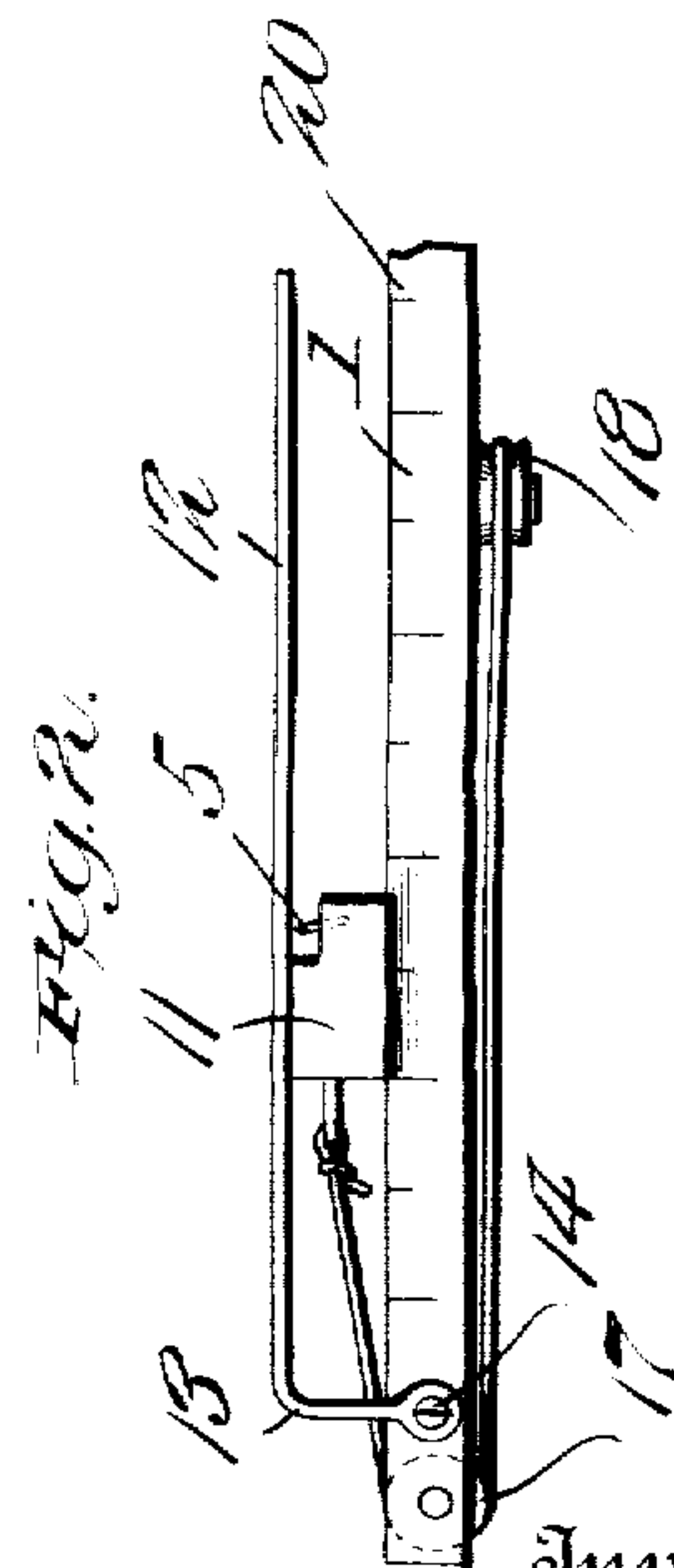
