

No. 664,759.

Patented Dec. 25, 1900.

G. A. JOY.

BUTTONHOLE MARKER AND SPACER.

(Application filed Dec. 22, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

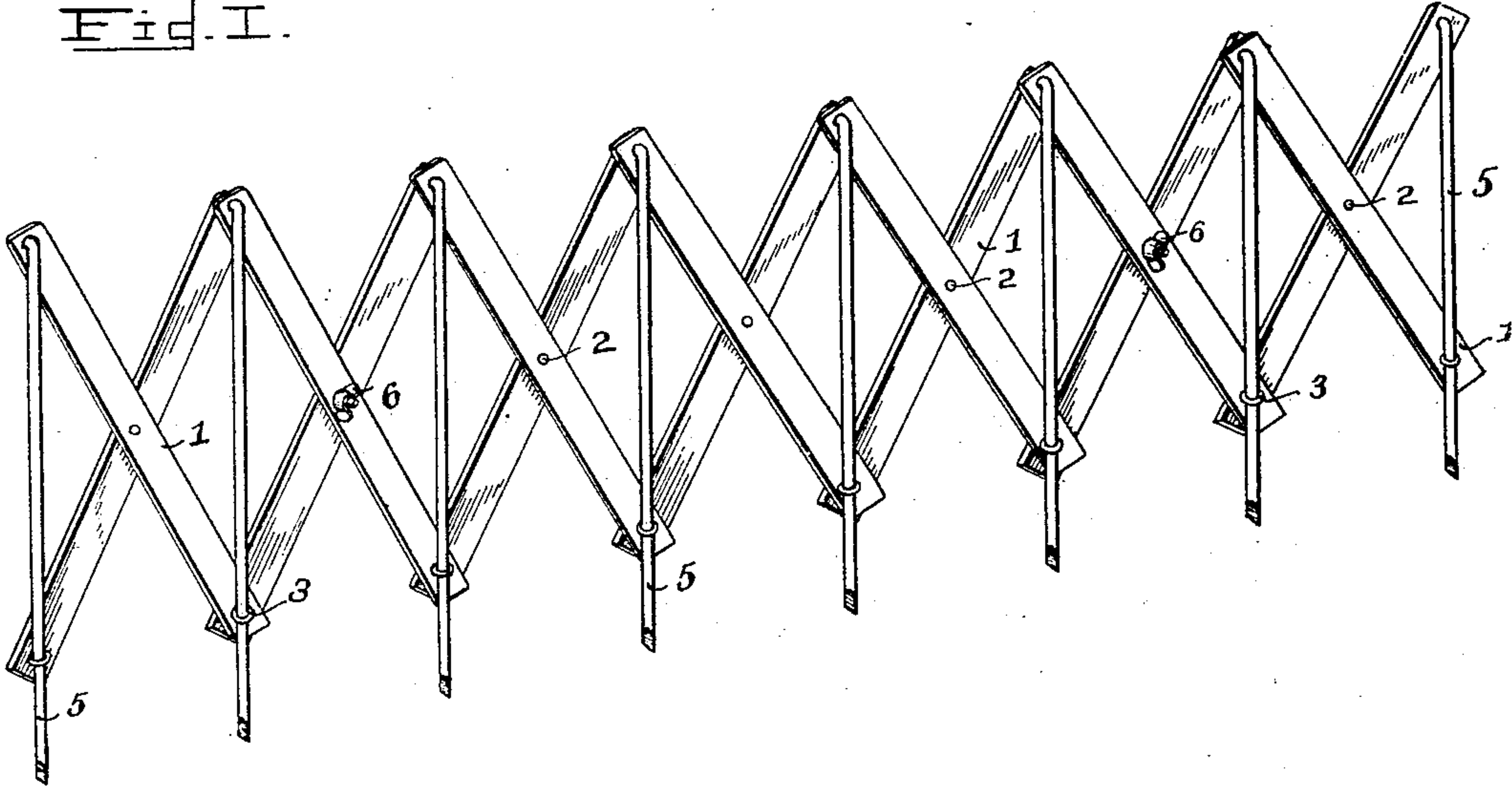


Fig. 2.

