N. E. LARSON.

CLENCH CURTAIN CLAMP.

APPLICATION FILED OCT. 5, 1914. RENEWED SEPT. 12, 1917.

1,244,748.

Patented Oct. 30, 1917.

Fig. 1

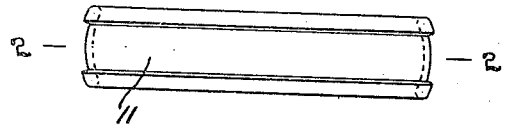


Fig. 3

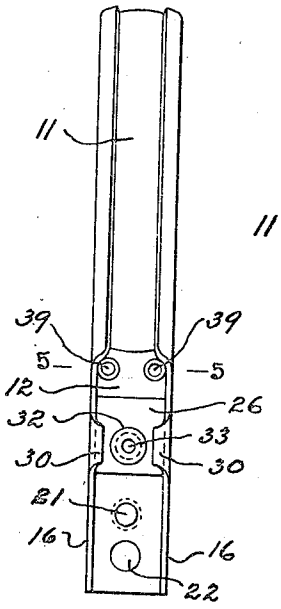


Fig. 2

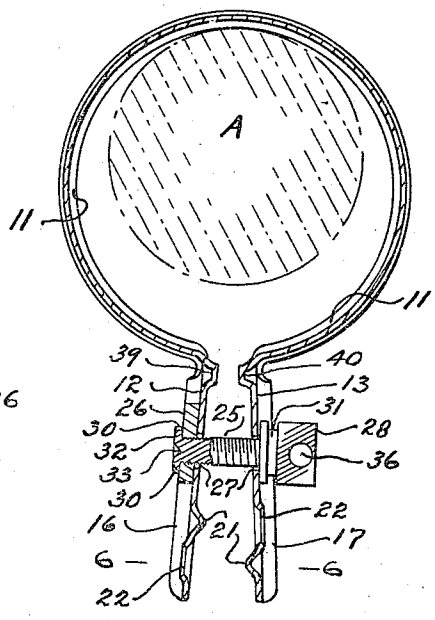
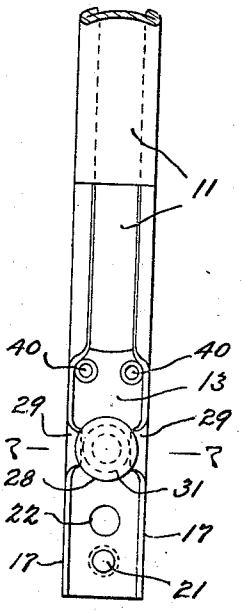


Fig. 4



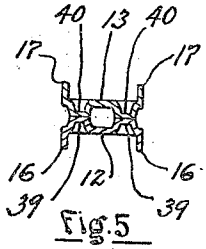


Fig. 5

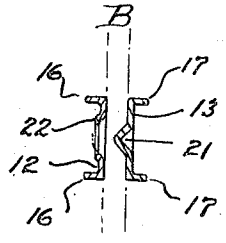


Fig. 6

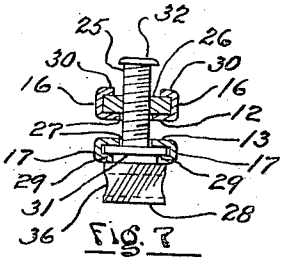


Fig. 7

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UNITED STATES PATENT OFFICE.

NILS EMIL LARSON, OF NEW YORK, N. Y.

CLENCH CURTAIN-CLAMP.

1,244,748. Specification of Letters Patent. Patented Oct. 30, 1917.

Application filed October 5, 1914, Serial No. 865,069. Renewed September 12, 1917. Serial No. 191,059.

To all whom it may concern:

Be it known that I, NILS EMIL LARSON, a citizen of the United States, and resident of the borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Clench Curtain-Clamps, of which the following is a specification.

The present invention, relates to improved means for suspending curtains, portières, draperies and the like, and it has particular reference to, and embodies, certain novel features of construction disclosed in my previous Patents, Nos. 1,085,690 and 1,087,670, but not claimable therein. For the sake of brevity, curtains only will be mentioned hereinafter as the articles wherewith the invention is designed to be employed.

An important object of this invention is to produce a curtain suspending device of improved construction, so contrived that it will seize and clasp the curtain without puncturing the same, and hold it fast from opposite sides as if by clenching, in pursuance of the purpose implied by the name "clench-curtain-clamp" under which the device herein described is known in trade.