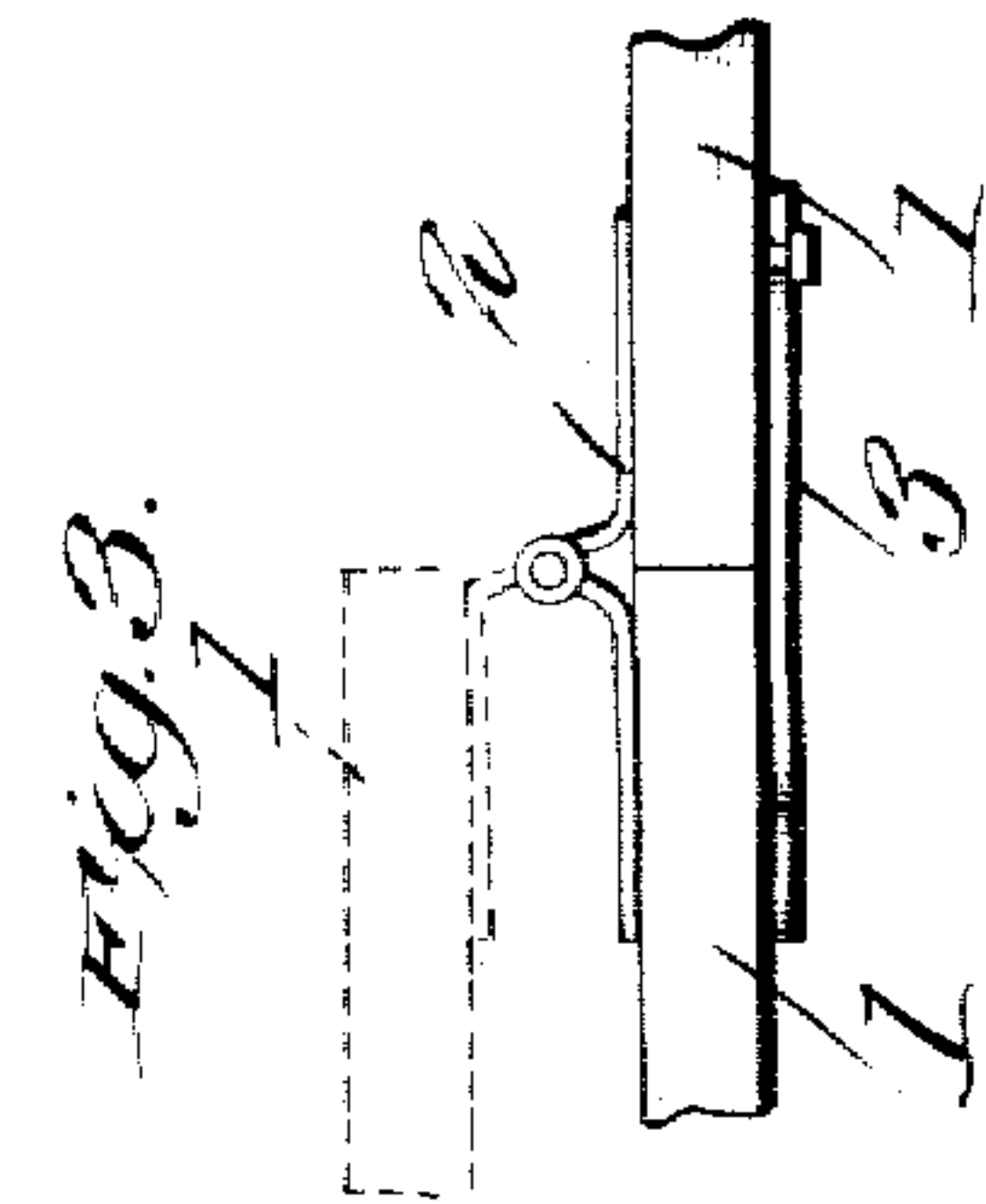
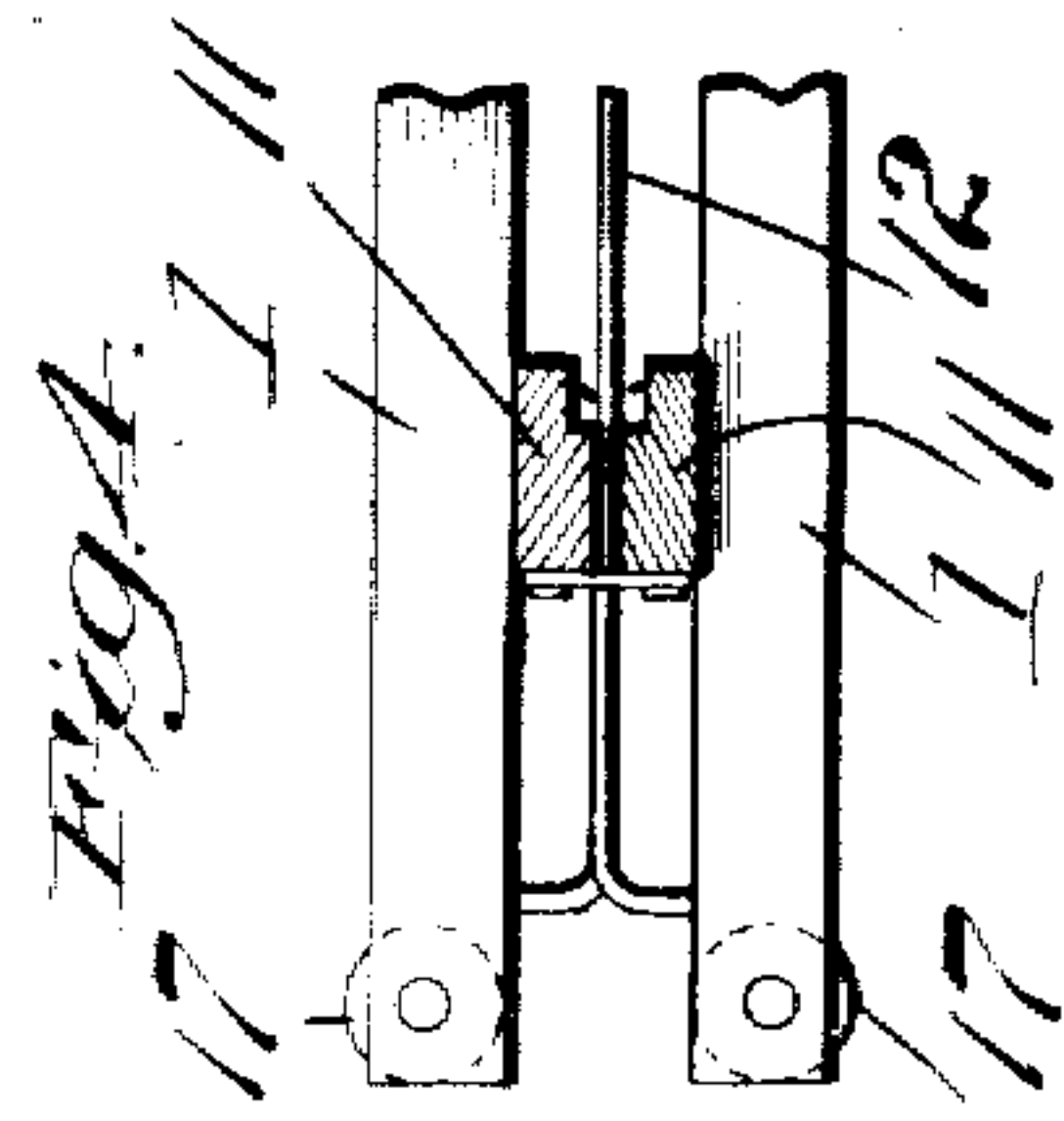