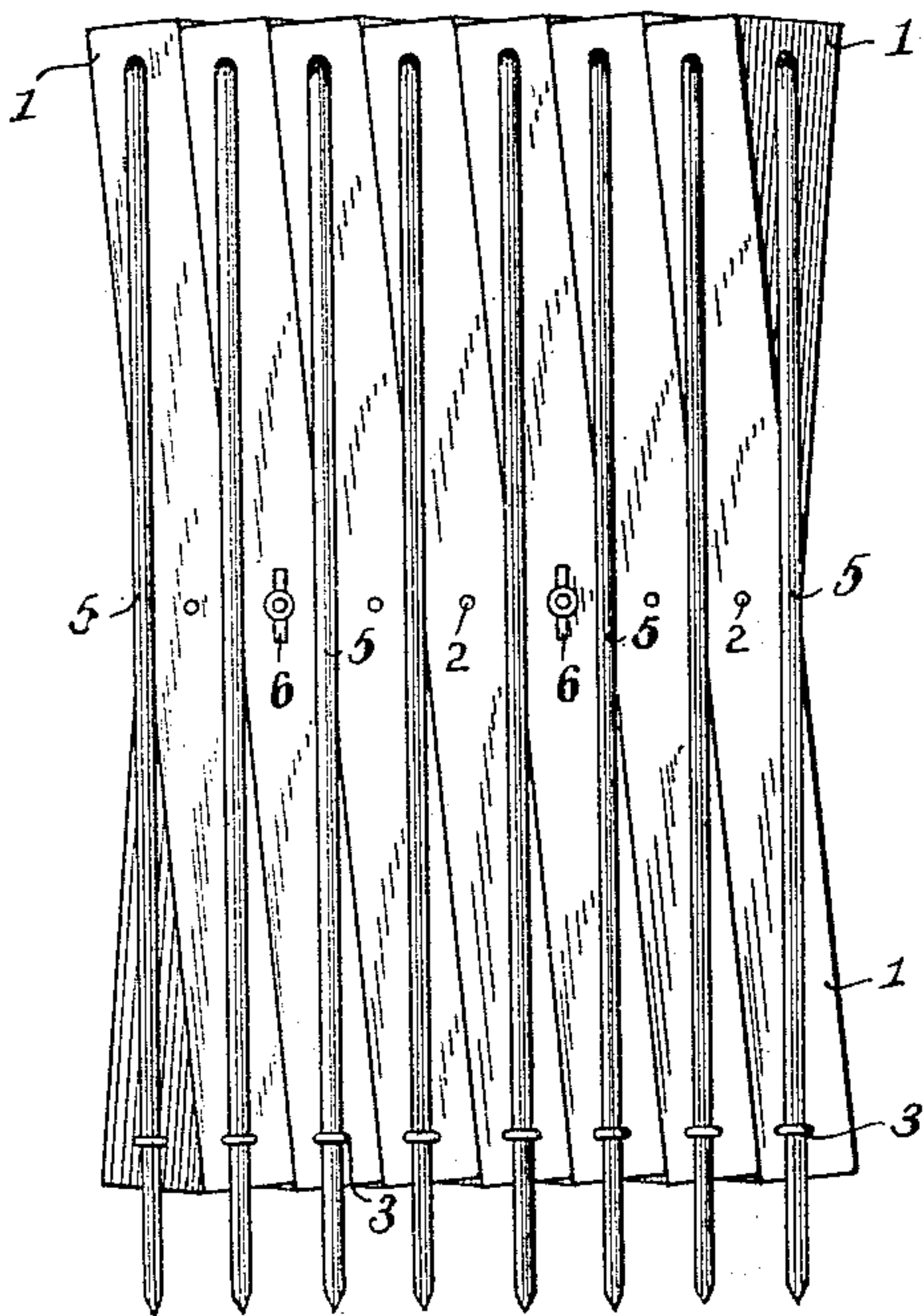


Fig. 3.

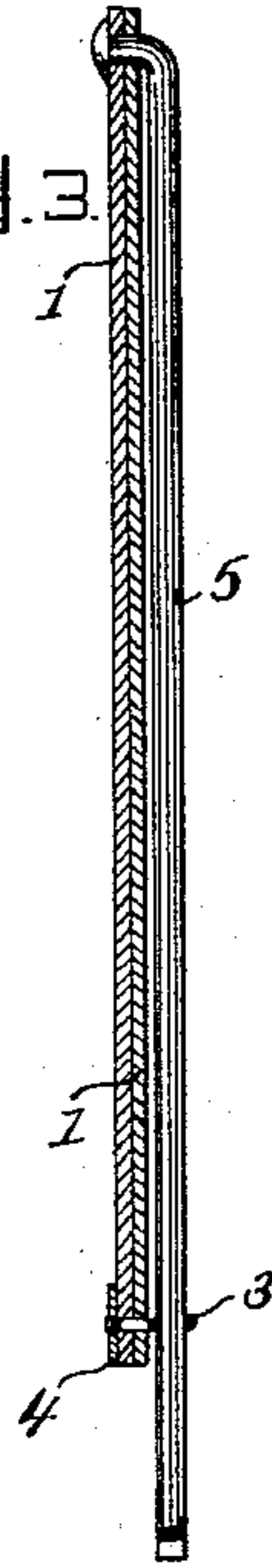


Fig. 4.

