come properly within the scope of the claims hereunto appended without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed is:

1. In a flexible blind structure of the kind described, a plurality of flat plate-like links separably and loosely coupled with each other, each formed at one end with an out-turned lip and a headed tongue at the other end, the out-turned lip of one link being cut into and receiving the headed tongue of an adjacent lip for the separable flexible coupling of said links and a fulcrum relationship between the lip and headed tongue, louvers carried by said links and each made from sheet metal, flanged portions turned outwardly from said louvers at an angle to the plane thereof, and out-struck bulged areas on said louvers and each creating a free edge next to and in overlapping relation throughout the flanged portion next thereto, the said bulged areas being extended outwardly for overhanging the overlapping relation of the flanges and free edges and also accommodating the lips of the links within said bulged areas.

2. In a flexible blind structure of the kind described, a plurality of flat plate-like links separably and loosely coupled with each other, each formed at one end with an out-turned lip and a headed tongue at the other end, the out-turned lip of one link being cut into and receiving the headed tongue of an adjacent lip for the separable flexible coupling of said links and a fulcrum relationship between the lip and headed tongue, louvers carried by said links and each made from sheet metal, flanged portions turned outwardly from said louvers at an angle to the plane thereof, and out-struck bulged areas on said louvers and each creating a free edge next to and in overlapping relation throughout the flanged portion next thereto, the said bulged areas being extended outwardly for overhanging the overlapping relation of the flanges and free edges and also accommodating the lips of the links within said bulged areas, the cut-into portions being extended from the lips into the links and inwardly disposed with respect to the free edges of said lips and links.

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