May 26, 1953 E. W. AYLOR 2,639,473

HINGED DOOR CHICKEN COOP

Filed Nov. 30, 1950

2 Sheets-Sheet 1

Fig. 1.

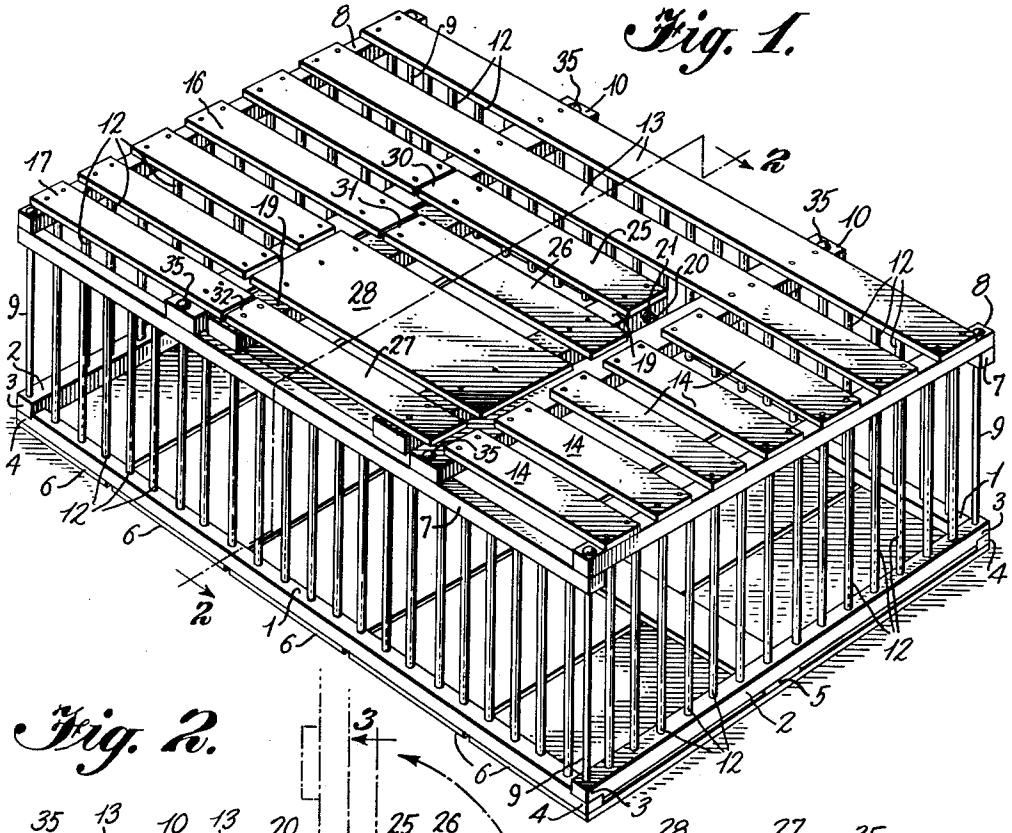
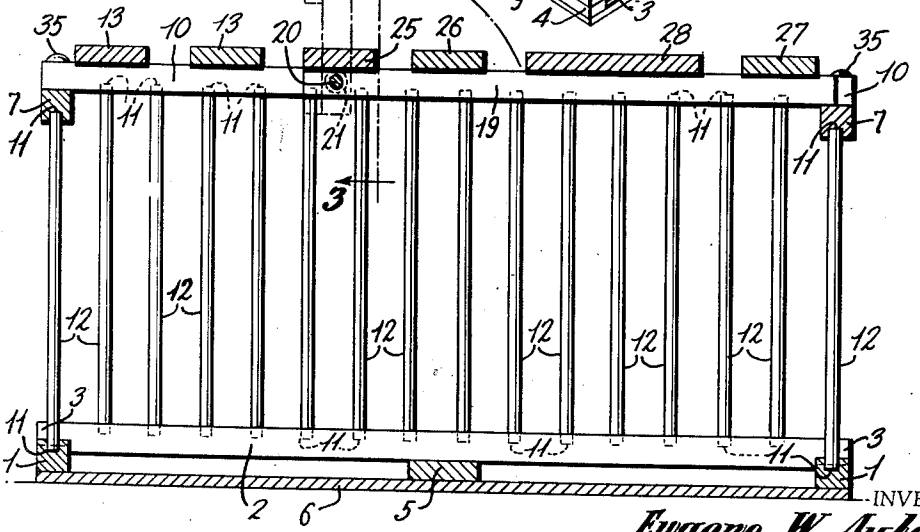


Fig. 2.



