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STANCHION.

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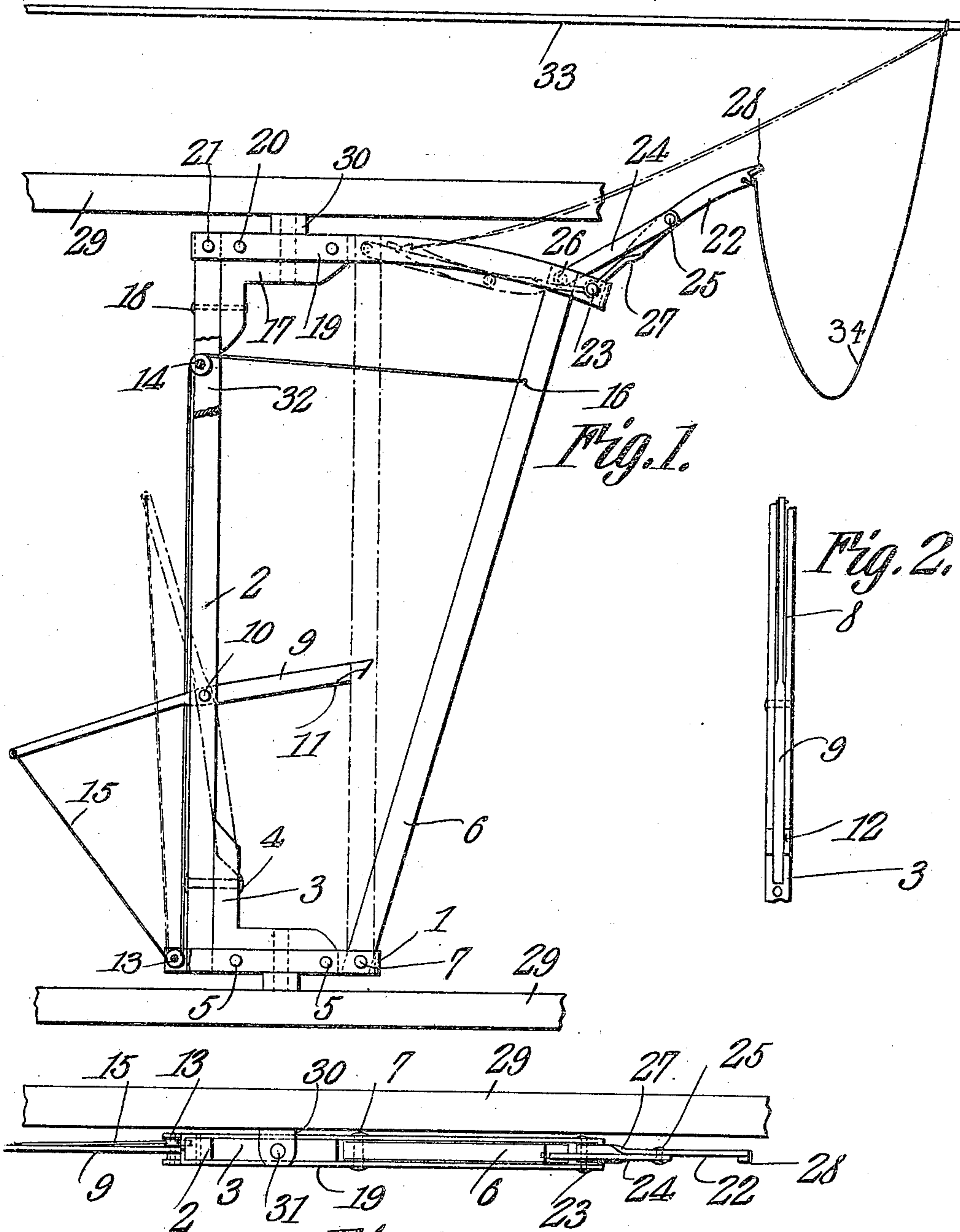


Fig. 3.

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963,149.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD A. HOEFFEL, a citizen of the United States, residing at Napoleon, in the county of Henry and State of Ohio, have invented a new and useful Stanchion, of which the following is a specification.

The objects of the invention are, generally, the provision, in a merchantable form, of a device of the above mentioned class which shall be inexpensive to manufacture, facile in operation, and devoid of complicated parts; specifically, the provision of a stanchion which may be locked about the neck of an animal by the movement of the neck of the animal therein; the provision of a stanchion of such construction that a number of them may be locked or unlocked simultaneously from a remote point; other and further objects being made manifest hereinafter as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts, hereinafter described, delineated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that divers changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings:—Figure 1 shows my invention in front elevation, portions being broken away better to illustrate the structure; Fig. 2 shows in detail a side elevation of a portion of the fixed stanchion bar and the lever which is mounted therein; and Fig. 3 is a top plan of the device.