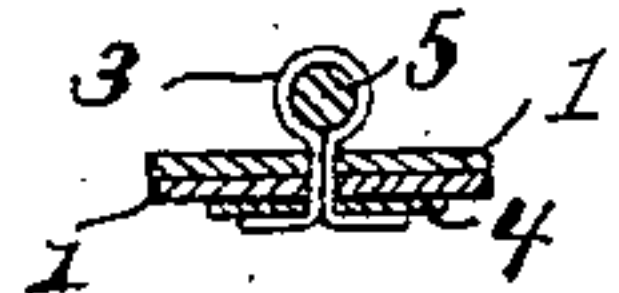


Fig. 5.

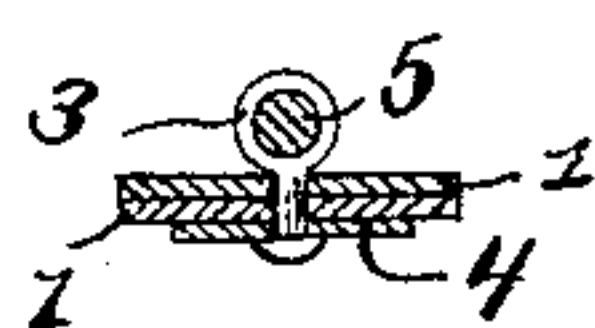
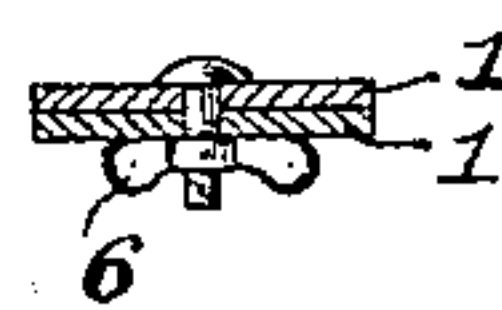


Fig. 6.



Witnesses

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2 Sheets—Sheet 2.

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Fig. 7.

