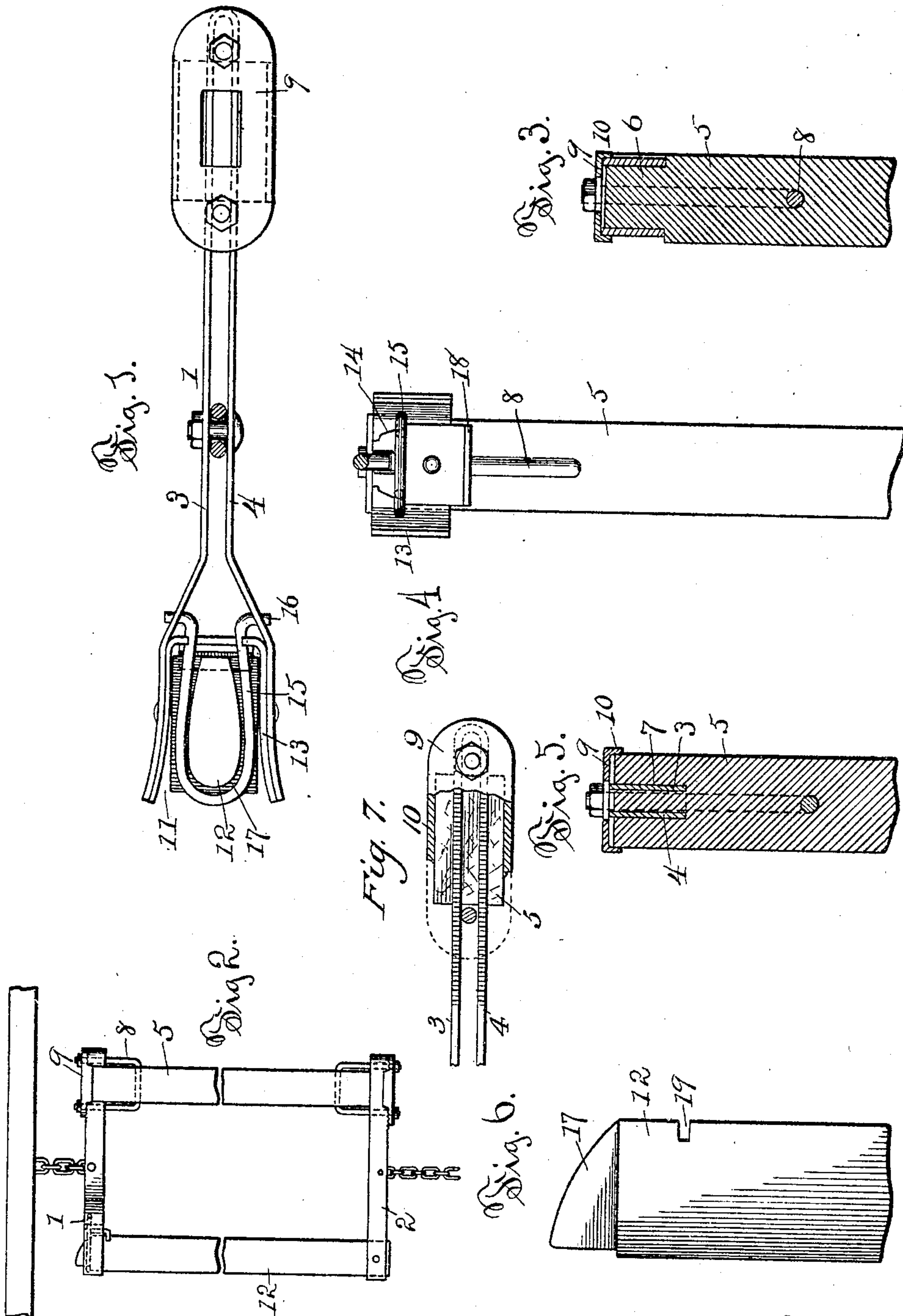


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PATENTED JULY 25, 1905.

O. H. ROBERTSON.
STANCHION.

APPLICATION FILED MAY 25, 1903.



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UNITED STATES PATENT OFFICE.

OLIVER H. ROBERTSON, OF FORESTVILLE, CONNECTICUT.

STANCHION.

No. 795,544.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OLIVER H. ROBERTSON, a citizen of the United States, and a resident of Forestville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Stanchions, of which the following is a specification.

My invention relates to the class of devices employed for securing cattle in a stall; and the object of my invention is to provide a device of this kind that shall be extremely cheap to manufacture, strong and durable in use, and of great convenience in operation. A device in the use of which these objects may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a top view of my improved structure. Fig. 2 is a view in elevation, on reduced scale, of the device with parts broken away. Fig. 3 is a view in lengthwise section of the end of a neck-bar. Fig. 4 is a view in elevation, looking from the left of Fig. 1, with the movable neck-bar removed. Fig. 5 illustrates one of the connections of neck and cross bar. Fig. 6 is a view of the upper end of the pivoted neck-bar. Fig. 7 is a plan view of the adjustable neck-bar connection with parts broken away to show construction.

