

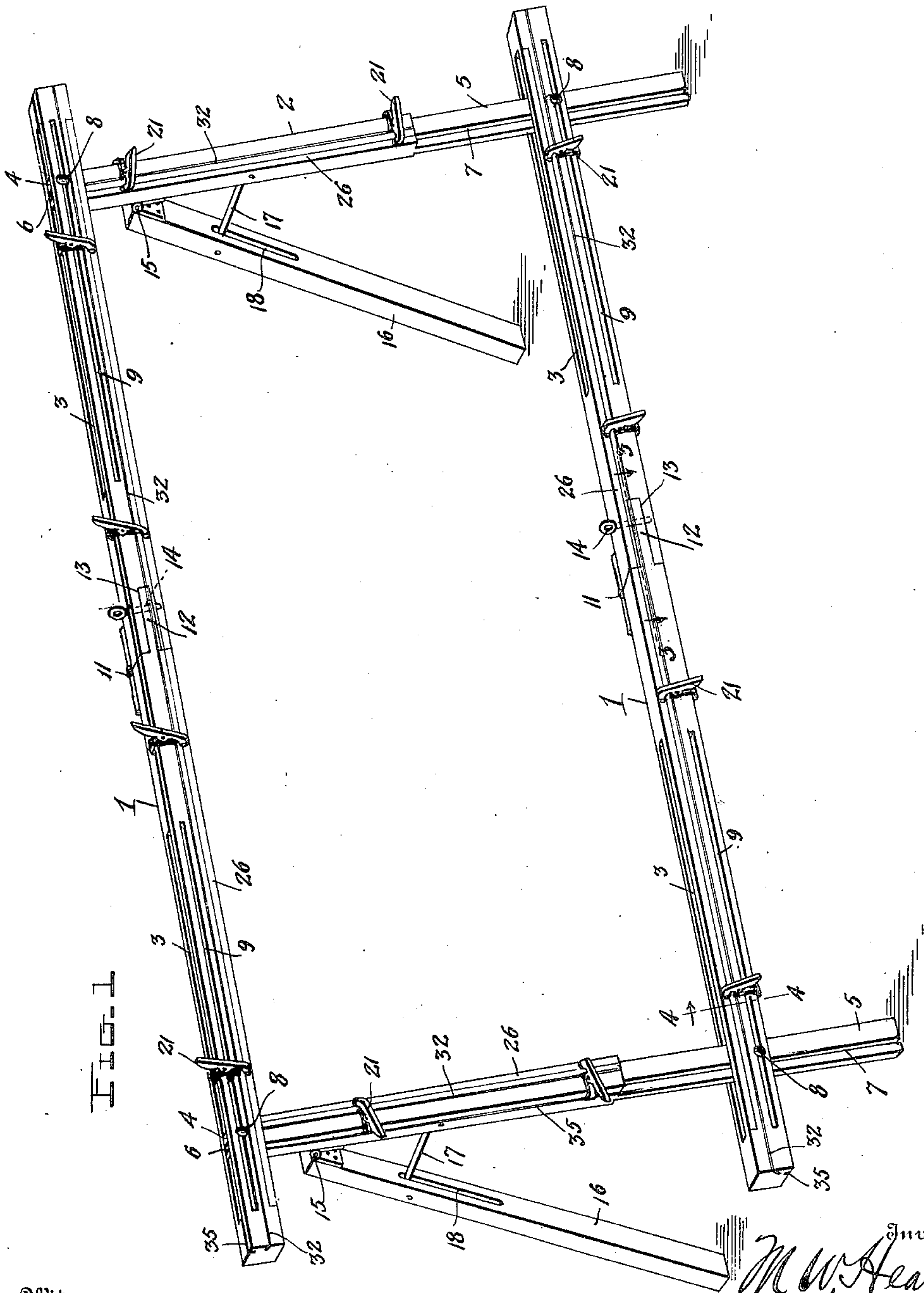
No. 875,261.