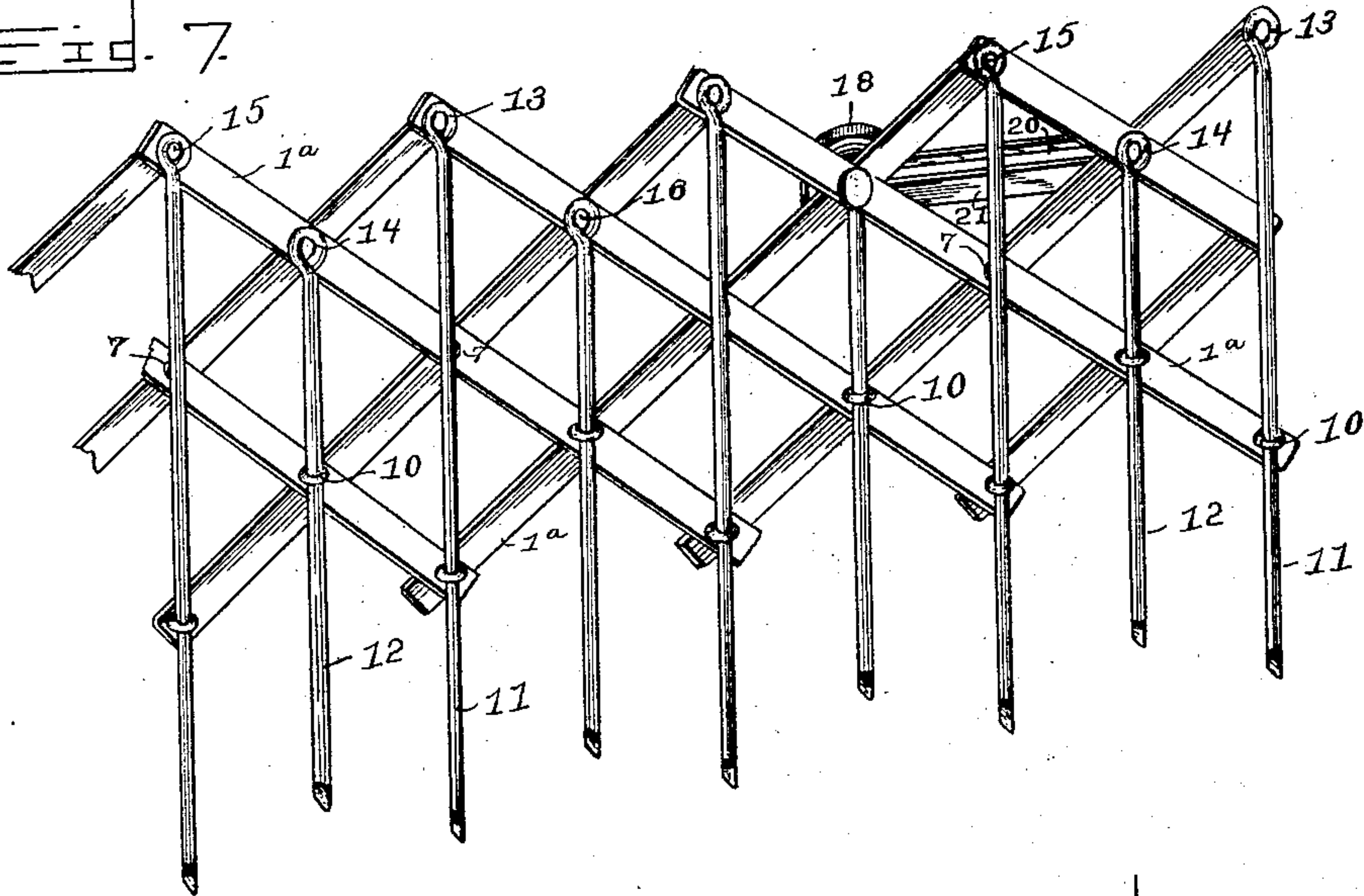


Fig. 8.

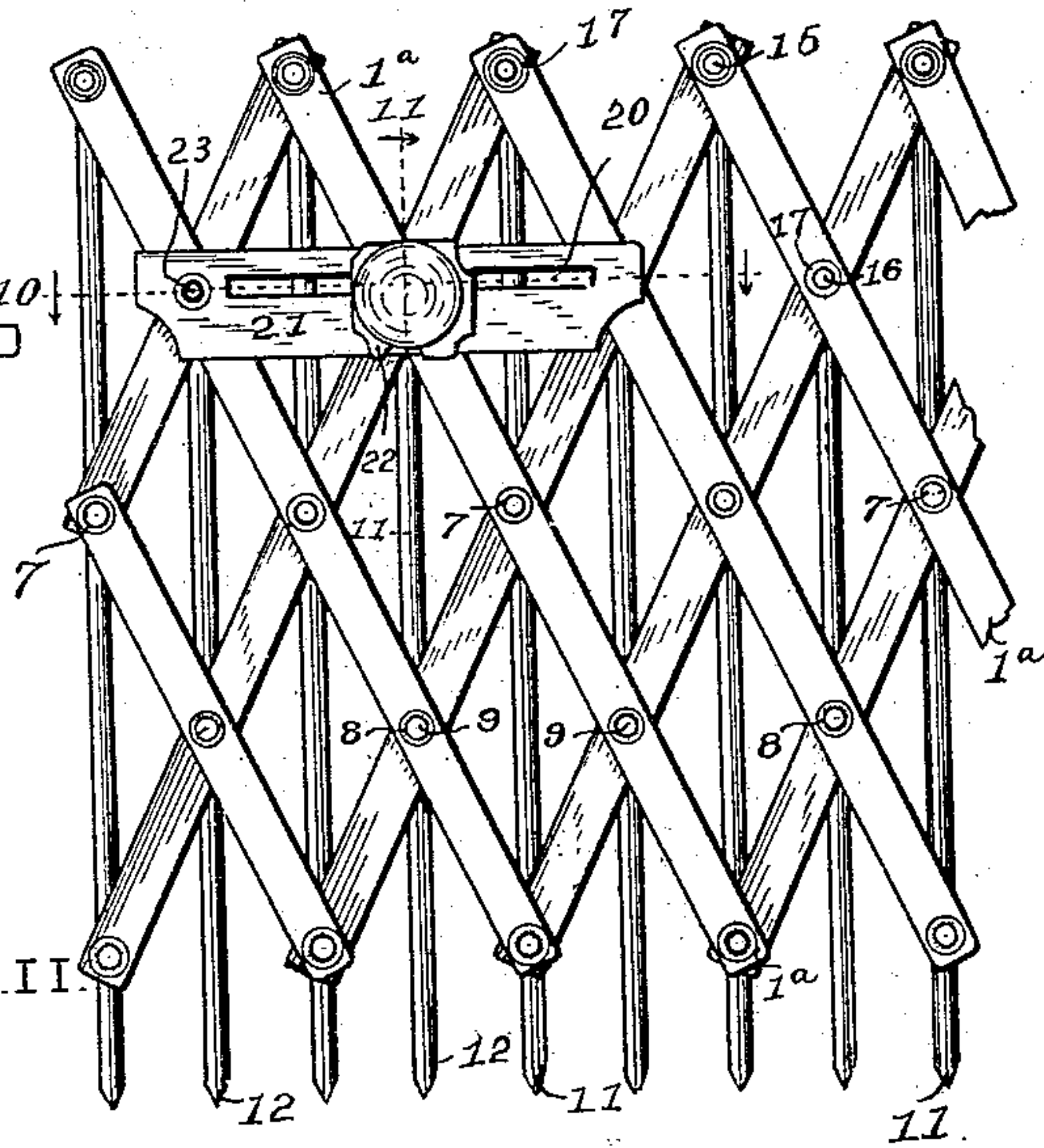


Fig. 9.