In the accompanying drawings the numeral 1 indicates the top cross-bar, and 2 the bottom cross-bar. These bars are constructed of strips of metal, preferably iron, bent to form two side parts 3 and 4, as clearly shown in Fig. 1 of the drawings.

A rigid neck-bar 5 is secured at each end to the cross-bars and has a reduced portion 6 on its end fitting between the side parts of the cross-bar (see Fig. 3) or cuts 7, within which the sides of the cross-bar may fit. (See Fig. 5.) The bend in the cross-bar is formed beyond the edge of the neck-bar, and a U-shaped bolt 8 extends transversely through the neck-bar and upward along the edges thereof through the opening between the side parts of the cross-bar and through a plate 9, being secured as by means of nuts. This plate 9 has flanges 10 closely fitting the sides of the neck-bar, and the under surface of the plate may be serrated, as shown in Fig. 2 of the drawings, this serrated surface fitting serrations on the upper edge of the side parts of the cross-bar, thus holding the plate firmly against movement lengthwise of the cross-bar.

The sides of the upper cross-bar flare outwardly at one end, providing a bifurcated open-

ing or mouth 11, the bifurcated ends of which lie on opposite sides of the end of the pivoted neck-bar 12, when the parts are in place. This neck-bar 12 is pivoted to the lower cross-bar, as shown in Fig. 2 of the drawings.

Both the upper cross-bar and the lower cross-bar are preferably formed of metal strips, which embrace the neck-bars on either side either as to the whole of said bars, as indicated in Fig. 3, or by being cut into the bars and embracing a portion thereof, as indicated in Figs. 1 and 5. In either case the cross-bars are what might be termed "cross-bars having side parts," which side parts have lying between them when in position the neck-bars, to which they are secured in the manner described.

Within the mouth 11, formed in the side parts of the upper cross-bar, a latch-plate having a cam-plate 13 is secured. This latch-plate is of U shape, the side parts being secured to the side parts of the cross-bar and the end of the latch-plate in which the cam-plate is formed extending across between said side parts. It constitutes, in fact, an inserted or reinforced mouth, within which the movable neck-bar may be inserted and held against swinging or transverse movement. The cam-plate is cut out at its upper edge, forming a cam-opening, the edges of which provide cams 14. A spring-latch 15 is pivoted in the side parts of the upper cross-bar, as by means of outturned ends 16 passing through holes in the side parts of the upper cross-bar. This spring-latch is formed into a loop adapted to pass over the reduced end 17 of the pivoted neck-bar, the neck-bar being curved or beveled, as shown in Fig. 6, to engage the latch and move it upward as the neck-bar is swung into the bifurcated end of the upper cross-bar. In this upward swinging movement of the latch the side parts engaging the cams 14 of the cam-plate are pressed toward each other and put under spring tension. As soon as the neck-bar has passed beyond and into the loop the tendency of the side parts to separate under the spring action causes the latch to snap down over the end of the neck-bar and hold it in place against swinging transverse movement. Appurtenant to the latch-plate is a projection 18, which may be of any desired form and which engages a recess 19 of corresponding form in the pivoted neck-bar and when the parts are engaged locks the latter against downward movement. These interengaging parts coop-

erate with the latch and latch-plate to securely hold the movable neck-bar and cross-bar against separation or relative movement.

The stanchion as a whole is secured by a flexible connection at the top and bottom, as is usual in devices of this class.

It is obvious that the construction herein illustrated and described may be departed from to a considerable extent and yet embody the invention, and I do not limit myself to the exact construction set out. For instance, the cross-bars need not necessarily be made from a strip of metal bent to form, (although this is the preferred construction,) but may be formed of any material so long as they are properly secured to the stationary neck-bar and have adjacent to the pivoted neck-bar an opening appurtenant to which is a latch-plate and a reinforce or mouth adapted to receive the neck-bar, and of course it is preferred to provide the cam for tensioning the spring upon this inserted reinforce, having the latch-plate, reinforce-mouth, and cam constituting a complete structure, although obviously any form of cam might be used. It is also desirable that in addition to the latch-plate and latch for holding the movable neck-bar against transverse swinging movement there shall be provided appurtenant to the latch-plate and movable neck-bar inter-engaging parts to securely lock the neck-bar against downward movement with reference to the cross-bar.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination in a stanchion, a cross-bar formed from a strip of metal providing side parts arranged to embrace neck-bars, a rigid neck-bar projecting into the opening between the side parts of the cross-bar and adjustable along the cross-bar, means for securing the rigid neck-bar within said opening, a cross-bar located at the opposite end of said neck-bar, a pivoted neck-bar secured to one of said cross-bars, means for adjusting one of said neck-bars toward and away from the cooperating neck-bar and means for removably securing the opposite end of the pivoted neck-bar to the opposite cross-bar.

