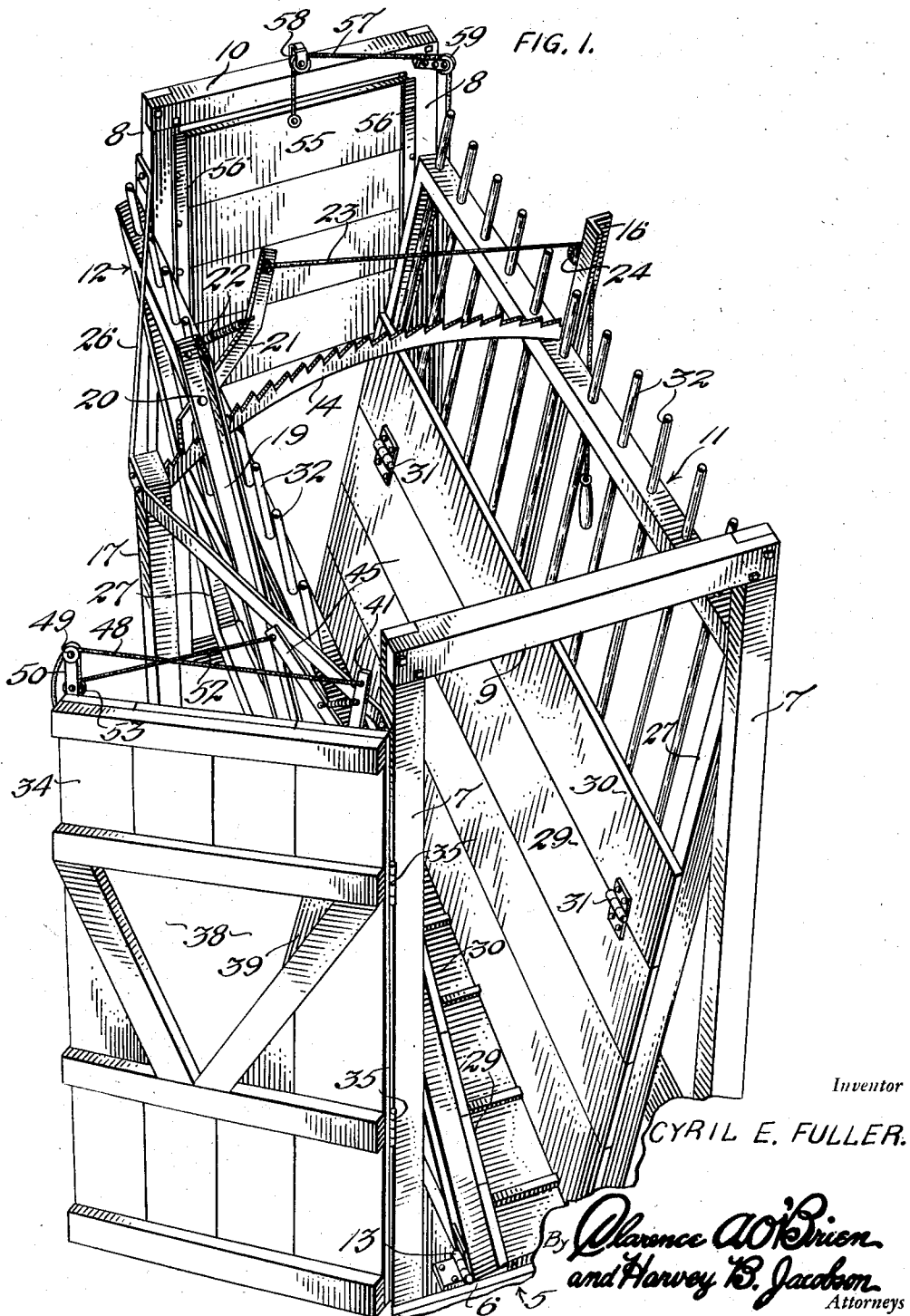


Filed June 24, 1946

STOCK HANDLING APPARATUS

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