G. H. TRACY.

FOLDING CURTAIN FRAME.

APPLICATION FILED MAY 26, 1914.

1,186,456.

Patented June 6, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

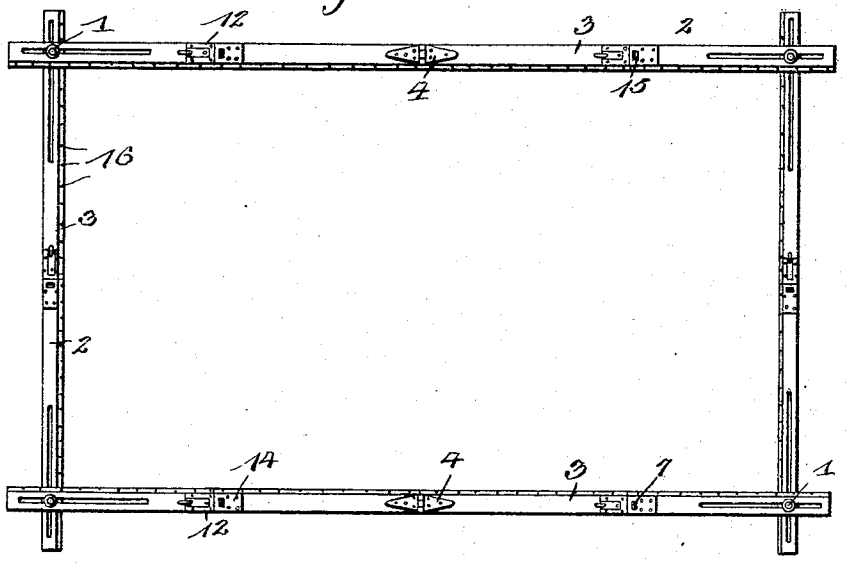


Fig. 2.

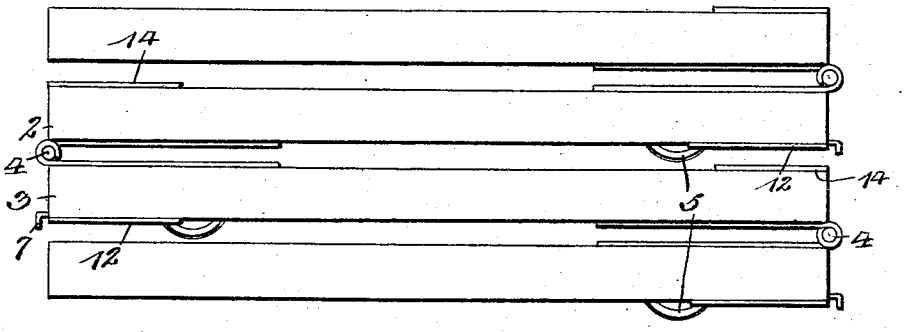
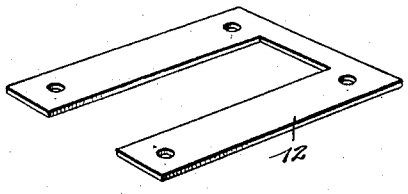


Fig. 6.



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2 SHEETS—SHEET 2.

Fig. 3.

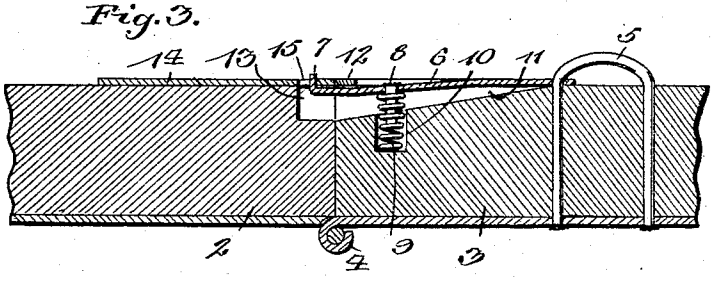


Fig. 4.

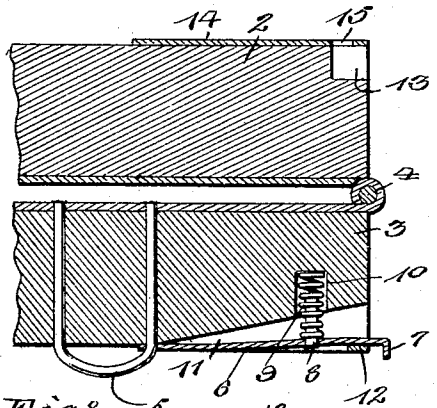


Fig. 7.

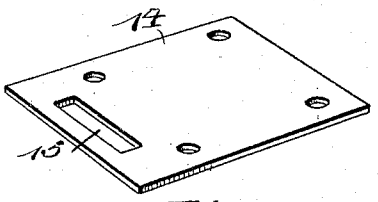


Fig. 9.

