



**Jan. 31, 1961**

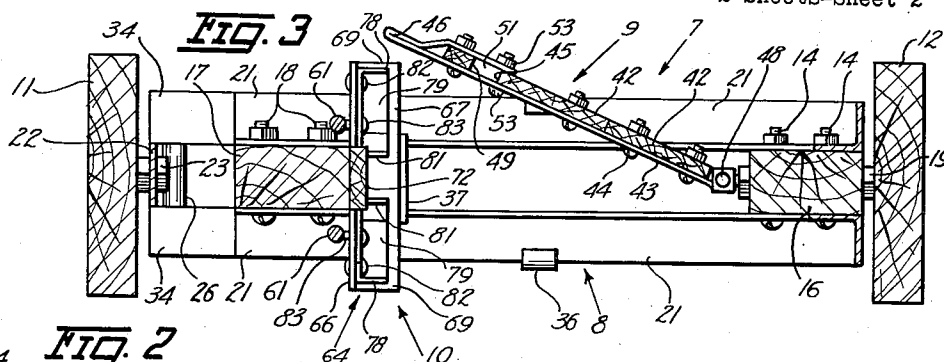
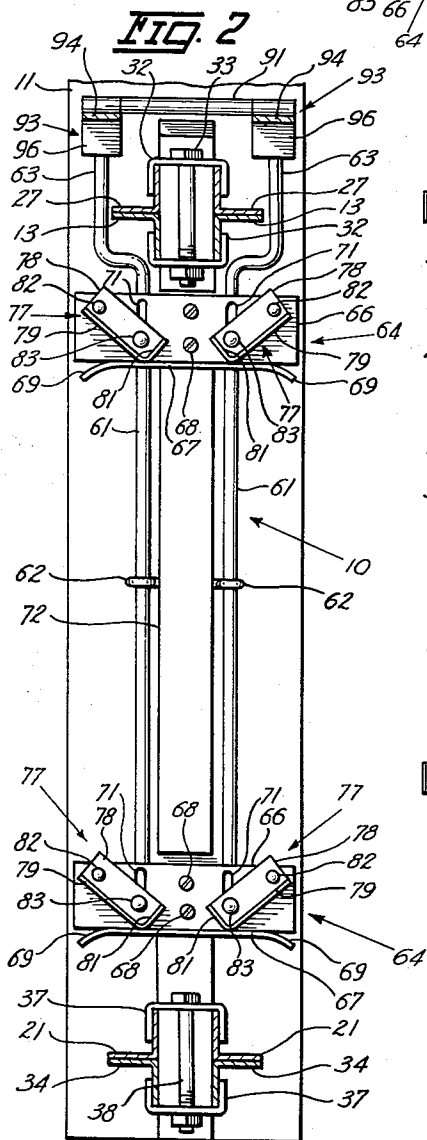
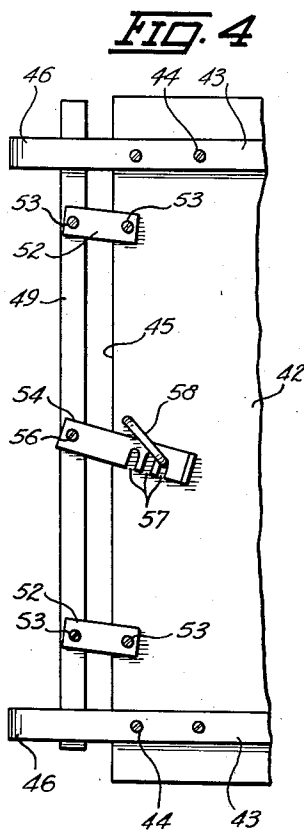
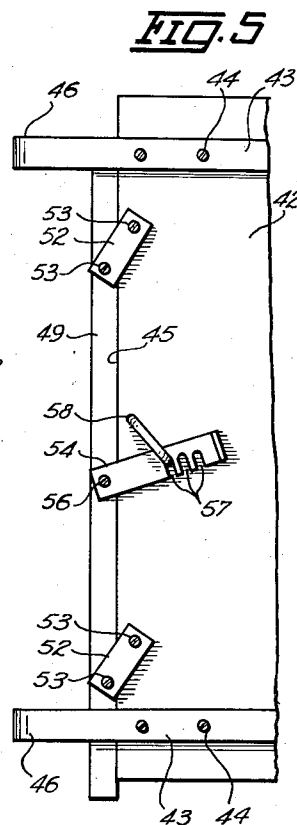
R. E. COLLINS

**2,969,770**

## STANCHION APPARATUS

Filed Jan. 16, 1958

2 Sheets-Sheet 2



INVENTOR.  
RUSSELL E. COLLINS  
BY *Rudolph S. Sauls*  
ATTORNEY.