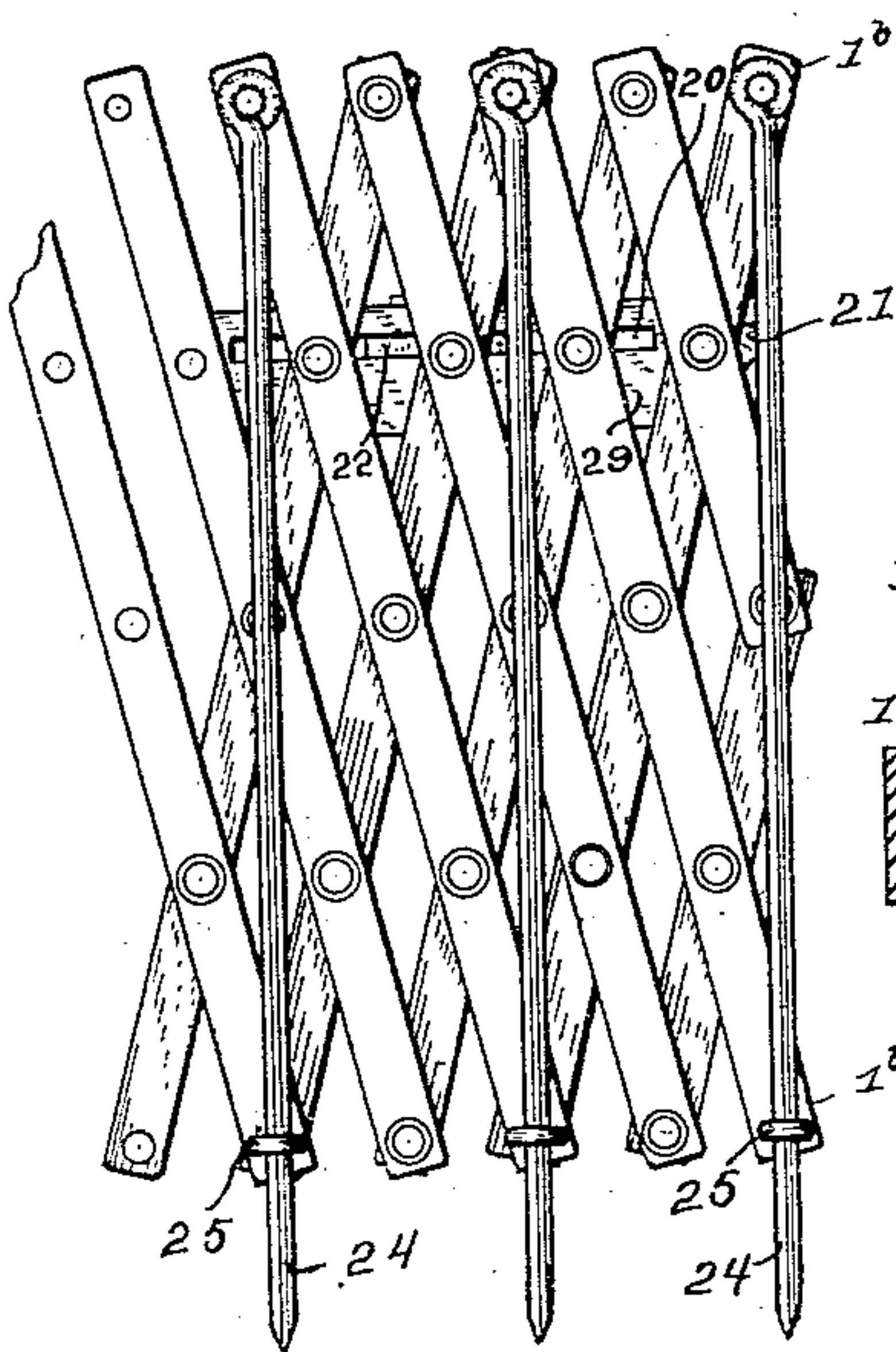


Fig. 10.