PATENTED DEC. 31, 1907.

M. W. HEARN.
CURTAIN STRETCHER.

APPLICATION FILED FEB. 14, 1907.

2 SHEETS—SHEET 1.



Witnesses

J. H. Krieger, Jr.
L. O. Little

By

M. W. Hearn
Nelson E. Coleman
Attorney

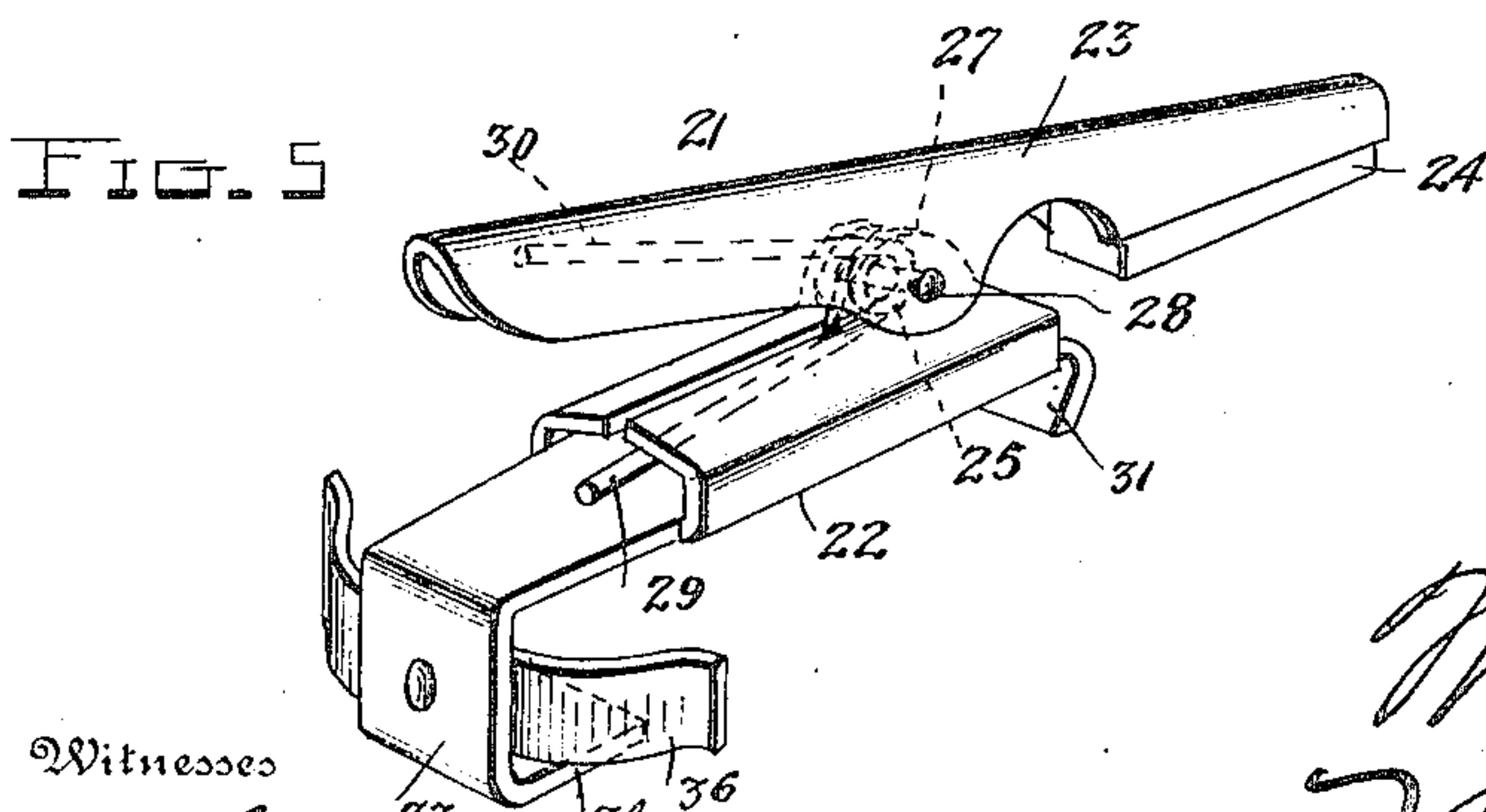
