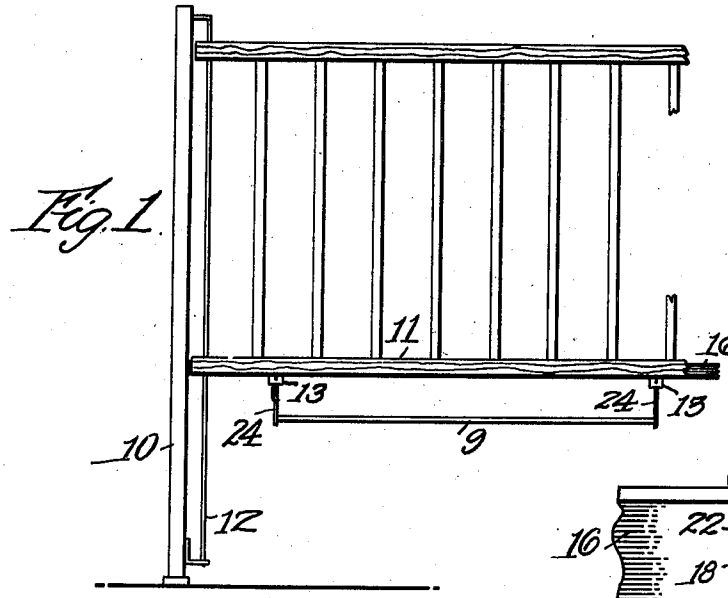
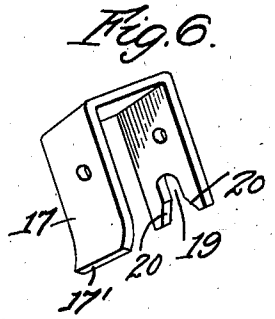
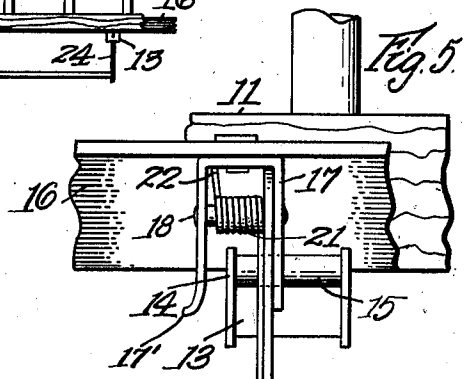
Feb. 23, 1943. H. W. NEUNHERZ 2,312,184

TREADLE AND CATCH

Filed July 31, 1940







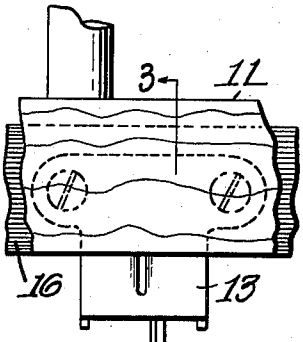


Fig. 2.

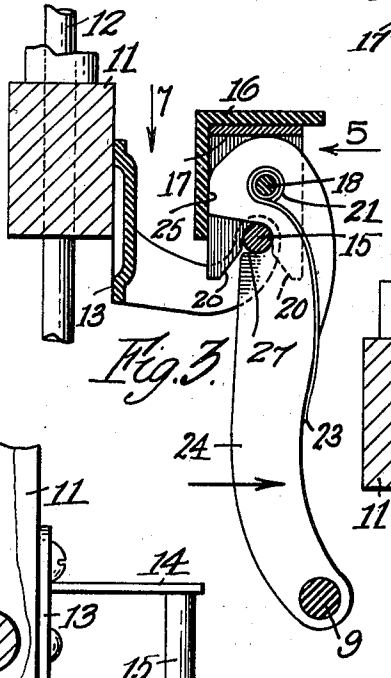


Fig. 3.

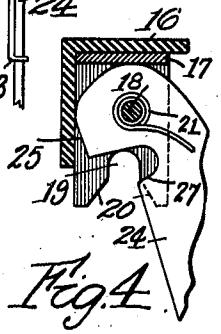


Fig. 4.