1

2,969,770

## STANCHION APPARATUS

Russell E. Collins, 311 S. Market, Oskaloosa, Iowa

Filed Jan. 16, 1958, Ser. No. 709,351

4 Claims. (Cl. 119—98)

This invention relates to a stanchion apparatus for catching and holding domestic animals, such as cattle, and more particularly to a stanchion apparatus including a swingable door and a latch mechanism therefor for holding cattle while they are being treated for tuberculosis, Bang's disease and the like.

An object of the present invention is to provide a novel and improved stanchion apparatus for catching, holding and releasing domestic animals.

A further object of the present invention is to provide a stanchion apparatus having a swingable door and a latch mechanism therefor with an improved manner of co-action therebetween.

Still another object of the present invention is to provide an improved latch mechanism for a stanchion apparatus comprising a movable rod device normally maintained at a lower limit of movement and being cooperable with relatively movable members to form a locking structure for a swingable door.

Another object of the present invention is to provide a stanchion apparatus including a swingable door and a latch mechanism therefor which is simple of operation, efficient of use, and economical of manufacture and installation.

These and other objects will become readily apparent from the following description and the accompanying drawings, wherein:

Fig. 1 is a perspective view of a stanchion apparatus arranged in accordance with the present invention;

Fig. 2 is a vertical cross-sectional view taken along the lines 2—2 of Fig. 1;

Fig. 3 is a horizontal cross-sectional view taken along the lines 3—3 of Fig. 1; and

Figs. 4 and 5 are fragmentary side elevational views of an adjustable door feature of the invention.

Referring now to the drawings, the stanchion apparatus 7 (Fig. 1) of this invention is secured between a pair of laterally spaced upright jambs 11 and 12 and comprises a rectangular frame unit 8 to which a door unit 9 is swingably attached on one side, the other side being releasably engaged by a latch mechanism 10 operatively connected to the frame unit 8. The upper frame portion of the apparatus 10 comprises a pair of spaced angle irons 13 which are secured, as by bolts 14, at one end thereof to an upright frame member 16 and at the other end to another upright frame member 17, as by bolts 18, the frame member 17 being spaced outwardly from the post 11.

The frame member 16, which is the right vertical side of the stanchion apparatus frame as seen in Fig. 1, is secured to the jamb 12 by bolts 19 (Fig. 3). The lower frame portion comprises a pair of laterally spaced angle irons 21 (Figs. 1 and 2), similar to the upper irons 13, which are secured at their right ends to the post 16 by bolts 14, and which are secured adjacent their other ends to the post 17 by bolts 18. The left vertical side of the frame comprises a flat bar 22 (Figs. 1 and 3) which is secured to the jamb 11 by means of bolts 23. The

2

bar 22 has a pair of integral bore-forming elements 24 and 26 provided at the top and bottom thereof, respectively, for a purpose hereinafter described.

A pair of angle irons 27 (Figs. 1 and 2), similar to but of a shorter length than the upper angle irons 13, are placed in a back to back relation on top of a corresponding upper angle iron 13, each iron 27 having formed at the inner end thereof a claw or clamp member 28 (Fig. 1) which engages the outwardly extending horizontal flange of the lower angle iron 13; the inner ends of the irons 27 being secured together, as by a bolt 29 inserted through their vertical legs (Fig. 1), the bolt 29 passing through a spacer 30 inserted therebetween. The outer ends of the angle irons 27 are secured to each other by a bolt 31 which extends through the bore-forming element 24 of the bar 22 (Fig. 1). A pair of U-clamps 32 are placed above and below the joined pairs of angle irons 13 and 27, and are secured together as by bolt 33.

The lower pair of angle irons 21 (Figs. 1 and 2) are joined along their bottom surfaces by a pair of angle irons 34, similar to but of shorter length as indicated, each of which have a claw member 36 (Fig. 1) at the inner end thereof which hooks over the outwardly extending flange of the respective angle iron 21 thereover. The inner ends of the angle irons 34 are secured together as by a bolt (not shown) and the outer ends are also secured together by a bolt (not shown) which extends through the lower bore-forming element 26 of bar 22 (Fig. 1). The lower pairs of angle irons 21 and 34 are secured together by a pair of U-clamps 37, the U-clamps being secured by a bolt 38.