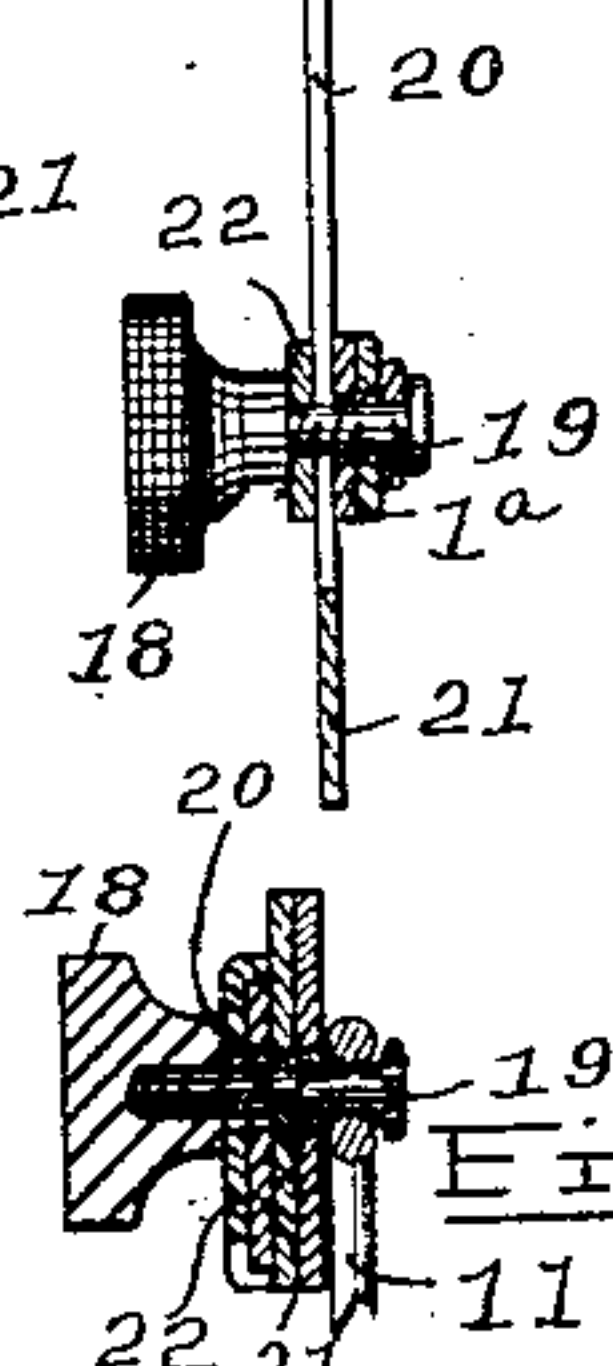


Fig. 11.

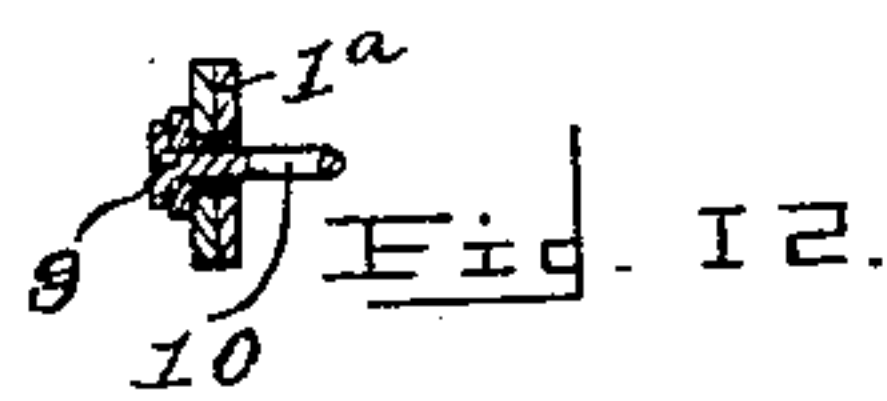


Fig. 12.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE A. JOY, OF BAR HARBOR, MAINE.

BUTTONHOLE MARKER AND SPACER.

SPECIFICATION forming part of Letters Patent No. 664,759, dated December 25, 1900.

Application filed December 22, 1899. Serial No. 741,297. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. JOY, a citizen of the United States, residing at Bar Harbor, in the county of Hancock and State of Maine, have invented a new and useful Buttonhole Marker and Spacer, of which the following is a specification.

The invention relates to buttonhole markers and spacers.

10 The object of the present invention is to provide a simple, inexpensive, and convenient device by means of which the points at which buttonholes are to occur may be instantly and accurately laid off, the device being adapted to mark off any number of but-
15 tonholes in any length of space within its limits. The device is also adapted to lay off the spaces in a straight line or in an arc or several arcs of regular or irregular form.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is a perspective view of a marking device constructed in accordance with this invention and illustrating the simpler form thereof, the marking device being partially open. Fig. 2 is a plan view
30 of the same. Fig. 3 is a section through the same, taken in line with one of the rods or markers. Fig. 4 is a detail sectional view showing one form of the eyes through which the markers slide. Fig. 5 is a similar view
35 showing another form of eye. Fig. 6 is a detail sectional view illustrating the simpler locking device for holding the lazy-tongs frame in its adjusted position. Fig. 7 is a perspective view of a buttonhole-marker provided with long and short markers, the lazy-
40 tongs frame being extended for the purpose of illustration. Fig. 8 is a plan view showing the opposite side of the marker illustrated in Fig. 7. Fig. 9 is a plan view of the marker
45 designed particularly for use on men's garments. Figs. 10 and 11 are enlarged detail sectional views on lines 10 10 and 11 11 of Fig. 8. Fig. 12 is a detail sectional view illustrating the manner of mounting the guiding-
50 eyes on the frames shown in Figs. 7 and 9.