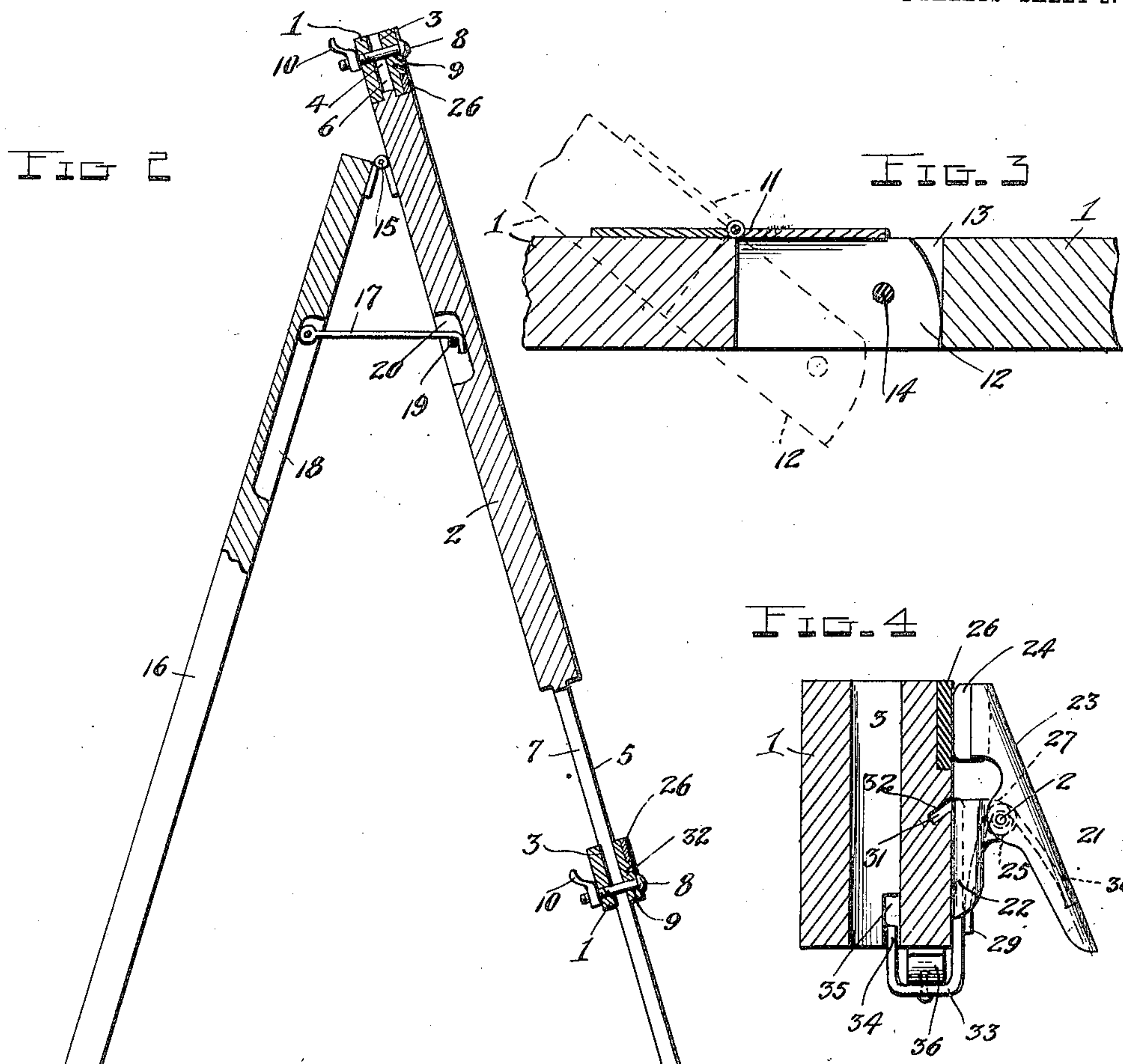
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Witnesses

J. A. Giesbauer, Jr.
R. O. Kittle

Inventor

M. W. Hearn
By *Watson Coleman*
Attorney

UNITED STATES PATENT OFFICE.