The arrangement of the upper and lower pairs of angle irons, 13, 27 and 21, 34 respectively, is such that by merely loosening and re-tightening the clamping devices provided therefor, the claw members and the U-clamps, each pair may be adjusted as to its combined length, whereby it is obvious that the width of the frame unit 8 may be adapted within limits to fit between jambs 11 and 12 of varied types and spacings.

A door unit 9 (Figs. 1 and 2) is provided for the stanchion apparatus and comprises several door panels 42 placed in a side-by-side relation and secured at the top and bottom by a metal strap 43, which is attached to the panels 42 by means of bolts 44. A catch member 46 (Figs. 3—5) is formed by a closed loop at the outer end of each strap 43 and extends laterally outwardly from the free side 45 of the door, the other end of each strap 43 being secured to the post 16 by a conventional bolt and spring unit 48 for obtaining a floating swinging movement of the door unit 9. A laterally adjustable bar 49 (Figs. 4 and 5) has its upper and lower ends guidably movable in a space 51 (Fig. 3) formed by the outer catch member-forming portion of each strap 43 being returned and secured on the opposite side of the panel 42 in a spaced relation to the main portion of each strap 43. A pair of elements 52 (Figs. 4 and 5) are pivotally secured, as by bolts 53, between the inner door panel 42 and the bar 49 as indicated. An elongated element 54 is also pivotally secured at one end to the bar 49, as by a bolt 56, and has a series of serrations 57 formed along the base of the other end for the selective reception therein of the lower leg of a U-shaped member 58, both legs of which are permanently secured in a door panel 42. By this arrangement, the bar 49 may be laterally adjusted to vary the width of the door unit 9 for a purpose hereinafter described.

A latch mechanism 10 (Figs. 1, 2 and 3) for releasably engaging the door unit 9 comprises a pair of horizontally spaced, vertically disposed rods 61, each movably secured to the frame member 17 by an eyelet screw 62. Each rod 61 is bent outwardly at right angles at the top 63 for a purpose hereinafter described. A pair of L-shaped

3

plate members 64, comprising a back member 66 and a base 67, each have their back member 66 secured to the inside of the frame member 17, as by bolts 68, immediately above and below the lower and upper portions, respectively, of the stanchion frame. Each plate member 64 is secured so that the base 67 extends horizontally outwardly from the member 17 at a location whereby, upon a swinging movement of the door unit 9, the catch member 46 moves in a horizontal path immediately above and over the base 67. The ends of the base 67 are bent downwardly at 69 (Fig. 2) to aid in guiding a respective catch member 46 thereover. A pair of horizontally spaced, vertically elongated slots 71 (Fig. 2) are formed in the back member 66 of a plate member 64, each slot being placed directly in front of a rod 61. A relatively flat member 72 is secured against the inner side of the frame member 17 and extends between the plate members 64 (Figs. 1 and 2).

A pair of horizontally spaced keeper plates 77 (Fig. 2), each having a back member 78, an outwardly extending base 79, and an inner side member 81, are each pivotally secured at the outer end of the back member 78, by a pivot bolt 82, to the back member 66 of each plate member 64, the pivot point being a spaced distance above the shelf-forming base 67 of the member 64. The inner end of each keeper plate 77 is pivotally secured to a pivot pin 83, which pin is pivotally secured in turn through a respective slot 71 to the rod 61 directly therebehind. It is here to be noted that each rod 61 is free to move downwardly due to the force of gravity, the downward movement being limited only by the respective pivot pins 83 secured thereto, contacting the lower extremes of their respective slots 71. In the lower position of each rod 61 (Fig. 2), it is noted that the inner end of each keeper plate 77 lies closely adjacent the shelf forming base 67 of a plate 64 and is located in the horizontal path of movement of a respective upper or lower catch member 46 (Fig. 1).