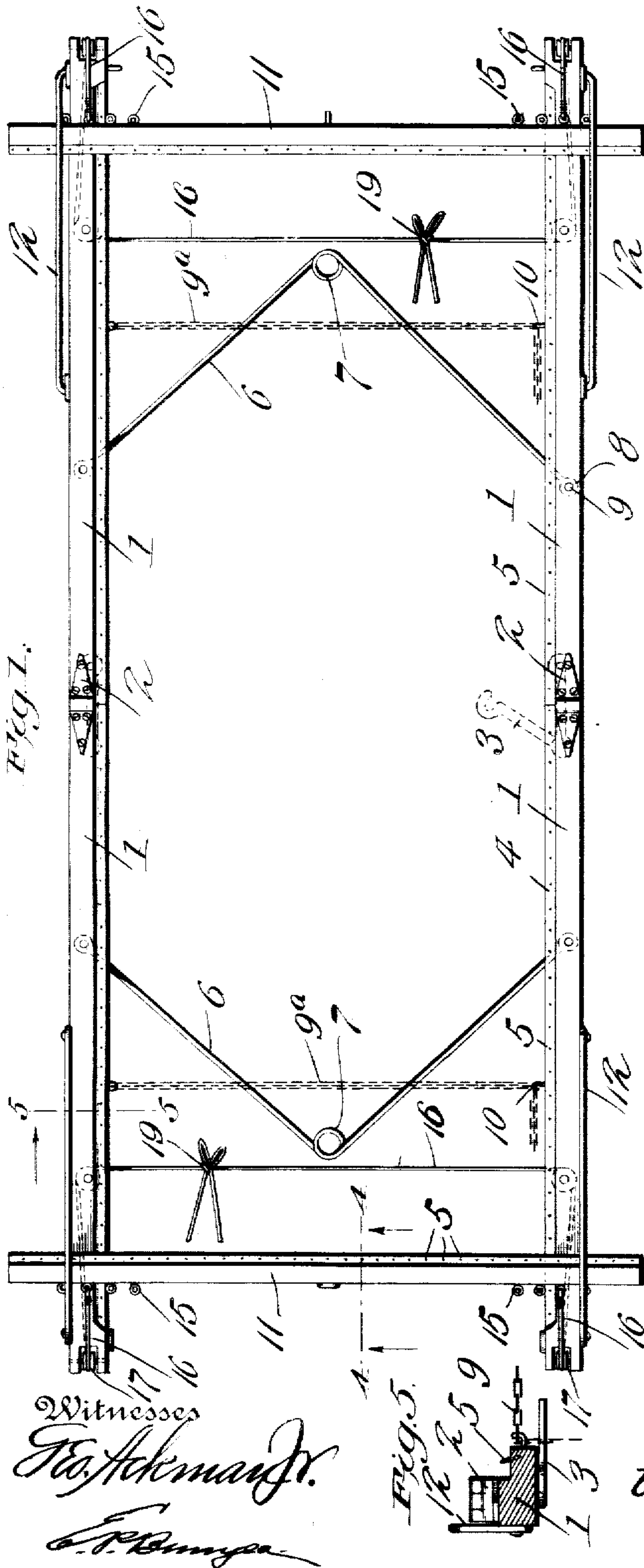