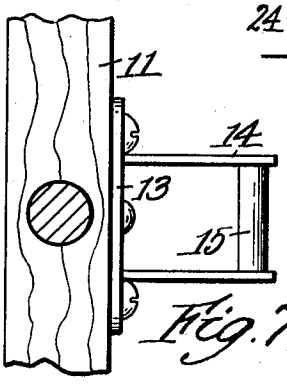


Fig. 7.

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TREADLE AND CATCH

Herbert W. Neumherz, Gardner, Mass.

Application July 31, 1940, Serial No. 348,747

8 Claims. (Cl. 5—100)

This invention relates to a treadle and holding device for the drop side of a crib and it constitutes a mechanical construction which can be used in any other suitable place.

The principal objects of the invention are to provide a spring treadle having no parts projecting down to the floor; to provide a treadle which will automatically catch a member on the drop side when the latter is pushed up and effectively hold it in position and which can be released by the simple pushing in of a short lever to allow the side of the crib to drop; and to provide a construction in which, when the side is raised, a yielding construction will allow of this action and yet keep a bar on the drop side in such position that, as it goes up, it will be forced into the holding position combined with a form of receiving device at the top that will force the same backwardly into locking position.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawing, in which

Fig. 1 is a front elevation of a crib and drop-side therefor, provided with a preferred embodiment of this invention;

Fig. 2 is an elevation of the catch, locking device and associated parts;

Fig. 3 is a sectional view of the same on the line 3—3 of Fig. 2, with the drop-side held in elevated position;

Fig. 4 is a similar view showing the drop-side released and dropping down;

Fig. 5 is an elevation looking in the direction of the arrow 5 in Fig. 3;

Fig. 6 is a perspective view of a bracket to be mounted on the crib frame, and

Fig. 7 is a plan, looking in the direction of the arrow 7 in Fig. 3.

The invention is shown as applied to a crib 10 having a drop-side 11 with the usual vertical guides 12 therefor. On the bottom and rear of the drop-side there are two brackets 13 spaced apart and fixed to the rear of the drop-side and extending rearwardly. Each bracket has upwardly extending ends 14. Each of these ends carries a pin 15. These pins 15 are at opposite ends of a treadle by which they are supported in the raised position of the drop-side. This completes the drop-side.

On the stationary front rail 16 of the crib, which is in the form of an angle iron, there are riveted two double or inverted U-shaped brackets 17 in side the angle and each having on each side a perforation for the reception of a pivot pin 18. One of these sides has near the center at the bottom a semi-circular slot 19. From both sides of the slot 19 extend surfaces 20, which are at opposite angles to guide the pins 15 into the same when the drop-side is moved upwardly. One side of each bracket has an angled guiding lip 17'.

On each pivot pin 18 is a coil spring 21, one end of which 22 simply bears against the inside of the top of this bracket 17. The other ends 23 engage knee levers 24, so that the knee lever is always forced forwardly by this spring. A longitudinal bar 9 connects the levers 24 and completes the treadle. Each lever at 25 acts as a stop against the angle iron to limit the motion of the lever beyond the desired position, which is almost vertical. Each lever 24 has a notch 27 in its edge co-operating with the opening 19 to hold the pin 15 when the lever is in the right position. These levers are pivoted on the two pivot pins 18.

In the operation of the device, when the drop-side is down, the raising of it along its guides 12 will result in bringing the pin 15 eventually into contact with the front edge of the treadle lever 24 and, acting against the spring, gradually force the lever back until the pin 15 runs into the slot 19, allowing the lever to be swung over by the spring 21 so that the notches 27 receive the pins 15.

It will be seen that when the pins 15 reach the position to enter these slots, they are kept from moving forwardly or backwardly materially by the two inclined surfaces 20 and they constitute guides to insure the proper positioning of the pins in the slots 19.

The length of pins 15 is such that a relatively large amount of inaccuracy in the assembly of the parts may be accommodated, as well as inaccuracy or spring in such parts as the rods 12. The guides 17' will assist in locating the pin and catch if they become offset. The treadle can be moved back to abut the spring frame for transportation.