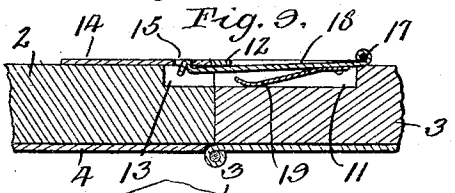


Fig. 8.

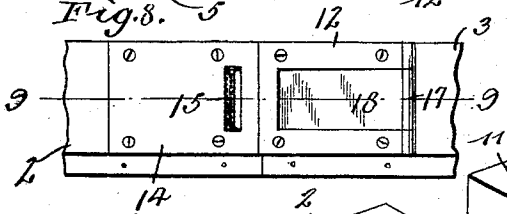
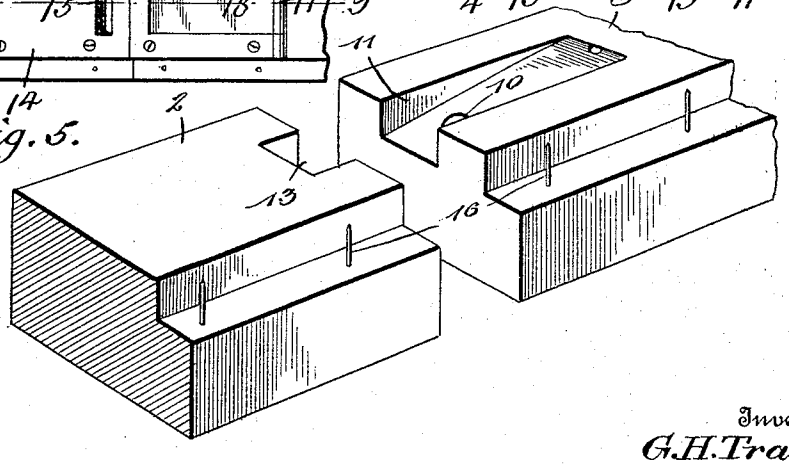


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE H. TRACY, OF BOONE, NEBRASKA.

FOLDING CURTAIN-FRAME.

1,186,456. Specification of Letters Patent. Patented June 6, 1916.

Application filed May 26, 1914. Serial No. 841,159.

To all whom it may concern:

Be it known that I, GEORGE H. TRACY, a citizen of the United States, residing at Boone, in the county of Boone and State of Nebraska, have invented new and useful Improvements in Folding Curtain-Frames, of which the following is a specification.

The invention relates to frames designed chiefly for stretching lace curtains and like draperies, the purpose being to provide a frame which may be readily set up for use or folded into compact form when it is required to store the same.

The primary object of the invention is the provision of a substantial joint between the sections of a frame bar or member, said joint insuring a firm and substantial connection which will withstand ordinary strain and hold the sections in alinement when extended.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawings, and pointed out in the appended claim.

Referring to the drawings, forming a part of the specification, Figure 1 is a front view of a folding curtain stretcher frame embodying the invention. Fig. 2 is a view, showing one of the longitudinal bars folded. Fig. 3 is a longitudinal section of one of the joints between the parts of a frame member. Fig. 4 is a view similar to Fig. 3, showing the sections in folded position. Fig. 5 is a detail perspective view of adjacent ends of sections having the fastening means removed. Fig. 6 is a detail view of the keeper plate formed with a longitudinal slot. Fig. 7 is a detail view of the plate having the opening to receive the engaging end of the catch. Fig. 8 is a plan view of a modification. Fig. 9 is a section on the line 9—9 of Fig. 8.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawings, by the same reference characters.