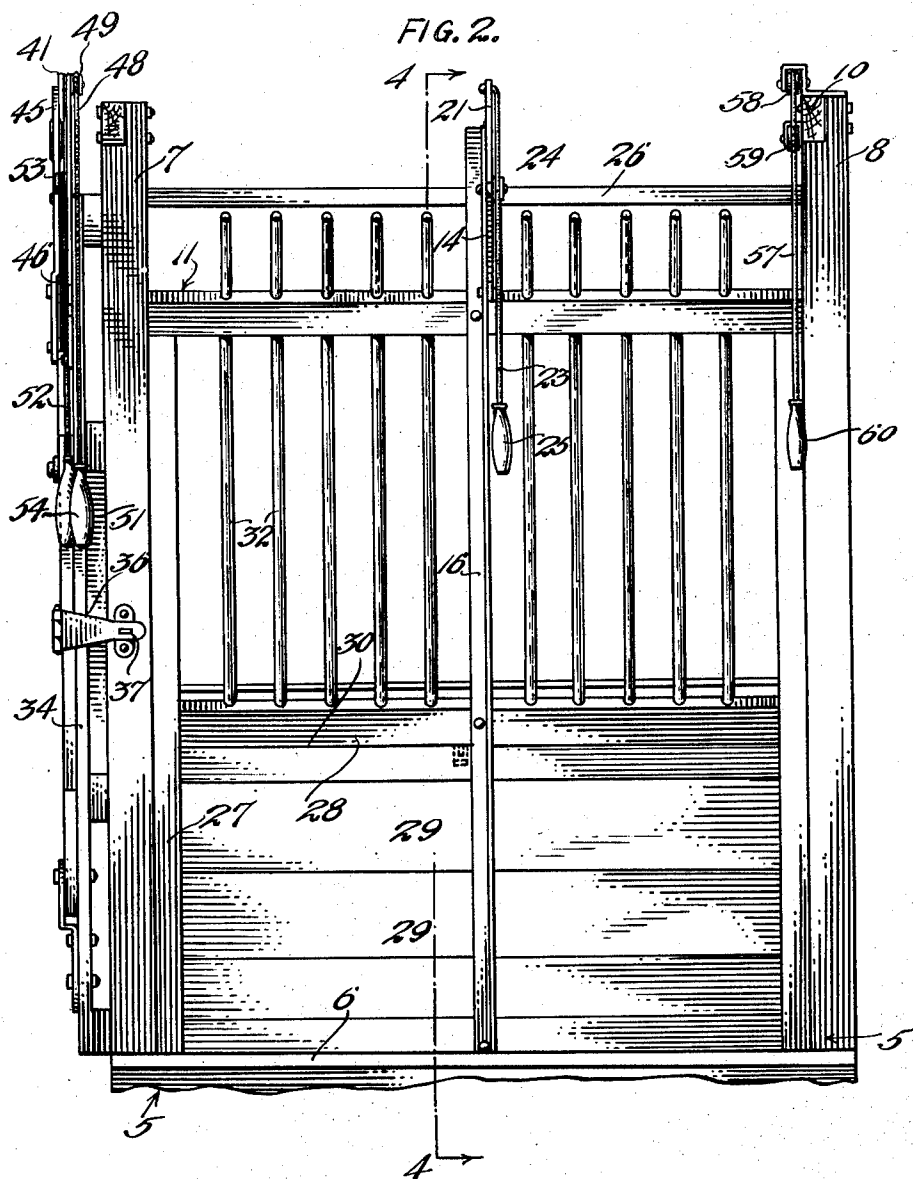
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STOCK HANDLING APPARATUS