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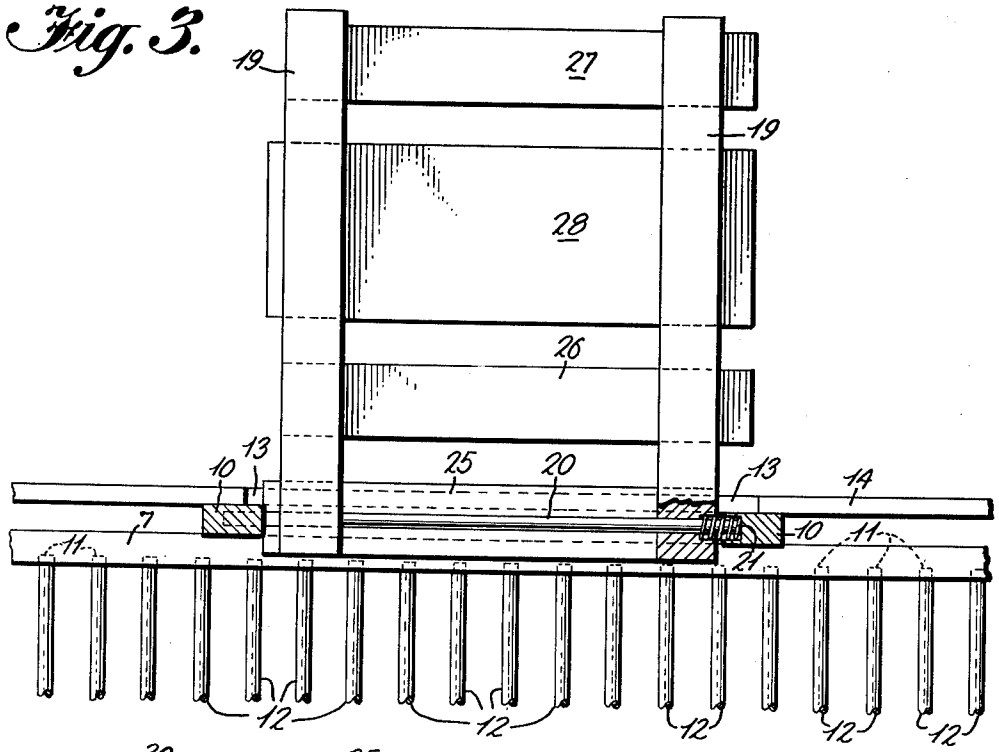
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Fig. 3.