In carrying out my invention I provide, primarily, a supporting member 1 which may be of any form; preferably, however, it takes the form of a metallic loop inclosing near its terminals a fixed stanchion bar 2 and a movable stanchion bar 6, the lower terminal of the movable stanchion bar 6 being pivoted upon a bolt 7 therein and the fixed stanchion bar 2 being rigidly held in place by an angle block 3; a bolt 4 uniting the angle block 3 with the fixed stanchion bar 2, other bolts 5 being passed transversely

through the supporting member 1 and through that portion of the angle block 3 which is inclosed within the supporting member.

Referring now to Fig. 2, it will be seen that the fixed stanchion bar 2 is provided with a longitudinally disposed slot 8 in which is mounted a lever 9, the said lever 9 being fulcrumed upon the fixed stanchion bar 2 by means of a bolt 10 or like element which is passed transversely through the fixed stanchion bar 2 and through the lever 9 intermediate its ends. As thus mounted, the lever 9 has one of its ends disposed between the stanchion bars and arranged to move therebetween, the other terminal of the lever 9 projecting laterally beyond the fixed stanchion bar 2. The upper terminal of the upright portion of the angle block 3 is slotted as denoted by the numeral 12 in Fig. 2, to receive the terminal of the lever 9 which is beveled as denoted by the numeral 11, to cooperate with the beveled lower face of the slot 12, the said beveled lower face of said slot being indicated in dotted line in Fig. 1. The relation between the lever 9 and the angle block 3 is such that when the terminal of the lever is in contact with the angle block, the lever will be limited to a position out of parallel with the fixed stanchion bar 2, this position of the lever being indicated in dotted line in Fig. 1.

The fixed stanchion bar 2 is provided near its upper terminal with a channel 32 in which is mounted the pulley 14 having its tread projecting outward beyond the face of the fixed stanchion bar 2. It will be seen that the supporting member 1 is made to project beyond the fixed stanchion bar 2, and in this extension is journaled for rotation a pulley 13. A flexible element 15 has one of its terminals attached to the outer end of the lever 9 the other terminal being passed downward about the pulley 13, carried upward along the face of the fixed stanchion bar about the pulley 14, and through the channel 32 in the fixed stanchion bar, and thence into connection with the movable stanchion bar 6 near its upper terminal, as denoted by the numeral 16. Referring to Fig. 3, it will be seen that the pulley 13 is mounted adjacent to one side of the supporting member 1 in order that the flexible element 15 may clear the lever 9.

The upper terminal of the fixed stanchion bar 2 carries an upper angle block 17 similar

in shape to the angle block 3 hereinbefore described, a bolt 18 serving to unite the angle block 17 with the said fixed stanchion bar 2, and the upper face of the angle block 17 being substantially flush with the upper end face of the fixed stanchion bar.

I have shown in the drawings a guide member 19 which, in its preferred form, takes the shape of a metallic loop, straight for a portion of its length and slightly arcuate and downwardly inclined throughout its remaining portion. This guide member 19 is arranged to inclose the upper terminal of the fixed stanchion bar 2 and the upper angle block 17, being attached to the fixed stanchion bar 2 by a bolt 21 and to the angle block 17 by other bolts 20. The upper terminal of the movable stanchion bar 6 is inclosed by the guide member 19 and arranged to reciprocate therein.

A locking lever 22 is shown having its lower terminal pivoted at 23 in the guide member 19, a link 24 having its upper terminal pivotally connected at 25 to the locking lever 22 intermediate its ends, the other terminal of the link 24 being pivotally connected at 26 with the upper terminal of the movable stanchion. The locking lever 22 is twisted intermediate its ends through an angle of 90 degrees, whereby a shoulder 27 is formed, the same being arranged to receive the link 24 and to prevent the locking lever 22 from moving into an inoperative position. The free terminal of the locking lever 22 carries a laterally projecting stop 28 arranged to engage the link 24 and to maintain the parallelism between the locking lever 22 and the link 24 when the parts are in the locked position shown in dotted line in Fig. 1.

It is obvious that my invention may be variously mounted, the particular means used for mounting the same being governed largely by the structure of the building in which it is to be used. The drawings show a convenient and inexpensive means for mounting the device, the said mounting means comprising sills 29 provided with a transversely extending arm 30 in order that the locking lever 22 may clear the sill. A bolt 31 may be passed through the arm 30 and through the angle blocks 3 and 17 securing the stanchion in proper position.

In the accompanying drawings I have shown but a single stanchion of my invention, but it is obvious that any number of these stanchions may be mounted side by side between the sills 29, their number being limited only by the dimensions of the structure in which they are housed.

In order to operate the stanchions simultaneously, I dispose above the upper sill 29 the member 33 which may be a rod suitably supported or a simple jerkline. I shall hereinafter describe this element as the jerkline,

it being understood that any mechanical equivalent for a line may be substituted in the structure. The jerkline 33 is operatively connected with the upper terminal of the locking lever 22 by a flexible element 34 which may take the form of a rope, chain or wire.