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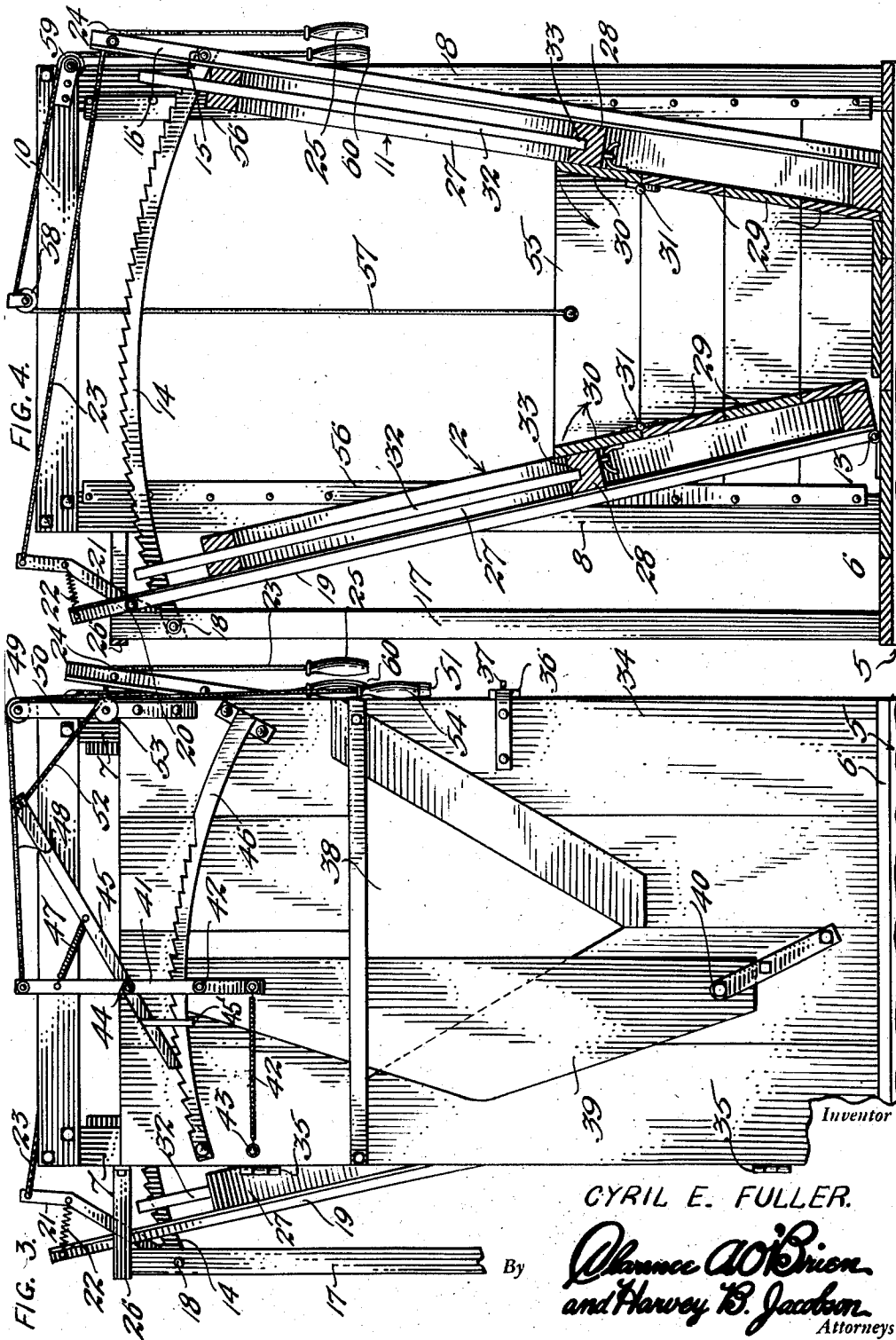
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STOCK HANDLING APPARATUS

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UNITED STATES PATENT OFFICE

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STOCK HANDLING APPARATUS

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2 Claims. (Cl. 119—99)

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This invention relates to stock handling apparatus of the type commercially known as "branding chutes" and adapted for confining and firmly holding the animal when performing such operations as branding, dehorning, etc.

The primary object of the present invention is to provide an improved apparatus of the above kind which is comparatively simple and durable in construction, efficient in use, and easy and convenient to use.

A further object of the invention is to provide an apparatus of the above kind by means of which the desired operations may be expeditiously performed in a safe manner, and which will readily accommodate animals of different sizes.

The present invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:

Figure 1 is a front perspective view, partly broken away, of a stock handling apparatus constructed in accordance with the present invention, the gates of the apparatus being open.

Figure 2 is a side elevational view thereof with the gates closed.

Figure 3 is a front elevational view of the apparatus as shown in Figure 2, partly broken away.

Figure 4 is a vertical transverse section taken on line 4—4 of Figure 2.

Referring in detail to the drawings, the illustrated embodiment of the invention includes a suitable base 5 having a floor 6. Front and rear pairs of spaced posts 7 and 8, respectively, are rigid with and rise from the base 5 and are connected at their upper ends by cross pieces 9 and 10, respectively.