2. In a stanchion, in combination, a cross-bar having side parts arranged to embrace neck-bars, a rigid neck-bar projecting into the opening between said side parts, a plate overlying the neck-bar and cross-bar, a bolt projecting from the neck-bar along its edge and through said plate, a cross-bar secured to the opposite end of the neck-bar, a pivoted neck-bar secured to one of the said cross-bars, and means for removably securing the opposite end of the pivoted neck-bar to the opposite cross-bar.

3. In a stanchion, in combination, a cross-bar having side parts arranged to embrace neck-bars and a serrated edge, a rigid neck-bar projecting into the opening between the

side parts, a plate overlying the end of the neck-bar and the cross-bar and having serrations, a bolt projecting from and extending along the edge of the neck-bar through the opening between the side parts of the cross-bar, means for securing said bolt outside of the plate, a cross-bar secured to the opposite end of the neck-bar, a pivoted neck-bar secured to one of said cross-bars, and means for removably securing the opposite end of said pivoted neck-bar to the opposite cross-bar.

4. In a stanchion, in combination, a cross-bar having side parts arranged to embrace neck-bars, a neck-bar located in the opening between said side parts, a plate overlying the neck-bar and cross-bar and having flanges lying against the side of the neck-bar, a bolt projecting from and extending along the edge of the neck-bar through the opening between the side parts of the cross-bar, means for securing the bolt, a cross-bar secured to the opposite end of the said neck-bar, a pivoted neck-bar secured at one end to a cross-bar, and means for removably securing the opposite end of the neck-bar to the opposite cross-bar.

5. In a stanchion, in combination, a lower cross-bar and a rigid neck-bar, an upper cross-bar having side parts arranged to embrace neck-bars and secured to the rigid neck-bar, a spring-latch pivoted in the side parts of said cross-bar, means for moving the ends of the latch laterally to produce spring action, and a pivoted neck-bar adapted to engage said latch.

6. In combination in a stanchion having a lower cross-bar and a rigid neck-bar, an upper cross-bar having side parts arranged to embrace neck-bars, a spring-latch pivoted in the sides of the upper cross-bar, cams for moving the ends of the latch laterally to produce spring action, and a pivoted neck-bar adapted to be engaged by said latch.

7. In a stanchion, in combination with a rigid neck-bar and a lower cross-bar, an upper cross-bar having side parts arranged to embrace neck-bars, a cam-plate secured to each of the said side parts and having cams, a spring-latch engaging said cams whereby its ends are moved laterally to produce spring action, and a pivoted neck-bar adapted to engage said latch.

8. In a stanchion, in combination with a rigid neck-bar, a pivoted neck-bar, a cross-bar, means for connecting the cross-bar to the rigid neck-bar at one end and an opening in the opposite end of said cross-bar, a reinforce-mouth adapted to be inserted in said opening, and means appurtenant to the mouth for removably securing therein the pivoted neck-bar.

9. In a stanchion, in combination with a rigid neck-bar and a movable neck-bar, a cross-bar provided adjacent to the movable neck-bar with a bifurcated opening, a reinforce-mouth adapted to be inserted in said opening

and provided at its inner end with a lip, an opening in the movable neck-bar adapted to engage said lip, and means appurtenant to the reinforced mouth for removably securing the movable neck-bar in place with the lip and recess in engagement.

10. In a stanchion, in combination with a rigid and a movable neck-bar, a cross-bar formed of a single piece of metal bent to shape, means for securing said cross-bar to the rigid neck-bar, an opening in one end of the cross-bar, a reinforce arranged within said opening, a cam operatively arranged with relation to the reinforce, and means coöperating with the cam for engaging and holding the relatively movable neck-bar.

11. In a stanchion, in combination with a rigid neck-bar, a pivoted neck-bar, a cross-bar, means for connecting the cross-bar to the rigid neck-bar at one end and an opening in the opposite end of said cross-bar to receive the pivoted neck-bar, a latch-plate and latch for holding the pivoted neck-bar in the opening, and interengaging parts appurtenant to the latch-plate and neck-bar for preventing lengthwise movement of the latter.

12. In a stanchion, in combination with a rigid neck-bar, a pivoted neck-bar, a cross-bar, means for connecting the cross-bar to the rigid neck-bar at one end and a bifurcated opening in the opposite end of said cross-bar, a latch-plate and latch operatively arranged with reference to said bifurcated end and adapted to secure the pivoted neck-bar against transverse swinging movement, a projection operatively arranged with relation to the latch-plate and cross-bar, a corresponding recess in the neck-bar, said projection and recess adapted to interengage when the neck-bar is swung into position and held by the latch.