Like numerals of reference designate cor-

responding parts in all the figures of the drawings.

The invention will be described as adapted for use for the purpose of marking off but-
55 tonholes of garments and other articles; but it will be apparent that the marker is capable of being put to various other uses and that the same is also susceptible of various changes in the form, proportion, and minor
60 details, which may accordingly be resorted to, without departing from the spirit or sacrificing any of the advantages of the invention.

In carrying out the present invention resort is had to what is known as the "lazy-
65 tongs" principle, and to this end a framework is constructed of a series of equal and similar bars 1, the number, length, width, and thickness of which may of course be varied according to the use to which the device is to
70 be put. The several bars cross each other in pairs upon a central line in the simpler form of the invention illustrated in Figs. 1 and 2 of the accompanying drawings; but bars may be arranged to cross each other at the center
75 and at intermediate points, as hereinafter explained. The contiguous ends of the several bars 1 are also pivotally connected together, and in the present instance, as illustrated in Figs. 1 and 3 of the drawings, at one side of
80 the marking device consist of eyes or loops 3, having their terminal portions inserted through registering openings in the ends of the bars 1 and spread in opposite directions upon the opposite side against a washer 4, one
85 washer being employed for each eye and being interposed between the spread terminals thereof and the face of the adjacent bar, thus forming an easy-working joint. The pivots at the opposite side of the frame are formed
90 by a series of rods or markers 5. Each of said rods or markers 5 has one end bent substantially at a right angle and inserted through registering openings in the meeting ends of the bars 1, after which such bent end is headed
95 to prevent its escape. Each rod or marker then extends transversely of the frame and passes through its respective eye or loop 3 at the opposite side of the frame, said rod or marker being adapted to slide through such
100 guiding eye or loop for permitting the extension and folding of the marking device as a

whole. The ends of the rods or markers which extend through the guides are pointed, as shown, for the more accurate laying off of distances. As the frame of the device is extended the distance between each of the markers is proportionately increased and the same space is maintained between each pair of markers.

In order to lock the device in its adjusted position, one, two, or more of the pivots 2 may be extended at one end beyond the bars 1 and threaded for the reception of a thumb-nut 6, by means of which the crossing bars at such pivot may be clamped together, and thereby lock the device against extension or contraction. The device may thus be set in a certain position and locked therein for any desired length of time.

In Fig. 5 the eye 3 is provided with a solid shank, which forms the pivot for the contiguous bars, and the end of the shank is headed or spread upon the washer 4 to hold the pivot in position.

The marking device illustrated in Figs. 1 and 2 of the accompanying drawings is designed for general application, and that illustrated in Figs. 7 and 8 is designed more especially for use on ladies' garments, and the bars 1^a are crossed centrally and at opposite sides of the center. The central pivots consist of tubular rivets 7, and those at one side of the central pivot consist of tubular rivets 8, which receive shanks 9 of guiding-eyes 10, located at the ends of the bars 1^a and at points between such ends and the centers of the bars and forming guides for markers 11 and 12. The markers 11 and 12 are provided with eyes 13 and 14, which receive end and intermediate pivots 15 and 16, consisting of tubular shanks passing through tubular rivets 17 and provided with heads which engage the eyes of the markers. The other ends of the tubular pivots 15 and 16 are spread against the adjacent ends of the tubular rivets. The markers 11 are arranged the same as those illustrated in Figs. 1 and 2 of the drawings and extend entirely across the frame from the ends of the bars at one side thereof to the ends at the other side, and the markers 12, which are arranged in the intervals between the markers 11, are pivoted and guided at points intermediate of the ends of the bars 1^a, equidistant of the centers thereof, and are retained in true parallelism with the said markers 11 and bisect the spaces between the same. The short markers, which do not extend entirely across the frame, are located between the long markers and are provided for the purpose of enabling a large number of markers to be arranged within a comparatively small space, and this construction will be found especially advantageous and effective in dividing a comparatively small space into a large number of smaller spaces, which operation will require only a comparatively slight extension of the lazy-tongs frame and

which will not carry the short markers inward sufficiently to impair the effectiveness of the device. When used for this purpose, the pointers or markers may be pressed through the material to indicate the points marked off, or the device may be held in a slanting position or may be arranged flat against the material to enable the points to be marked off with chalk or other marking material. This form of the device is not designed for use when the lazy-tongs frame is in a very extended position, sufficient to raise the short markers above the points of the long markers, and when intervals of this character are to be marked off a device having only the long markers should be employed. Such a device having only long markers, as illustrated in Figs. 1 and 2, cannot be used for dividing a comparatively small space into as many smaller spaces as can be obtained when the long and short markers are employed, for the reason that a series of long markers cannot be arranged sufficiently close together with advantage to produce this result.