MOSES W. HEARN, OF COBLESKILL, NEW YORK.

CURTAIN-STRETCHER.

No. 875,261.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed February 14, 1907. Serial No. 357,363.

To all whom it may concern:

Be it known that I, MOSES W. HEARN, a citizen of the United States, residing at Cobleskill, in the county of Schoharie and State of New York, have invented certain new and useful Improvements in Curtain-Stretchers, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in devices for stretching and drying curtains or the like and it consists of the novel construction, combination and arrangement of parts hereinafter described and claimed.

One object of the invention is to provide a device of this character which may be readily adjusted for curtains of various sizes and which may be quickly and easily taken apart and folded to occupy but little space so that it may be conveniently stored away or transported.

Another object of the invention is to provide a device of this character with curtain holding means that will not soil or injure the curtain.

The above and other objects are accomplished by the improved construction illustrated in the accompanying drawings, in which

Figure 1 is a perspective view of my improved curtain stretcher set up ready for use; Fig. 2 is a vertical transverse section through one end of the device; Figs. 3 and 4 are detail views taken respectively on the planes indicated by the lines 3—3 and 4—4 in Fig. 1; and Fig. 5 is a perspective view of one of the curtain clamps or holders.

My improved curtain stretcher consists of upper and lower side bars or members 1 connecting end bars or members 2. The end bars are adjustable longitudinally at both their upper and lower ends upon the side bars and the lower side bar is adjustable longitudinally upon the lower portions of the end bars. This connection and adjustment of the parts is effected by forming the side bars with vertical slots 3 adapted to receive the reduced ends 4, 5 of the end bars. The reduced upper ends 4 of the end bars are short, corresponding in length to the width of the upper side bar, but the lower ends 5 are comparatively long so that the lower side bar may be adjusted longitudinally on the end bars, that is in a vertical plane or toward and from the upper side bar. The ends 4, 5 are

tending slots 6, 7 adapted to receive clamping bolts or the like 8, which pass through horizontal slots 9 formed in the side bars and intersecting the vertical slots 3. The bolts 8, as will be seen upon reference to Fig. 2, have heads upon their outer ends and wing nuts 10 upon their inner ends, which nuts when tightened effectively clamp the reduced portions or ends 4, 5 of the bars 2. When said nuts are loosened, the bolts 8 slide freely in the slots 9 so that the end bars 2 may be adjusted toward or from each other. By providing the slots 6, 7 in the portions 4, 5 of the end bars it will be seen that the latter may be disconnected from the side bars by simply loosening the nuts 10 and sliding the portions 4, 5, out of the slots 3 thus dispensing with the necessity of removing the bolts 8.

In order to permit the stretcher to be folded when it is temporarily out of use, I preferably form each of the upper and lower bars 1 of two sections of equal length and hingedly connect said sections at their inner ends, as shown at 11. These hinges 11 are arranged upon the rear faces of the sections of the side bar and one leaf or member is connected to each section.

In order to lock the sections in longitudinal alinement, I form upon the inner end of one of them a centrally arranged and longitudinally projecting tongue 12 adapted to swing into and out of a similar groove or recess 13 formed in the corresponding end of the adjacent section, and I provide a removable locking pin 14 which is passed vertically through alining apertures in the tongue 12 and in the recessed portion of the adjacent section, as will be readily seen upon reference to Figs. 1 and 3. When the pins 14 are removed, the two sections of each of the bars 1 may be swung rearwardly toward each other, the tongues 12 swinging forwardly and out of the grooves 13. When the pins are inserted in the bars as shown in Fig. 1 they will effectively lock the sections of said bars in longitudinal alinement. It will be noted upon reference to Fig. 3 that one leaf of the hinge 11 closes a portion of the slot 13 and serves as a stop for the tongue 12 as the latter swings into the slot 13, thus insuring the proper alinement of the apertures in said tongue and the walls of the slot 13 and enabling the locking pin 14 to be readily inserted in said apertures.