13. In combination in a stanchion, a rigid neck-bar and a movable neck-bar, a cross-bar provided adjacent to the movable neck-bar with a bifurcated opening, a latch-plate adapted to be inserted in said opening and constituting a reinforce-mouth, a cam secured in the latch-plate and a latch coöperating with the cam, a projecting part appurtenant to the latch-plate and a recess upon the movable neck-bar adapted to engage said projection and coöperate with the latch and latch-plate to securely lock the movable neck-bar and stationary cross-bar against all relative movement.

14. In combination in a stanchion, a stationary neck-bar, a cross-bar secured thereto and a movable neck-bar, a latch-plate and latch operatively arranged on the cross-bar to hold the neck-bar against movement in one direction, and interengaging parts appurtenant to the latch and latch-plate and movable neck-bar to prevent relative movement of the parts.

15. In combination in a stanchion, a metallic cross-bar including two side parts, a rigid neck-bar secured to the cross-bar in the open-

ing between the two metallic side parts, a cross-bar located in the opposite end of said neck-bar, a pivoted neck-bar pivotally secured to one of said cross-bars, means for removably securing the opposite end of the pivoted neck-bar to the opposite cross-bar, and means for bodily adjusting one of said neck-bars along the line of the cross-bars.

16. In combination in a stanchion, a stationary neck-bar and a pivoted neck-bar coöperating therewith, a pair of cross-bars having metallic side parts arranged to embrace the opposite ends of the neck-bars, means for bodily adjusting the stationary neck-bar and securing it within the openings formed between the side parts of the cross-bars, one of said cross-bars having arranged and pivoted between its side parts the movable neck-bar, the other of said cross-bars having an opening to receive the opposite end of said movable neck-bar, and means for securing said movable neck-bar within the opening between the side parts of the last-named cross-bar.

17. In combination in a stanchion, a stationary neck-bar and a pair of cross-bars having metallic side parts, means for securing the stationary neck-bar within the openings formed between the side parts of the cross-bars, a movable neck-bar pivoted to one of the cross-bars between its side parts and removably secured to the opposite cross-bar between its side parts, means for removably securing the movable neck-bar in place, a lip projecting from the metallic cross-bar, and an opening in the movable neck-bar arranged to be engaged by said lip with the parts in place.

18. In combination in a stanchion, a cross-bar comprising two metallic side parts arranged parallel to each other, a neck-bar arranged between the side parts of the cross-bar and means for securing it with relation thereto, a reinforce arranged between the two metallic side parts at the opposite end thereof from the stationary neck-bar and provided with a lip, a movable neck-bar and means for removably securing it between the metallic side parts and with relation to the reinforce, and a groove in said neck-bar adapted to be engaged by the lip.

19. In combination in a stanchion, a rigid neck-bar, a movable neck-bar, cross-bars comprising substantially parallel metallic side parts arranged on opposite sides of the rigid neck-bar, means for rigidly securing one end of the metallic side parts and rigid neck-bar, a member forming a cross-tie for the metallic side parts arranged adjacent to one end of one of the cross-bars, and a latch extending over said cross-tie and coöperating therewith to form a positive lock for preventing movement of the movable neck-bar.

20. In a stanchion, in combination with a rigid neck-bar and a movable neck-bar, a cross-bar comprising two metallic side parts arranged on opposite sides of the neck-bar, said

side parts rigidly secured to one of the neck-bars, means at the opposite ends of the cross-bar for maintaining its side parts in parallel relation, a reinforce arranged appurtenant to the side parts and movable neck-bar, a projecting lip appurtenant to the reinforce, an opening in the movable neck-bar adapted to engage said lip, and a latch for holding the movable neck-bar in engagement with the lip appurtenant to the reinforce.

21. In a stanchion, in combination with a rigid neck-bar and a movable neck-bar, cross-bars each comprising a pair of metallic side parts arranged parallel to each other, said cross-bars secured to one of the neck-bars, a reinforce arranged appurtenant to one of the cross-bars between its side parts and adjacent to the movable neck-bar, a projecting lip appurtenant to the reinforce, a recess in the

movable neck-bar adapted to engage said lip, a latch located between the side parts of the cross-bar and adapted to hold the movable neck-bar in engagement with the lip, and means for bodily adjusting one of said neck-bars with reference to its cooperating neck-bar and the cross-bars.

22. A stanchion-frame composed of two upright neck-bars, one pivotally supported at its foot and the other rigidly supported, said neck-bars united at each end by metallic strips arranged on opposite sides thereof, the metallic strips embracing said neck-bars at opposite ends, and means for adjustment of the uprights toward and away from each other.

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Witnesses:

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