The curtain frame embodies upper and lower longitudinal bars and end bars, each of said bars comprising a plurality of sections which are hingedly connected to admit of the sections folding to reduce the length of the bars so as to facilitate their handling. Longitudinal slots are formed in end portions of the respective frame bars to admit of varying the size of the frame according to the dimensions of the curtain to be stretched, said slots receiving fastenings 1 which usually consist of bolts provided with thumb nuts. The end bars usually comprise two sections, whereas the longitudinal bars are for the most part formed of four sections, but the several sections are similarly connected so that when in alinement the joints are stiffened and strengthened in every direction, thereby rendering staying means unnecessary. Adjacent sections 2 and 3 are connected by means of a strap hinge 4, the ends of the sections abutting when the sections are extended or are in alinement. The leaves of the strap hinge 4 are secured to the same side of the respective sections. A staple 5 has its members secured to the leaf of the hinge attached to the section 3, the legs or members of the staple passing through openings formed in the section 3 and the closed end of the staple projecting slightly beyond the side of the section opposite that to which the leaf of the hinge 4 is attached. A catch 6 is fitted upon the projecting end of the staple 5, said catch being of a length to have its free end projecting slightly beyond the extremity of the section 3 and bent outwardly to form a hook 7. A stud 8 projects inwardly from the catch 6 and enters the outer end of an expansible helical spring 9 which is set in an opening 10 formed in the section 3 near its extremity. The spring 9 normally exerts an outward pressure upon the catch 6. The section 3 has a tapered recess 11 in which the catch 6 is fitted, said recess 11 being deepest at its outer end to admit of the hooked end 7 of the catch being pressed inward when it is required to engage or release the catch from the coöperating member of the joint fastening. A keeper plate 12 of substantially U form is secured to the side of the section 3 receiving the catch, the outer end of the keeper extending across the outer end of the catch 6 and the side members of the keeper extending along opposite sides of the catch to hold the latter in proper position and to form bracing means therefor. The inner edges of the side members of the keeper plate 12 engage the longitudinal edges of the catch 6, whereby the latter is braced and held in longitudinal position. By having the catch 6 mounted upon the closed end of the staple 5 said catch is well adapted to resist longitudinal strain.

The section 2 is formed in its end with a notch 13, which is adapted to receive the

projecting end of the catch 6. A plate 14 is secured to a side of the section 2 and extends over the notch 13 and is provided with an opening 15 to receive the hooked end 7 of the catch. The plate 14 constitutes a complementary member of the joint fastening and may be secured to the section 2 in any manner. When the sections 2 and 3 are extended or in line the projecting end of the catch 6 enters the notch 13 and the hooked end 7 passes through the opening 15 of the plate 14, thereby holding the section in position. The hooked end 7 engages the ends of the opening 15 so as to prevent any appreciable give in the joint at a right angle to the plane of movement of the sections 2 and 3 when opening or closing. It is to be understood that the several parts 6, 12 and 14 are of substantial and durable structure so as to resist wear and the usage to which such parts are ordinarily subjected in the operation of the frame.

The frame bars or members have their inner edges rabbeted and the projecting portions thus formed receive the pins 16 which are designed to engage the curtain or other drapery to be stretched when the frame is in service. When the frame is set up the several bars are secured in the adjusted position by means of the fastening 1 and the several sections of the members are held extended by the fastening means in the manner set forth. When the frame is to be set aside the sections of the members or bars are folded to reduce their length and such bars may be arranged in a bundle, as may be readily understood. The longitudinal members or bars may be folded about as indicated in Fig. 2, the middle sections folding inward and the end sections folding outward, the several sections lying one against the other when folded.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claim appended hereto, it being understood that the frame may be used for quilting or other purposes.

In the modification shown in Figs. 8 and 9, the fastening is adapted for general use and the catch is automatic in action, snapping when the parts 2 and 3 are brought into alinement. In the modification, the parts 2 and 3 may be elements of any nature intended to be hingedly connected. The hinge 4 connecting such parts is arranged on the side opposite that provided with the fastening means, and such parts are formed with a notch 13 and recess 11. A plate 14 is secured to the part 2 and extends over the notch 13 thereof and is formed with an opening 15 in the part extending over the notch 13. The plate 12 is of U-shape and is secured to the part 3 with its closed end extending over the recess 11. A pin 17 is fitted in an eye formed by bending the rear end of the plate 12 into a roll. A catch 18 is mounted upon the pin 17 and extends through the space and beneath the outer end of such plate and projects a distance to enter the notch 13 of the member 2 and come beneath the overhanging portion of the plate 14. The outer end of the catch 18 is beveled and formed with a stop to engage the plate 14, in front of the opening 15. The beveled ends of the catch 13 enables the same to ride upon the outer end of the plate 14 and ride under such plate when turning the parts 2 and 3 so as to aline, whereby the fastening is made automatic in action when bringing the parts 2 and 3 into alined position. A flat spring 19 is secured at one end to the catch 18 and its opposite end engages the inner wall of the recess 11 and such spring normally exerts an outward pressure upon the catch 18. This form of fastening may be applied to doors, poles, or other parts which are hingedly connected.

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

In combination two sections adapted to have their ends abut, one of said sections having a notch and the other a recess, a hinge connecting the sections and applied to corresponding sides thereof, fastening means applied to the opposite sides of the sections and embodying two plates attached to the respective sections, one of said plates having an opening in register with the notch of the section and the other plate having a portion cut away opposite the recess of the section, a spring actuated catch arranged to operate in the recess of the section and having its end projecting to engage the plate of the other section, and a staple attached to the section and the opposite end of said catch and secured to a leaf of the hinge.

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

GEORGE H. TRACY.

Witnesses:
A. F. NIEMANN,
R. E. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."