In order to support the stretcher in an upright or inclined position I hinge or other-

wise pivotally connect, as shown at 15, to the upper portion of each of the end bars 2, a supporting leg 16. The hinges 15 permit said legs to be folded against the rear faces of the bars 2 and when said legs are swung to angular positions with respect to said bars, they convert the stretcher or frame into an easel and thus support it in an inclined position. To prevent the legs from slipping when in their open position, I preferably provide detachable braces 17. The latter are in the form of hooks which have eyes and their inner ends pivoted in longitudinally extending recesses 18 formed in the legs 16, and the hook shaped portions at their outer or free ends adapted for engagement with cross pins 19 arranged in recesses 20 formed in the inner faces of the end bars 2. The recesses 18 are of sufficient length to permit the hooks or braces 17 to swing into them when the legs 16 are folded against the bars 2.

In order to attach the curtain or other article to be stretched or dried to the side and end bars of the stretcher frame, without soiling or damaging the same, I arrange upon said bars a plurality of slidably and detachably mounted clamping devices 21. Each of these devices, as more clearly shown in Figs. 4 and 5, consists of a body 22 on which is pivoted a dog 23 having a jaw at one of its ends in which is arranged a block of soft, yielding, non-absorbent or waterproof material, such as rubber which will not soil or injure the curtain. The dog 23 is actuated by a spring 25 so that its jaw 24 is forced downwardly against strips of rubber or the like 26 set in the outer faces of the bars 1, along their inner longitudinal edges, as clearly shown in the drawings. The dog 23 is preferably constructed of a piece of sheet metal suitably shaped and doubled upon itself, as clearly shown in Fig. 5, the jaw block 24 being clamped in one of its ends, and its other end serving as a finger piece, which when depressed will elevate the block 24 from the strip 26 so that the curtain may be removed from or inserted between said block and strip. The body 22 is also preferably formed from a piece of sheet metal suitably shaped and bent, as clearly shown in Fig. 5. Upon its top at its inner end are arranged a pair of ears 27 which enter between the sides of the dog 23 and receive the pivot 28 around which latter the spring 25 is coiled and has one of its ends 29 bearing upon the top of the body 22 and its other end 30 within the finger piece of the dog. The inner end of the body 22 is bent downwardly and inwardly at an angle to provide an inclined tongue 31 which enters and slides in an inclined longitudinally extending groove 32 formed in the outer faces of the side and end bars of the stretcher. The tongue 31 and grooves 32 may be of any other shape which will retain the body upon the bar to which it is applied. The rear or

outer end 33 of the body 22 is bent to form a loop and has a longitudinally projecting tongue 34 which enters and slides in a longitudinal groove 35 formed in the outer edges of the side and end bars of the stretcher. The length of the body 22 is greater than the distance between the groove 32 and the outer edge of the bar in which said groove is formed so that said body may have a transverse sliding movement upon the bar to permit its tongue or end 31 to be sprung into and out of the groove 32, the resiliency of the metal of the body and the length of the tongues 31, 34 permitting of this engagement and disengagement of the body of the clamp. In order to retain the tongue 31 in the groove 32, a bow shaped leaf spring 36 is secured centrally in the loop or end 33 of the body and has its ends bearing against the outer edge of the bar to which the clamp is applied. This spring effectively retains the clamp upon the bar but at the same time yields when the clamp is forced inwardly to effect its disengagement.