A further object is to provide a curtain suspending device of the type set forth having a pair of jaws that are slightly divergent when spaced apart to receive the curtain, but will gradually close and converge thereupon at the outer ends when brought to their clamping position.

Another object is the production of a light and at the same time self-reinforcing structure for the said jaws when pressed together laterally against the curtain.

Still another object is the provision of simple means for the effective manipulation of the said curtain clamp which shall be so connected as to form an inseparable part thereof and thus insure that the device be ready for use as a whole at all times.

Referring to the annexed drawing, for a detailed description of the invention:—

Figure 1 is a top plan view showing this improved clench curtain clamp on a somewhat larger scale than it is usually made;

Fig. 2 is a sectional side elevation thereof, the section being taken on the line 2—2 of Fig. 1;

Fig. 3 is an edge view, looking from the left-hand side of Fig. 2;

Fig. 4 is a similar view, looking from the right-hand side of the latter-named figure;

Fig. 5 is a transverse section of Fig. 3, taken on the line 5—5;

Fig. 6 is a transverse section of Fig. 2, taken on the line 6—6; and

Fig. 7 is a transverse section of Fig. 4, taken on the line 7—7.

As shown in the said drawing, the body or principal portion of the clamp may consist of a single strip of material preferably sheet-metal of a flexible and resilient character, which strip is curved centrally to form a loop 11, and has its opposite ends 12, 13, turned outwardly therefrom on approximately radial lines, as seen in Fig. 2. The loop 11 is designed to embrace more or less loosely, and to slide over, an ordinary curtain-pole, indicated by A in the view last named. The ends 12, 13, constitute a pair of jaws or clasping members for the curtain, represented by dot-and-dash lines at B, Fig. 6.

In order to secure lightness, strength, and ease of movement along the pole A, the loop 11 is made convexo-concave in a transverse direction, that is, convex outward and concave inward, and the edges thereof are folded over exteriorly, all as illustrated in the sectioned upper part of Fig. 4. It will be observed that the transversal curvature, besides imparting steadiness and rigidity to the loop, causes it to bear on the pole at the edges alone, thereby reducing the friction on account of having point contact only with the pole, and the edges being overlapped produce the requisite stiffness in the sides of the clamp which ordinarily will be subjected to the greatest strains.

The aforesaid loop ends or clasping members 12, 13, also have their opposite lateral edges bent externally but these edges extend in opposite directions at substantially right angles to the metal web of which the said members are formed, so as to constitute outwardly-directed flanges 16, 17, by the sides of the same. The flanges here spoken of serve to counteract the inherent pliability of the web, and further discharge other functions, which will hereinafter appear.

Grippers of cone-and-socket formation are provided on the clasping members 12, 13 to afford a firmer hold on the curtain B inserted therebetween, when the members are

brought together in close contact, in the manner represented in Figs. 5 and 6. Such grippers, as seen in Figs. 2 and 6, comprise a conical protuberance or hollow button 21 produced on the inner surface of one of the members, and a correspondingly-shaped oppositely rimmed aperture 22, forming a socket therefor in the face of the other member directly opposite. As many grippers may be used as the length of the pair of jaws or clasping members 12, 13 will accommodate, the invention contemplating the use of one or more of the cone-and-socket type above described. The elements 21, 22, it will be noticed, are adapted for interengagement, with the curtain *b* placed between them, and they are located, by preference midway between the flanges 16, 17, on their respective jaws or clasping members.

The preferred means utilized to force the said jaws or clasping members positively together or apart, either to clamp or release the curtain, consist of a screw 25 and a nut 26 co-acting therewith. The stem or shank of the screw 25 passes through alined apertures 27, formed in the webs of the opposite members 12, 13. A knurled head 28 is provided on this screw to facilitate quick manipulation thereof by the fingers, and the same may be located on the outer side of either member, for instance the member 13, as shown. When the head 28 is thus positioned, the nut 26 will, as a matter of course, be placed on the outside of the opposite member 12, as seen in the drawing. Both the head and nut are confined, at least partly, between the flanges 16, 17, of their respective jaws or clasping members, and they are further maintained in operative position relatively thereto each by a pair of retainers 29, 30. As illustrated, these retainers may consist of lugs formed integral with the flanges 16, 17, the lugs 29 engaging a peripheral groove 31 cut around the head 28, near the inner end thereof, and the lugs 30 extending over opposite sides of the nut 26.