The marking device illustrated in Figs. 7 and 8 is retained at the desired adjustment by means of a clamping-nut 18, mounted on a threaded shank or screw 19, extending through one of the intermediate tubular pivots and constituting the pivot of the adjacent intermediate marker and provided with a head for engaging the same. The threaded stem or screw 19 extends through a longitudinal slot 20 of a plate 21 and through a perforation of a slide 22, which is clamped against the outer face of the slotted plate by means of the nut 18. The slide is provided at its edges with flanges which engage the side edges of the slotted plate. The slotted plate is secured at its outer end at 23 by one of the intermediate pivots of the shorter markers 12.

The marking device illustrated in Fig. 9 of the accompanying drawings is designed particularly for use on men's garments, and the markers 24 are arranged at greater intervals than those shown in Figs. 7 and 8. The bars 1^b of the frame (shown in Fig. 9) are crossed at their centers and intermediate points similar to the bars 1^a and are pivoted together by means of tubular rivets. The end rivets at one side of the centers of the bars receive the guiding-eyes 25, and the corresponding end rivets at the opposite side of the device receive headed tubular pivots 26, which connect markers 24 to the frame. The markers 24 extend through the guiding-eyes 25 and operate similar to those heretofore described, the frame being provided with an adjusting device 29, similar to that described in connection with the form shown in Figs. 7 and 8.

In marking off the buttonholes of a garment the upper and lower or the initial and final holes are first indicated. After deciding upon the number of holes count off the corresponding number of markers and extend

the machine and locate the end markers of such selected series on the initial and final buttonholes. A check is then made by any suitable means adjacent to each rod or marker, and the distance between the initial and final buttonholes may be thus accurately divided into any number of spaces within the limits of the device without any tedious calculation.

The bars of the frame may be made thin and flexible, so that the marking device may be flexed or given any desired curvature in the hands of the operator in event of the points to be laid off not being located in alignment. In this manner a regular or an irregular arc, a sinuous course, or a complete circle, may be instantly laid off into any desired number of spaces or intervals.

When the device is constructed as illustrated in Figs. 7 and 8 of the drawings, the frame is preferably made to accommodate twenty-one, and when it is constructed for use on men's garments six markers or rods will be provided; but, as before explained, any number of markers or rods may be used. The combined buttonhole marker and spacer may also be advantageously employed for marking off bicycle-wheels for accurately indicating the points at which the spokes are to be applied. It may be readily adjusted to divide the rim of the wheel into any desired number of spaces, and it is easily handled by simply curving or flexing it to fit the exterior of the rim.

The device is a great time-saver and is capable of uses other than those herein explained.

What is claimed is—

1. The herein-described marking device comprising a lazy-tongs frame provided with pivots connecting the bars of the frame and having openings extending entirely through them, solid pivots passing through the tubular pivots of the lazy-tongs frame and located at one side of the latter, the rods or markers extending entirely across the frame and provided at one end with eyes receiving the solid pivots, and the guides receiving the other ends of the rods or markers and provided with solid shanks passing through the adja-

cent tubular pivots of the lazy-tongs frame, substantially as described.

2. A device of the class described comprising a lazy-tongs frame composed of bars connected at their centers, ends and intermediate points by tubular pivots, the guides located at one side of the center of the frame and provided with shanks secured within the adjacent end and intermediate tubular pivots, the short and long markers or rods passing through the said guides and provided with eyes located at the other side of the frame, and pivots passing through the eyes and through the adjacent tubular pivots, substantially as described.

3. The herein-described marking device comprising a lazy-tongs frame provided with pivots connecting the bars and having openings extending entirely through them, the rods or markers extending across the frame and connected with the same by devices having solid shanks or portions passing through the tubular pivots, the slotted plate secured to the frame by one of the said devices, a screw passing through one of the tubular pivots and through the slot of the plate, a slide arranged on the plate and having an opening receiving the screw, and a clamping-nut arranged on the screw and engaging the slide and securing the frame at the desired adjustment, substantially as described.

4. A device of the class described comprising a lazy-tongs frame composed of bars crossing one another at their centers and at intermediate points and pivoted together at the said points and at their ends, the long rods or markers extending entirely across the frame and connected with the bars at the end pivots, and the short rods or markers located between the long rods or markers and connected with the bars at the intermediate pivots, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE A. JOY.

Witnesses:

E. N. BENSON,

MILTON W. STRATTON.