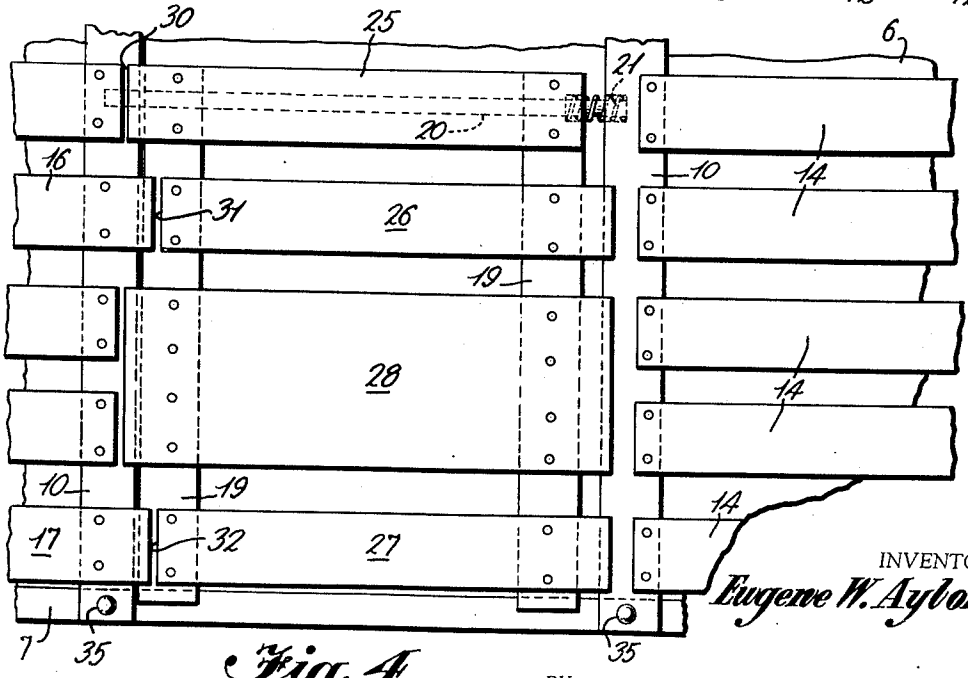


Fig. 4.

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HINGED DOOR CHICKEN COOP

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3 Claims. (Cl. 20—16)

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This invention relates to chicken coops, and more particularly to that type of coop used in the transportation of poultry.

Coops for this purpose, by reason of the rough handling to which they are subjected and the prevalent practice of piling such coops in tiers both when filled and when being returned empty, make it essential that they provide the maximum of air for the fowls, and also that their construction be extremely rigid to withstand the strains and shocks to which they are habitually subjected.

Coops of this type have to a large extent become conventionalized and are usually constructed of a rectangular shape with the side walls formed by spaced dowels, whereby a maximum quantity of air is admitted to the poultry and, at the same time, substantial strength provided to resist the downward force of a large number of such coops piled one upon the other, and the fact that they are frequently stepped upon. Such coops are further characterized by the prevalence of a type of door provided in the top of the coop which slides upon a pivot rod adjacent one end of the door and bridging the door opening, the door being of a width slightly less than the width of the door opening, and propelled by a compression spring so that the side of the door opposed to the spring will normally contact the opposite side of the door opening so that simple interengaging members provided on that remote side of the door provide an effective lock for the door in its closed position, which lock can be readily released by sliding the door axially against the compression of the spring and thence rotating it to its open position.

Experience has indicated that great damage is done to the coops by the failure of those emptying the same to go to the additional trouble of securely closing the door, as same involves the additional movement of again sliding the door so as to free the interengaging latching members. Such failure results in the door not closing completely, and thereby remaining exposed to almost certain injury in the course of the return trip.

It is further desirable that such coops be provided with means for readily emptying the accumulated droppings before the return trip, and at the same time strengthening the floor structure without interfering with its smooth, planar outer surface, which avoids any projections which could operate to snag or injure the bottom.

The present invention is directed to providing an improved chicken coop of the type referred to in which an improved door structure renders the

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automatic, complete closure of the door a certainty, if any attempt to close it is made, and further provides an improved floor structure permitting the ready removal of droppings, while at the same time retaining the smooth outer face of the floor and strengthening the floor and coop structure.

Further objects will more particularly appear in the course of the following detailed description.

The invention consists in the novel construction, arrangement and combinations of parts hereinafter more particularly described and claimed.

Two sheets of drawings accompany this specification as part thereof, in which like reference characters indicate like parts throughout.

In the drawings:

Figure 1 is a perspective view of my improved chicken coop;

Figure 2 is a fragmentary cross section taken on line 2—2 of Figure 1;

Figure 3 is a fragmentary vertical cross section taken on line 3—3 of Figure 2; and

Figure 4 is a fragmentary top plan view showing the position of the door closed.

In accordance with the present invention the coop comprises two substantially rectangular frame members for supporting the top and bottom, respectively, the bottom frame comprising side frame members 1—1, and end frame members 2—2. These frame members are mortised at their ends as at 3, 4 so that the end frame members 2 overlie the ends of side members 1—1, but the mortises are less than half of the full thickness of the frame members, whereby the bottom faces of the end frame members 2—2 are raised above the bottom faces of the side frame members 1—1, thereby providing open slots or spaces under the end frame members 2—2, the floor proper of the coop being formed by transversely positioned boards or slats 6 which are extended completely to the outer edges of both the side frame members 1 and the end frame members 2. Conveniently, and especially if the coop is of substantial width, a reinforcement strut 5 of a thickness equal to the slot between the end floor board 6 and the end frame member 2, is positioned medially of the side frame members 1—1 and this strut 5 can be secured both to the end frame members 2—2 and to all of the floor boards 6, thereby materially increasing the strength of the bottom structure, providing cleaning slots at each end of the coop through which accumulated droppings can be spilled, and

providing for an increased strength to the coop without any obstructions protruding which would catch or engage with other coops or objects.