With especial reference to Figs. 2 and 3, it will be noted that the said nut 26 is kept from being rotated with the screw 25, due to its location between the flanges 16. It is also made longer in one direction than it is wide, being extended up toward the loop 11. In other words, the nut is tapped nearer to its lower end, to provide an eccentrically-disposed threaded aperture for the screw. This peculiar feature of construction affords additional rigidity to the web of the clasping member 12, against which the nut bears. The latter may be further maintained thereon, and the several parts of the clamp held together in permanent assemblage, by upsetting the end of the screw, as at 32, Figs. 2, 3 and 7. This will preclude complete retraction of the screw from the nut and disassembling of the operative parts of the clamp. To make the work of upsetting easier, the center of the screw end is countersunk as at 33, so that a smart blow or equivalent pressure exerted thereupon will cause it to quickly flatten out.

Sufficient purchase is obtained for clamping curtains of light fabric by turning the knurled head 28 of the screw with the fingers, as hereinbefore indicated. However, the resistance met varies in natural ratio to the thickness of the material entering into the composition of the curtain, and therefore, to provide for the convenient clamping of heavy fabrics, the screw head 28 is formed with a transverse opening 36, permitting the insertion of a pin-wrench, which may be used to turn the screw when there is occasion to tighten the jaws or clasping members upon curtains exceeding the average thickness.

Normally, the spring of the loop 11 is such as to cause the jaws or clasping members 12, 13 to move apart from each other on slightly divergent lines, in the best position to receive the curtain between them, when the screw 25 has been retracted to its full limit through the nut 26, as exemplified by the reverse conditions depicted in Figs. 2 and 7. But this divergent posture of the opposed members 12, 13 is not favorable to the retention of the suspended curtain, and it would remain unaltered and ineffective if the members were allowed to press directly against each other at the ends thereof nearest the loop, owing to the location of the actuating screw. Therefore, to overcome the divergence, the inner ends of the clasping members are provided with opposed, inwardly facing bosses 39, 40, which abut against one another and operate to keep the said inner ends out of actual contact with each other. This expedient prevents the outer ends of the clasping members from opening or spreading apart when the screw is tightened. It aids in holding the goods or curtain between the jaws more secure, since the bosses 39, 40, constitute fulcra upon which the clasping members oscillate under pressure of the screw and are forced actually to converge toward each other at their outer ends, between which the curtain is firmly grasped. These bosses are located at the greatest possible distance apart transversely of their respective clasping members, and preferably at the points where the lapped-over edges of the loop 11 merge into the lateral flanges 16, 17, as best seen in Figs. 3 and 4.

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

1. The combination with a curtain pole, of a suspending loop having edges folded exteriorly thereof and constituting bearing points upon the pole, jaws depending from

the ends of said loop, tightening means for drawing said jaws together, and inwardly facing bosses located near the juncture of said edges with the jaws preventing the outer portions of the latter from spreading when said means are tightened.

2. A curtain clamp comprising a suspending element, laterally flanged clasping members depending therefrom, a screw for drawing said members together, and cone-and-socket grippers on said members located between their respective flanges below said screw.

3. A curtain clamp comprising a suspending element, laterally flanged clasping members depending therefrom, and tightening means, including a nut held from turning between the flanges of one of said clasping members, and a screw located between the flanges of the opposite member engaging said nut.

4. A curtain clamp comprising a suspending loop with the extremities thereof bent outwardly to form a pair of clasping members, and tightening means for the latter consisting of a nut and screw, said screw being upset at the end over said nut externally of one of the clasping members, and provided with a head capable of pressing against the other clasping member on the outer side of the same.

5. A curtain clamp of resilient material comprising a suspending loop with clasping members depending therefrom, a stop at the juncture of said loop with said members, and tightening means intermediate of said stop and the outer ends of the clasping members causing said ends to approach each other.

6. A curtain clamp comprising a suspending element, clasping members depending normally on divergent lines therefrom, opposed stops located near the juncture of said element with said members, and a screw and nut tightener intermediate said stops and the outer ends of the members acting to draw the latter together.

7. A curtain clamp comprising a suspending element, clasping members depending therefrom provided with externally directed flanges, an eccentrically tapped nut arranged to bear upon one of said members between the flanges thereof, and a screw in engagement with said nut having its head positioned to press against the opposite clasping member.

8. A curtain clamp comprising a suspending element, clasping members depending therefrom, tightening means for the latter consisting of a screw, and nut operable on opposite sides thereof, and retainers acting to confine the tightening means in juxtaposition to their respective members.

Signed at the borough of Manhattan, in the county of New York, and State of New York, this 31st day of September, A. D. 1914.

NILS EMIL LARSON.

Witnesses:
H. C. KARLSON,
W. H. GEE.

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