Let it be supposed that the device is in the position shown in solid line in Fig. 1; then its operation is as follows:—The movable stanchion bar 6 may be thrown into locked position in two ways; first, by the movement of the animal; and second, manually through the operation of the jerkline 33. When the animal introduces its head between the fixed stanchion bar 2 and the movable stanchion bar 6, it will reach downward to seize the fodder in the manger or crib, engaging the end of the lever 9 which is disposed between the stanchion bars, throwing the said lever 9 into the position shown in dotted line in Fig. 1. As the outer terminal of the lever 9 moves upward it will cause the flexible element 15 to move over the pulleys 13 and 14, drawing the movable stanchion bar 6 into the position shown in dotted line. The movable stanchion bar in passing into the upright position, as shown in dotted line, will carry with it the link 24, the said link in its turn tilting the locking lever 22 and causing the center of gravity of the said locking lever 22 to shift from the outer side of the pivotal connection 23 to the inner side thereof. The locking lever 22 will drop downward into substantially parallel relation with the link 24, the stop 28 of the locking lever engaging the link 24 and maintaining the parallel relation between the parts. It is to be understood that the flexible element 34 is of sufficient length to allow the locking lever to be operated by the lever 9 independent of the jerkline 33.

The foregoing operation is one which will ordinarily take place when the device is locked about the neck of an animal, but it is obvious that the locking operation may also be effected through the medium of the jerkline 33 and the flexible element 34, the same being operated manually to throw the locking lever 22 into its locked position. Now although the jerkline 33 may be employed to lock the device as hereinbefore pointed out, its most important function is to serve as an unlocking means, since through the employment of the jerkline 33 all of the cattle may be freed at once, as is commonly necessary when the milking has been completed, and especially desirable in time of conflagration, flood, or tornado when the rapid freeing of a large number of animals is of vital importance.

It is obvious that a plurality of jerklines may be employed each being connected with a series of stanchions, so that a portion of

the cattle confined may be set at liberty, the remaining portions being secured. Furthermore, it will be seen that there is nothing in the construction of my invention to prevent a single stanchion from being locked and unlocked entirely independent of the other stanchions in the series.

Having thus described my invention, what I claim as new, and desire to protect by Letters Patent is:—

1. In a device of the class described, a supporting member; a fixed stanchion bar rigidly mounted in the supporting member and a movable stanchion bar terminally pivoted therein; a lever fulcrumed intermediate its ends upon the fixed stanchion bar and having its inner end arranged to move between the stanchion bars; a flexible element uniting the outer end of the lever with the movable stanchion bar; and means for automatically locking the movable stanchion bar in substantial parallelism with the fixed stanchion bar.

2. In a device of the class described, a supporting member; a fixed stanchion bar rigidly mounted in the supporting member and a movable stanchion bar terminally pivoted therein; a lever fulcrumed intermediate its ends upon the fixed stanchion bar and having its inner end arranged to move between the stanchion bars; means operatively uniting the outer end of the lever with the movable stanchion bar; and means for connecting the fixed stanchion bar with the supporting member, the said means constituting a stop arranged to prevent the lever from moving into parallel relation with the fixed stanchion bar.

3. In a device of the class described, a supporting member; a fixed stanchion bar rigidly mounted in the supporting member and a movable stanchion bar terminally pivoted therein; a guide member inclosing the upper terminal of the movable stanchion bar and having one of its terminals rigidly mounted upon the fixed stanchion bar; a locking lever having one of its terminals pivoted to the guide member; a link uniting

the locking lever with the movable stanchion bar; there being a projection upon the locking lever arranged to engage the link when the movable stanchion bar is in open position, and a projection upon the locking lever arranged to engage the link when the movable stanchion bar is in closed position.

4. In a device of the class described, a supporting member; a fixed stanchion bar rigidly mounted in the supporting member and a movable stanchion bar terminally pivoted therein; a lever fulcrumed upon the fixed stanchion bar, positioned to extend between the stanchion bars and arranged to throw the movable stanchion bar into substantial parallelism with the fixed stanchion bar; a guide member inclosing the upper terminal of the movable stanchion bar and having one of its terminals rigidly mounted upon the fixed stanchion bar; a locking lever having one of its terminals pivoted to the guide member; a link uniting the locking lever with the movable stanchion bar; and means for operating the locking lever from a remote point.

5. A device of the class described comprising a fixed stanchion bar and a movable stanchion bar pivotally supported at its lower end; a pulley supported for rotation adjacent the lower end of the fixed stanchion bar; a pulley supported for rotation adjacent the upper end of the fixed stanchion bar; a lever fulcrumed intermediate its ends between the stanchion bars and having its inner end arranged to move between the stanchion bars; and a flexible element connected at one end with the movable stanchion bar and at the other end connected with the outer end of the lever, the intermediate portion of the flexible element being passed about the pulleys.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDWARD A. HOEFFEL.

Witnesses:

E. N. WARDEN,
ELIZABETH ZIEROLF.