Spaced side walls 11 and 12 are mounted on the base, respectively between the front and rear posts 7 and 8 at each side of the base. The side wall 11 is rigid with the base and the upper portions of the adjacent posts 7 and 8, and is inclined inwardly of the lower portions of the latter posts toward the bottom of the side wall 12. The side wall 12 is hinged to the base 5 as at 13 for swinging adjustment toward the side wall 11, and manually releasable means is provided to secure the wall 12 in different positions of adjustment. The latter means includes a transversely disposed rack

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segment 14 arranged concentric with the pivots of the hinges 13 and attached at one end, as at 15, to the upper portion of a vertical bar 16 rigidly secured to the outer side of and extending above the stationary side wall 11. A further vertical post 17 is rigidly mounted on the base 5 at the outer side of and intermediate the ends of the hinged wall 12, and the other end of segment 14 is attached at 18 to the upper portion of this post 17. A further vertical bar 19 is rigidly secured to the outer side of the hinged side wall 12 intermediate the ends of the latter, and the upper portion of the bar 19 engages one side of the segment 14 and projects above the latter. Pivoted at 20 to the upper portion of the bar 19 directly above the segment 14 is a hinged latch 21 yieldingly engaged with the segment 14 by means of a spring 22. The teeth of the segment 14 are of ratchet formation and so disposed that engagement of latch 21 with any tooth will prevent swinging movement of the hinged side wall 12 away from the stationary side wall 11. Attached to the upper end of the latch 21 is a pull cord 23 that is extended across the top of the device and over a guide 24 mounted on the upper end of the bar 16, said cord 23 depending from the guide 24 and terminating in a handle 25. By pulling downwardly on the handle 25, the latch 21 may be disengaged from the segment 14 to permit swinging of the side wall 12 away from the side wall 11 to the desired position of adjustment. A brace 26 connects the upper end of the post 17 with the upper ends of the posts 7 and 8 at the adjacent side of the device.

Each of the side walls 11 and 12 includes a barred upper portion and a solid lower portion. Preferably, each side wall consists of a rectangular frame 27 having a horizontal cross-bar 28 intermediate the top and bottom thereof, the lower portion of the wall including boards 29 laid across and secured to the side members of the frame, and a top board or section 30 hinged at 31 to the uppermost board 29 at a point below the cross-bar 28 to swing inwardly and downwardly to open position. When the sections 30 are opened, access to lower portions of the confined animal is facilitated. The barred upper portion of each side wall includes a plurality of spaced, vertical bars 32 secured at their lower ends in sockets 33 provided in the cross-bar 28, and secured to and extending through openings in the upper member of

the frame 27. Bars 32 are spaced sufficiently to permit access to the confined animal therebetween.

A horizontally swinging gate 34 is hinged at 35 to the front post 7 adjacent the hinged side wall 12, for closing the space between the side walls at the front thereof. Means is provided to fasten the gate 34 in closed position including cooperating fastener elements 36 and 37 mounted on the gate and the other front post 7, respectively. These fastener elements are respectively shown as a swinging hasp and a cooperating keeper loop that may receive the shackle of a padlock, or the like. The gate 34 has an inverted triangular opening 38 therein for passage of the animal's head therethrough, and a swinging clamping bar 39 is pivoted to the gate 34 as at 40 for engagement with the animal's neck. The clamping bar 39 is pivoted at its lower end, and a rod 41 is fixed near its lower end, as at 42, to the upper end of the clamping bar 39 so as to project above the latter. A tension spring 42' connects the bar 39 with the door 34 at a point outwardly of the bar 39 as at 43. Pivoted to the rod 41 above the bar 39, as at 44, is a hinged latch 45 arranged to engage the teeth of a rack segment 46 secured to the gate 34 concentric with the pivot 40 of clamping bar 39. Latch 45 is engaged with the teeth of segment 46 by a spring 47, and the teeth of segment 46 are of ratchet formation and so disposed that engagement of latch 45 with a tooth of said segment will prevent material movement of clamping bar 39 away from the animal's neck disposed in the opening 38. A stop loop 45' is attached to latch 45 and embraces segment 46 to limit movement of said latch to a point wherein it is disengaged from said segment. In order to swing the clamping bar 39 into engagement with the animal's neck, a pull cord 48 is attached to the upper end of rod 41 and is extended laterally to the free vertical edge of gate 34, where it passes over a guide 49 mounted on the upper end of a bar 50 secured to the top of gate 34. From the guide 49, cord 48 depends at the free edge of door 34 where it is provided with a handle 51 within convenient reach of an attendant standing on the ground or the base 5 at this side of the apparatus. Obviously, by pulling downwardly on handle 51, clamping bar 39 may be swung in a direction to suitably restrict the opening 38 and into engagement with the adjacent side of the animal's neck protruding through said opening. In order to manually release the latch 45, a pull cord 52 is attached to the upper end of the latter and extended over another guide 53 carried by the bar 50 beneath the guide 49. This cord 53 has a depending free end portion equipped with a handle 54 which may be pulled downwardly to release the latch 45 from the segment 46 so that clamping bar 39 may be swung away from the animal's neck when it is desired to release the animal. At this time, it is noted that the animal is led into position between the walls 11 and 12 and gate 34 is closed so that the animal may be positioned with his neck extending forwardly through the opening 38, wall 12 being then swung toward the wall 11 to confine and firmly hold the animal against movement sideways. With the gate 34 secured in closed position, the animal will be prevented from moving forwardly to any material extent, and the animal will be prevented from withdrawing his neck and head rearwardly out of the opening 38 by clamping engagement of the bar 39 and the opposite side wall of the