A plate 90 (Fig. 1) is secured to the top of the frame member 17, the inner end of which extends angularly upwardly from the secured end and has a bore-forming element 91 at its extreme inner end. A pin 92 is inserted through the bore forming end 91 of the plate 90 and extends outwardly from each end thereof. A lever member 93 is pivotally secured to each end of the pin 92 and has a free end 94 adapted for manual actuation, the other end 96 of the lever 93 being secured to the top 63 of a rod 61, as by a cotter pin 97. It may here be noted that as the main portion of each rod 61 is vertically disposed beneath the outwardly extending flanges of the upper pairs of angle irons 13 and 27 (Fig. 2), it is necessary, for the proper connection of a rod 61 with the respective lever member end 96, that the upper end 63 of each rod 61 be bent outwardly and upwardly at right angles to the main portion of the rod 61. The lever arrangement is such, that by a depression of the free end 94 of a lever 93, the rod 61 attached thereto is raisably moved from a gravitationally assumed lower position to an upper position, wherein the respective vertically spaced keeper plates 77, attached thereto via the pins 83, are pivoted upwardly and away from the shelf forming member 67, thus unblocking the horizontal movement of the catch members 46 and forming a horizontally disposed slot through which a catch member 46 may freely move.

To permit the entrance and exit of animals into the stanchion from either side thereof, the latch mechanism 10 is adapted to receive the door unit 9 from either side thereof and to release the door unit for movement to either side. As best appears in Fig. 2, the pivotal arrangement of the keeper plates 77 is such that upon movement of the door unit from an unlatched position toward a latched position, the keeper plates 77 on the sides of the plate members 64 toward the moving door unit 9, are forcibly pivoted upwardly upon contact by the latch member 46 against the downward force of their respective rod 61 and

4

lever 94 units. The keeper plates 77 will pivot either clockwise or counterclockwise depending from which side of the latch mechanism 10 the door unit 9 approaches. Each catch member 46 thereby passes through a slot 5 formed by the lower end 79 of the keeper plate 77 and the shelf member 67, and into the intermediate space formed between each pair of horizontally spaced keeper plates 77.

After passing the one keeper plate, the catch member 46 is prevented from further movement in the same direction by the other keeper plate 77 which is in its lower position in the horizontal path of movement of the catch member 46 and which is pivotally immovable by the catch member due to the blocking action of the shelf member 67. The locking of the latch mechanism 10 is completed, after the catch member 46 has passed the first set of keeper plates 77, by the upwardly forced rod 61 gravitationally re-assuming its lower position whereupon the keeper plates 77 attached thereto also drop into their lower position wherein they are adjacent the shelf members 67. It is obvious that in the position wherein both keeper plates 77 are in their lower positions forming a bracket about the respective catch members 46, the door unit 9 is prevented from swingable movement, until either of the lever ends 94 are depressed, as an attempted movement of the catch members 46 in either direction would but tend to pivot the left set of keeper plates 77 clockwise (Fig. 2) and the right set counterclockwise, both attempted pivotal movements being resisted by the respective shelf members 67.

When in operation, the space between the door unit 9, when in a latched position, and the inner side of the frame member 17 is adjusted by means of the adjustable bar 49 so as to be of a sufficient width only to allow the neck of an animal to pass therethrough without injury, while preventing either the head or the shoulders of the animal from also passing therethrough. The door unit 9 is swung toward the direction the animal approaches in a manner to present a partial opening, so that when the animal inserts its head between the space formed between the left vertical side of the stanchion frame and the partially opened door unit, the shoulder of the animal adjacent the door unit 9 contacts and forces the unit into the latching mechanism 10 whereby the door unit 9 is locked due to the hereinbefore described locking action.

To release the door unit 9 from its latched position, thereby releasing the animal from its caught position within the stanchion apparatus 7, the lever member 93, located on the opposite side of the stanchion apparatus as the animal, is depressed, whereby the respective rod 61 thereattached and its vertically disposed keeper plates 77 are moved upwardly and allow the catch members 46 and the door unit 9 to be moved out of the locked position and swung away from the latch mechanism 10. The animal is then free to move forward and through the stanchion apparatus 7, the apparatus then being placed in position to catch and hold the next animal.

Although one particular embodiment of the invention has been disclosed herein, it is not to be so limited. On the contrary, various alterations and modified constructions may be made without varying from the true spirit and scope of the invention, as disclosed in the appended claims.