P. J. DE VRIES.
LACE CURTAIN STRETCHER.
APPLICATION FILED APR. 4, 1908.

905,059.

Patented Nov. 24, 1908.



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PETER J. DE VRIES, OF HULL, IOWA.

LACE-CURTAIN STRETCHER.

No. 905,059.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed April 4, 1908. Serial No. 425,221.

To all whom it may concern:

Be it known that I, PETER J. DE VRIES, a citizen of the United States of America, residing at Hull, in the county of Sioux and State of Iowa, have invented new and useful Improvements in Lace-Curtain Stretchers, of which the following is a specification.

This invention relates to lace curtain stretchers, and one of the principal objects of the same is to provide a simple and efficient stretching frame which can be folded to occupy but little space when not in use.

Another object of the invention is to provide a foldable stretching frame in which the side rails of the frame are forced apart by means of springs and which are held together by means of chains or other suitable rigid connections.

Still another object of the invention is to provide a foldable stretching frame for curtains in which the side rails are held apart by means of springs connected thereto and chains for holding the side rails in adjusted positions and end bars mounted to slide on the side rails and provided with compensating cords and pulleys, whereby the end bars will slide automatically with the side rails.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which,

Figure 1 is a plan view of a curtain stretching frame made in accordance with my invention. Fig. 2 is a detail side elevation of a portion of a frame and at one corner thereof, and showing the manner of mounting the end bars upon the side rails, and showing the compensating cords and pulleys. Fig. 3 is a detail view of one of the hinges and the latch for one of the side rails. Fig. 4 is a similar view taken on line 4-4, Fig. 1, showing the frame folded. Fig. 5 is a detail section taken on the line 5-5 of Fig. 1, looking in the direction indicated by the arrow.