opening 38 with opposite sides of the animal's neck.

Undesirable rearward movement of the animal is also effectively prevented by means of a vertically sliding gate 55 mounted in guides 56 carried by the rear posts 8. Gate 55 lowers by gravity and is of a short height, being lowered directly behind the animal to prevent the latter from backing from between the walls 11 and 12. Gate 55 may also be sufficiently elevated as to be entirely out of the way and permit the animal to be led into the space between the walls 11 and 12 through the rear end of the device. In order to elevate the gate 55, a pull cord 57 is attached to the latter and passed upwardly over a guide 58 mounted on the cross piece 10. Cord 57 is then extended laterally over another guide 59 mounted on the end of cross piece 10 adjacent and above the stationary or fixed wall 11. Cord 57 has a depending outer or free end portion equipped with a handle 60 which may be conveniently reached for pulling downwardly thereon and causing the cord 57 to elevate the gate 55. Any suitable means may be provided for releasably securing the gate 55 in raised position.

The general manner of use of devices of this general character being well known in the art, and the purpose and operation of the various elements of the present device having been explained as the description of the construction progressed, it is believed that further explanation of the operation is unnecessary therein. It will be apparent to those skilled in the art that the present invention is so constructed as to effectively carry out the stated objects of the invention and meet with the requirements for a successful commercial use. Minor changes are contemplated, such as fall within the scope of the invention as claimed.

What I claim as new is:

1. In a stock confining and holding chute, a base having a floor, front and rear pairs of spaced posts rigid with and rising from said base spaced downwardly converging side walls mounted on the base respectively between the front and rear posts at each side of the base, one of said side walls being stationary and rigid with the base and the upper portions of the adjacent posts, the other side wall being hinged to the base, a vertical bar rigidly secured to the outer side of and extending above each side wall intermediate the ends thereof, a further post rigidly mounted on the base outwardly of and intermediate the ends of the hinged side wall, an arcuate ratchet segment concentric with the pivotal axis of the hinged side wall and engaging one side of the bar attached to the hinged side wall, said ratchet segment being attached at one end to the upper portion of the vertical bar secured to the stationary side wall and at the other end to the upper portion of said further post, a vertical hinged latch pivoted to the upper portion of the bar secured to the hinged side wall and yieldingly engaged at its lower end with the ratchet segment, a guide mounted on the upper end of the bar secured to the stationary side wall, and a pull cord attached at one end to the upper end of said latch and extending over said guide.

2. The construction defined in claim 1, wherein each side wall comprises a rectangular frame having vertical side members and top, bottom and intermediate horizontal members, a plurality of boards laid across the inner sides of and secured to the side members between the inter-

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mediate and bottom members, the upper board being hinged to swing inwardly and downwardly to open position, and a plurality of spaced vertical bars extending through the top member and seated at their lower ends in the intermediate member.

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