I claim:

1. A stanchion apparatus comprising a frame means, door means swingably attached at one side to a vertical side of said frame means and wherein the other side is horizontally spaced from the other vertical side of said frame means and has a horizontally extending catch member secured thereto, latch means movably attached to said frame means including a pair of horizontally spaced, vertically disposed rod members, a plate member secured to said frame means and being disposed between said rod members and said catch member and having a horizontally spaced pair of vertically elongated slots formed therein, a shelf-forming member secured to said

5

frame means adjacent the base of said plate member and extending outwardly from said frame means in a position wherein said catch member moves horizontally directly over said shelf member, and a pair of horizontally spaced keeper plates each pivotally secured at an outer end to said plate member a spaced distance above said shelf member and being pivotally secured at an inner end to a respective rod member by a pivot element extending through a respective slot, said rod members being free to fall a vertical distance limited by their pivot elements resting at the bottom of the slots whereupon the inner ends of said keeper plates lie adjacent the shelf member on either side of and in the path of horizontal movement of said door means catch member, and means secured to said frame means being connected to said rod members and being operable to move said rod members vertically upwardly whereby said keeper plates are pivotally moved upwardly and away from said shelf members and out of the horizontal path of movement of said catch member.

2. A stanchion apparatus comprising a frame means, door means swingably attached at one side to a vertical side of said frame means, the other side of said door means being laterally spaced a substantial distance from the other vertical side of said frame means and having laterally adjustable means adaptable to vary said space, and said door means having further a catch member of relatively narrow width extending laterally therefrom, latch means movably secured to said other vertical side of said frame means comprising a pair of horizontally spaced, vertically movable rod members operatively engaged with a keeper means including a horizontally spaced pair of keeper plates movable into or out of the path of horizontal movement of said catch member, and lever means secured to the top of said frame means and including a pivot element on each side of which a lever member is pivotally mounted for movement independent of the other lever, one end of each lever being secured to an upper end of a rod member whereby said respective rod member is movable from a gravitationally assumed lower position wherein a respective keeper plate is in said path of movement of the catch member to an upper position by actuation of the respective lever member wherein the respective keeper plate is withdrawn from said path.

3. A stanchion apparatus comprising a frame means, door means swingably attached to one vertical side of said frame means, and latch means secured to the other vertical side of said frame means comprising vertically extending connecting means operatively engaged with a shelf means having a portion extending outwardly from said frame means, the operative engagement occurring

6

by means of a pair of keeper plates each pivotally secured at one end to said shelf means and at the other end to said connecting means through a slot formed in said shelf means, said keeper plates movable by said connecting means from a position spaced upwardly from said shelf portion to a position contacting said shelf portion, whereby when said keeper plates are in said upwardly spaced position said catch member is horizontally movable between said shelf portion and said keeper plates and when said keeper plates are in said shelf portion contacting position said catch member is held between said keeper plates.

4. A stanchion apparatus comprising a frame means, door means swingably attached at one side to an inner vertical portion of said frame means and having laterally extending catch means at the other side thereof, and latch means for releasably holding said door means via said catch means and including vertically movable means disposed along the vertical portion of said frame means opposite said door means attachment, pivotal means attached to the top of said frame means and moving said vertically movable means from a gravitationally assumed lower position to an upper position, plate means secured to said opposite vertical portion, a pair of horizontally spaced keeper elements each pivotally attached to said plate means and to said vertically movable means, and movable, upon movement of said vertically movable means from said lower position to said upper position, from a position forming a bracket about said catch means to a position wherein said keeper elements are moved out of the horizontal path of movement of said catch means.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

|           |                  |                |
|-----------|------------------|----------------|
| 969,678   | West             | Sept. 6, 1910  |
| 1,245,057 | Stillings et al. | Oct. 30, 1917  |
| 1,447,705 | Anderson         | Mar. 6, 1923   |
| 1,461,591 | Wayrynen         | July 10, 1923  |
| 2,214,969 | McNett           | Sept. 17, 1940 |
| 2,554,558 | Bush             | May 29, 1951   |
| 2,661,971 | Reymann          | Dec. 8, 1953   |
| 2,693,043 | Leake            | Nov. 2, 1954   |
| 2,693,653 | Dean             | Nov. 9, 1954   |
| 2,698,601 | Pfullman         | Jan. 4, 1955   |
| 2,701,927 | Dyer             | Feb. 15, 1955  |
| 2,786,289 | Koch             | Mar. 26, 1957  |
| 2,822,630 | Guyer            | Feb. 11, 1958  |
| 2,833,248 | Meyer et al.     | May 6, 1958    |

##### FOREIGN PATENTS

|         |               |               |
|---------|---------------|---------------|
| 201,168 | Great Britain | Feb. 22, 1956 |
|---------|---------------|---------------|