As is the conventional practice, spaced holes 11 are formed in the upper faces of the frame members 1 and 2 to accommodate the ends of dowel members 12 which constitute the closure for the side walls, the upper ends of the dowels 12 being seated in similar holes formed in the bottom faces of the top frame member, which comprises generally the side frame members 7—7 and end frame members 8—8, which frame members are superposed at their ends, the end frame members being positioned on top of the side frame members.

When the two frame members are assembled with the dowels 12 properly positioned in the oppositely disposed holes 11, the frames are secured together by bolts or rivet rods 9 at each corner of the coop, which rivet rods extend through holes extending through the superposed top frame members and through the mortised end portions of the bottom frame members, being riveted on their ends to uniformly and effectively lock the upper and lower frame members in their associated relationship to the dowels.

On the top frame are positioned two additional intermediate cross frame members 10 to define a door opening, these intermediate frame members 10 being of equal thickness with the end frame members 8 and riveted to the side frame members at their ends, as by rivets 35.

Where the door opening is of less length than the width of the coop, strips 13 will be secured by their ends to the opposite top frame members 8—8 and further secured to the medial frame members 10—10, these strips extending the full length of the coop. On one end of the door opening the covering slats 14 may conveniently be made of uniform length, as illustrated, positioned on the spring side of the door.

A transverse pivot rod 20 is supported by the medial frame members 10—10 adjacent the inner end of the door opening and the door is constructed of side frame members 19—19 spaced apart a distance slightly less than the width of the door opening, as defined by the intermediate frame members 10—10. Upon the door frame members 19—19 are secured a plurality of slats which, in the present embodiment of my invention, are shown as of unequal length for a purpose which will more fully appear. In the particular embodiment illustrated, it will be observed that the door slat 25 positioned over the pivoted end of the door, extends on the side opposite the compression spring 21. This is positioned on one end of the pivot rod 20 with its ends seated in suitable depressions or holes formed in the confronting faces of the intermediate frame member 10 and door frame member 19, as well illustrated in Figure 4. The opposite end of this slat member 25 extends over the upper face of the opposite intermediate frame member 10, which end face is designated by the reference character 30. The slat 26 next adjacent the slat 25 terminates on the end opposite the compression spring, as at 31, spaced inwardly from the outer edge of the underlying frame member 19, while the slat 16, in longitudinal alignment with slat 26 on the far end of the coop, extends over the door opening closely adjacent to the end 31 of slat 26. The next slat 28 terminates at both ends in a conventional manner, partly overlying the opposite top faces of the

medial frame members 10—10, but the free end slat 27 of the door again terminates over the upper face of the door frame member 19 remote from the spring, with its end face 32 closely adjacent the end face of the corresponding slat 17 which extends over the adjacent end of the frame member 19.

With the slats constituting the door structure, as above illustrated, in conjunction with the adjacent slats in longitudinal alignment with the same, a consideration of the structure as illustrated in Figures 1 and 4, will make it apparent that the pressure of the compression spring 21 normally forces the door on the pivot rod 20 toward the remote side of the door opening so that the inner end of the top slat 17 will overlie the top face of the adjacent door frame member 19 when the door is in closed position, thereby locking the door against rotation on the pivot rod 20 until the door is deliberately pressed toward the spring side of the door opening, bringing the outer edge of frame member 19 clear of the inner edge of the slat member 17, and thereby permitting the door to be rotated on the pivot rod 20. At this point, however, it will be observed that immediately the rotation of the door begins the outer edge of the frame member 19 on the side remote from the spring will contact the inner end edge of the slat 17 and thereby positively prevent the door sliding back into its locking position. Furthermore, upon the further rotation of the door the inner end of slat 16 will engage the outer edge of the same frame member 19 prior to its release from the inner end of slat 17, and thereby continue to maintain the door pressed to its maximum position against the spring side. Further rotation of the door will bring the outer end of slat 25 into contact with the inner face of frame member 10 during the remainder of the rotation of the door. Thus, it is clear that at all times after the door is rotated out of its closed and locked position, the door will be maintained in its right-hand position with the spring 21 under compression so that during the return movement of the door to its closed position any pressure applied to the door will be equally effective in closing it and the door will not be permitted to slide into locking position until its rotary movement is completely ended, at which point the door will move bodily away from the spring, bringing the frame member 19 under the end of the slat 17.