Referring to the drawing for a more specific description of my invention, the numerals 1 designate the side rails, said rails being made in sections and divided centrally, said sections being connected together by means of hinges 2 and provided with suitable latches 3 which serve to hold the stretcher in extended condition. The side rails 1 are each provided with a rabbeted inner edge 4, and driven into this rabbet at suitable intervals are the impaling pins 5, said pins being driven at an angle, as shown

in Figs. 2 and 5. Connected to each of the sections of the side rails 1 is a spring 6, two such springs being shown and comprising oppositely disposed bars having a central coil or coils 7, and said springs being disposed oppositely and the bars of said springs being arranged at an angle one to the other, the coiled portions 7 of said springs exerting tension to straighten out the bars, so that there is a constant tendency on the part of the springs to move the side rails apart. These springs are connected by means of eyes 8 and suitable nails or pins 9 to the side rails. To limit the action of the springs I utilize a chain or other rigid connection 9^a, one near each end of the frame, said chain being detachable from a hook 10 on one of the side rails, while the other end of the chain is permanently connected. Thus, when the side rails are spread as far as required, one of the links of the chain 9^a is connected with the hook 10 to prevent further spreading of the frame.

In order that the end bars 11 may move simultaneously with the side rails I have provided guideways for said end bars, said guideways being shown as comprising rods 12 having downturned ends 13 secured to the side rails 1, as at 14, so positioned on the side rails as to permit the frame to be folded, more clearly shown in Fig. 4 of the drawing. The end bars 11 are also provided with inclined pins 5 for connecting the lace curtains thereto. A series of screw eyes 15 are connected to the outer edge of the bars 11, and secured to one of these eyes on each side are the compensating cords 16, said cords passing over pulleys 17 journaled in the ends of the side rails 1 and passing around pulleys 18 journaled underneath the rails 1, and from thence said cords are brought together and tied, as at 19. By means of this arrangement of cords and pulleys when the side rails are being separated by means of the springs 6, the end bars move toward the ends of the side rails in an obvious manner. The side rails and end bars may be provided with inch marks 20 to facilitate the adjustment of the frame to given sizes of curtains.

The operation of my invention may be briefly described as follows: Curtains are connected to the impaling pins 5, excepting at the corners, and after they have been connected, the chains 9^a are disconnected from the hooks 10, and the springs 6 are permitted

to stretch the curtains sufficiently, and then the chains are again connected with the hooks 10. The end bars will separate or move simultaneously with the movement of the side rails, and hence the chains 9^a serve as a limiting means for both the movements of the side rails and end bars. To fold up the stretcher the side rails are brought together and are held in this position by suitable latches. The side rails are then doubled in the middle, and the rails are held together by latches. The end bars in the meantime have been withdrawn and may be packed between the two side rails.

15 My invention is of simple construction, can be folded for packing or shipping to occupy but a small space, is automatic in its action and is convenient, reliable and efficient.

20 Having thus described the invention, what is claimed as new, is—

1. In a lace curtain stretcher, side rails, springs connected to said side rails, said springs exerting their influence to separate said rails, and means for limiting the action of said springs.

2. In a lace curtain stretcher, side rails, springs normally separating said side rails, means for limiting the action of said springs, end bars, and means whereby said end bars are moved outwardly automatically and simultaneously with the outward movement of the side rails.

3. A lace curtain stretcher comprising side rails, springs connected to said side rails, said springs being oppositely disposed and comprising angular bars and a central coil, the tendency of said springs being to separate the side rails, means for connecting the side rails to limit the action of said springs,

end bars mounted to slide on the side rails, and compensating cords connected to the end bars and passing over pulleys on the side rails and end bars, whereby said end bars move simultaneously with the side rails and automatically under the influence of said springs.

4. A lace curtain stretcher comprising side rails having impaling pins thereon, springs connected to said side rails, the tendency of said springs being to separate said side rails, chains connected to one side rail and detachably connected to the other side rail to limit the action of said springs, end bars, guides therefor, pulleys mounted in the side rails, and cords passing over said pulleys and having their inner ends detachably connected together and their outer ends attached to said end bars.

5. A lace curtain stretcher comprising side rails having impaling pins thereon, springs connected to said side rails, the tendency of said springs being to separate said side rails, chains connected to one of said side rails and detachably connected to the other side rail to limit the action of said springs, end bars, guides therefor connected to said side rails and so disposed as to permit the frame to be folded, pulleys mounted in the side rails and cords passing over said pulleys and having their inner ends detachably connected together and their outer ends attached to said end bars.

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

PETER J. DE VRIES.

Witnesses:

J. C. WILSON,
J. S. WILSON.