It will be clear that the sides of bracket 17 will prevent any large play of bracket 13, by abutment of the parts. This in turn prevents any horizontal tendency of the crib to collapse since the rigid frame 16 and the drop-side are thus bound together when the side is raised, although a little play is possible.

It will be seen now that the levers 24 will move slightly forward and form bottoms for the slots 19 to hold the pins in position. Thus the cylindrical pins are held in a substantially cylindrical passage and the springs 21 hold the treadle forward as far as it will go. This constitutes a

safe holder for the drop-side. Nothing can release the drop-side except the pushing in of the treadle. Furthermore, this treadle is so high that a dog or cat walking under the crib or a child playing on the floor around the crib could not possibly release it and there is very little danger of its being accidentally released in any other way.

This constitutes a very positive means for holding the drop-side of a crib in raised position when desired and enables the attendant to release it so as to have both hands free to handle a child in the crib. The raising of the drop-side of the crib necessarily locks the treadle in its highest position, when it once reaches that position, without any attention being given to the locking means, as the locking is automatic.

Having thus described our invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. In a crib having a drop side, a bracket extending inwardly from the drop side, and a horizontally extending pin or the like mounted in said bracket; a stationary rail on the crib, a bracket on said rail having two arms extending therefrom, a downwardly opening notch in the end of one arm, a treadle pivoted to said rail, a lateral notch in said treadle, said notches coinciding in one position of said treadle to enclose and hold said pin, means on the other arm of said second named bracket, cooperating with said first named bracket to prevent excess endwise relative displacement of said drop side and crib rail, and resilient means urging the treadle to latching position.

2. The combination of a crib having a stationary side rail, a bracket having a downwardly extending element on said side rail, a notch in the end of said element, said notch opening downwardly, a pivoted treadle on said bracket, a lateral generally horizontal notch in said treadle, said notches coinciding to form a substantially complete enclosure in one position of said treadle, and spring means normally urging said treadle towards said position; with a drop side for said crib, a bracket on said drop side, and a generally horizontal pin or the like on said last named bracket, the latter extending horizontally toward said rail and said pin being located vertically below said rail in position to be substantially enclosed in said inclosure upon raising said drop side to its uppermost position, whereby said drop side may be held in said last named position.

3. The combination recited in claim 2 wherein the downwardly opening notch in said element is provided with vertical side edges and the lateral notch in the treadle is provided with generally horizontal side edges.

4. The combination recited in claim 2 wherein the downwardly opening notch in said element is provided with vertical side edges spaced apart approximately a distance corresponding to the diameter of the pin and the lateral notch in the treadle is provided with generally horizontal side edges.

5. The combination recited in claim 2 wherein the downwardly opening notch in said element is provided with vertical side edges and the lateral notch in the treadle is provided with horizontal side edges spaced apart approximately a distance corresponding to the diameter of the pin.

6. The combination recited in claim 2 wherein the downwardly opening notch is provided with flaring edges leading to substantially vertical edges adjacent the closed end of the notch.

7. In a crib having a drop side, a catch for said drop side comprising a projecting pin on the drop side, an angle iron or the like on the crib, a bracket secured to a surface of the angle iron, said bracket having two spaced projections extending generally downwardly therefrom, a second pin secured to and between said bracket projections, a treadle pivoted on the second pin, a spring on the bracket to resiliently urge the treadle toward the drop side, means forming a downwardly opening slot in one projection, flaring surfaces at the open end of the slot for guiding the first named pin into the slot, a horizontal supporting surface on the treadle for supporting said first named pin when the latter is located in the slot, said treadle surface cooperating with the vertical slot to substantially close the same at a point intermediate the bottom of the slot and its open end, to thereby catch the first named pin in the slot, said treadle being retractable against the action of said spring to release the first named pin to cause the drop side to drop.

8. A crib as recited in claim 7 including means on the drop side extending between said spaced projections when the first named pin is located in the slot, to cooperate with said projections to limit relative movement of the crib and drop side in a direction lengthwise of the crib.

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