By reason of this construction, the handler of the coop is not required to make any attempt to slide the door during the locking operation, a movement which is completely eliminated by reason of my improved structure, which assures the door being properly closed and without any additional effort on the part of the operator. In other words, if the operator slams the door closed it will lock in fully closed position and cannot possibly lock short of fully closed position, thereby completely avoiding the handling of coops with their doors locked in open position by reason of indifference of the handlers to making the additional movement of sliding the door on its pivot rod.

Various mechanical arrangements will readily suggest themselves to those skilled in the art adapted to maintain the door in this fixed position, but all within the scope of the present invention as claimed.

Having thus fully described my invention, I claim:

1. In a chicken coop having a door opening de-

fined by spaced parallel frame members and a door including laterally spaced parallel frame members adapted to be positioned when closed between the first mentioned frame members, a pivot rod extending between and supported by the frame members defining the door opening at one end of the door opening, means for supporting the door pivotally and slidably on said rod, spring means continuously biasing the door axially on said rod toward a locking side of the door opening, spaced strips connecting the frame members of the door, spaced strips forming a coop wall and supported at one end on the frame members defining said door opening, at least some of said wall strips projecting into the door opening beyond the locking side thereof, the outermost of said projecting strips overlying the adjacent door frame member when the door is positioned flush with said coop wall to hold the door closed, and the ends of others of said projecting strips being positioned to successively engage the adjacent side of the door frame member throughout its opening and closing arc away from said flush position to maintain said door laterally shifted outwardly of the end of said outermost wall strip against the bias of said spring means.

2. In a chicken coop having a door opening defined by spaced parallel frame members and a door including spaced parallel frame members adapted to be positioned when closed between the first mentioned frame members, a pivoted rod extending between and supported by the frame members defining the door opening at one end of said door opening, the frame members of the door being pivotally and axially slidable on said rod, spring means normally biasing the door axially on said rod toward one side of the door opening, spaced strips connecting the frame members of the door, spaced strips longitudinally aligned with the door strips forming a coop wall and supported at one end on the frame members forming said door opening, the ends of said door strips and wall strips abutting in staggered relationship on the side toward which said door is biased with a portion of the outermost wall strip overlying the adjacent door frame member when the door is positioned flush with said coop wall to hold the same closed, the end of that strip and other staggered door and coop wall strips being disposed to successively engage the side faces of adjacent frame members of said door and door opening throughout the opening and closing arc of said door away from said flush position to maintain said door laterally shifted outwardly of the end of said outermost wall strip against the bias of said spring means.

3. In a chicken coop having a door opening defined by spaced parallel frame members and a door including laterally spaced parallel frame members adapted to be positioned when closed between the first mentioned frame members, a pivot rod extending between and supported by the frame members defining the door opening at one end of the door opening, means for supporting the door pivotally and slidably on said rod, spring means continuously biasing the door axially on said rod toward a locking side of the door opening, spaced strips connecting the frame members of the door, the innermost one of said door strips projecting toward said locking side and beyond the adjacent door frame member, spaced strips longitudinally aligned with the door strips forming a coop wall and supported at one end on the frame members defining said door opening, at least some of said wall strips projecting into the door opening beyond the locking side thereof, the outermost of said projecting wall strips overlying the adjacent door frame member when the door is positioned flush with said coop wall to hold the door closed, said projecting door strip and the end of another of said projecting wall strips being positioned to successively engage the adjacent frame member of the door and door opening respectively throughout the opening and closing arc of said door away from said flush position to maintain said door laterally shifted outwardly of the end of said outermost wall strip against the bias of said spring means.

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