The use and advantages of the invention will be readily seen from the foregoing description taken in connection with the accompanying drawings. When the stretcher is set up for use, as shown in Fig. 1 it may be readily adjusted to the size of the curtain to be stretched by simply loosening the bolts 8 and sliding the different members or bars upon each other. The curtain may be readily attached to the bars by simply lifting the clamping dogs and inserting the edges of the curtain beneath them or between the rubber blocks 24 and the rubber strips 26. This manner of connection permits the curtain to be readily applied to and removed from the stretcher without danger of tearing or otherwise injuring the curtain and there is no liability of the curtain being soiled by rust, or the like. Any number of the clamps 21 may be employed and by reason of their peculiar construction they may be readily applied to or removed from and adjusted to any position on the bars of the stretcher.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. A curtain stretcher comprising two side bars, one of which is formed with longitudinal slots intersecting each other in planes at right angles, end bars suitably connected at one end to one of said side bars and having their opposite ends reduced and formed with longitudinal slots, said reduced ends being adapted to enter one of the slots in said slotted side bar and to have their longitudinal slots intersecting the other slot in said slotted side bar, and means inserted in the last mentioned intersecting slots for adjustably securing the slotted side bar to the end bars.

2. A curtain stretcher comprising side bars

formed with vertical and horizontal intersecting slots, end bars having reduced ends formed with longitudinal slots and adapted to project through and slide in the vertical slots in the side bars, the slots in said end bars intersecting the other or horizontal slots in the side bars, means inserted in the last mentioned intersecting slots for retaining said bars in adjusted position, and means for supporting the stretcher in a substantially upright position.

3. A curtain stretcher comprising upper and lower side bars formed with vertical and horizontal intersecting slots, end bars having reduced ends formed with longitudinal slots and adapted to project through and slide in the vertical slots in the side bars, the slots in said end bars intersecting the horizontal slots in the side bars and clamping devices passed through the last mentioned intersecting slots.

4. A curtain stretcher comprising upper and lower side bars formed with vertical and horizontal intersecting slots, end bars having reduced ends formed with longitudinal slots and adapted to project through and slide in the vertical slots in the side bars, the slots in said end bars intersecting the horizontal slots in the side bars and clamping bolts passed through the last mentioned intersecting slots.

5. A curtain stretcher comprising a frame having side bars each consisting of two sections, one of said sections being formed at one end with the centrally disposed longitudinally extending slot 13, the centrally arranged and longitudinally projecting tongue 12 formed upon the other of said sections by cutting away the opposite faces of the same, the hinge 11 connecting the two sections of the side bar and having one of its leaves projecting across the slot 13 to serve as a stop for the tongue 12 when the latter enters said slot, and the removable locking pin 14 passed

through alining apertures in the tongue 12 and the walls of the slot 13, substantially as set forth.

6. A curtain stretcher having a bar formed with grooves, a clamp body slidably engaged with said grooves and a clamping dog carried by said body.

7. A curtain stretcher having a bar formed with longitudinal grooves, a clamp body having tongues slidably and detachably engaged with said grooves and a spring actuated clamping dog pivoted upon said body.

8. A curtain stretcher having a bar, a clamp body having a tongue to engage said bar, a spring carried by said body for retaining said tongue in engagement with said bar and a clamping element carried by said body.

9. A curtain stretcher comprising a bar, guides upon the latter, a curtain holder having projections to slidably engage said guides and a spring upon said holder for retaining said projections in engagement with said guides.

10. A curtain stretcher having a bar or support provided with a seat, a curtain holder provided with means to engage said seat and a spring carried by said holder for retaining its engaging means in said seat.

11. A curtain stretcher having a bar formed with the grooves 32 and 35, the plate 22 having one of its ends bent to form the tongue 31 for engagement with the groove 32 and its other end bent to form a loop and the tongue 34 to engage the groove 35, a spring arranged in said loop and engaged with said bar, and a curtain holding means upon said plate.

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

MOSES W. HEARN.

Witnesses:

D. C. Dow, Jr.,
MILLIE SUTLER.