

926,367.

Patented June 29, 1909.
 2 SHEETS—SHEET 1.

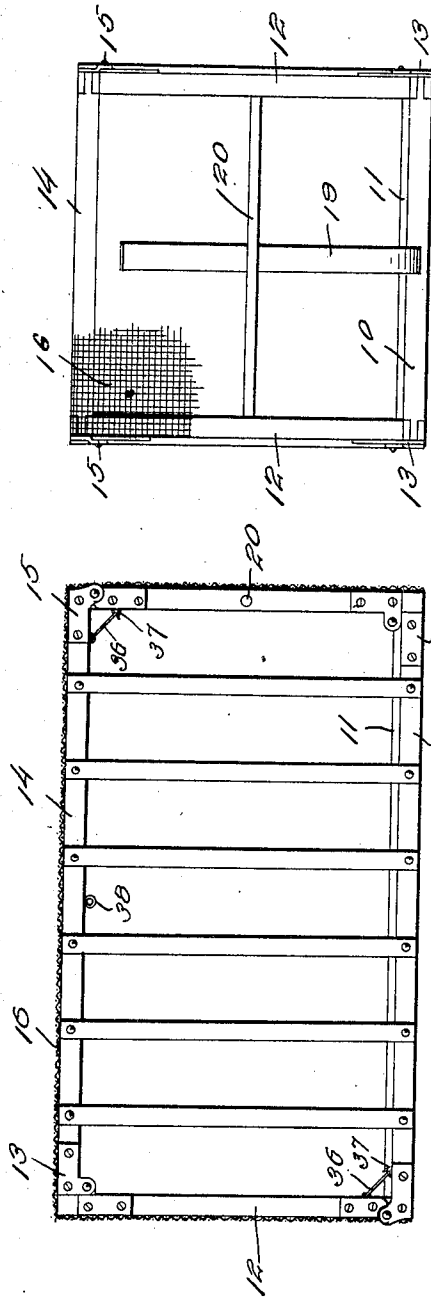


FIG. 1

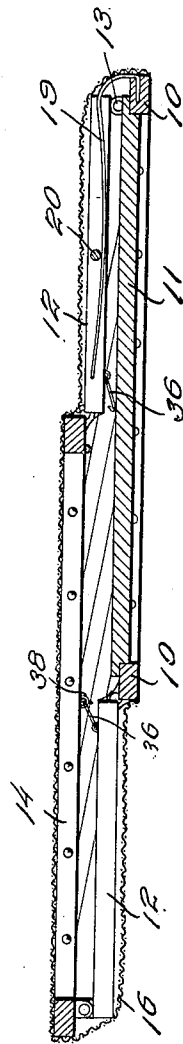


FIG. 2

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 FOLDING GRATE AND COOP.
 APPLICATION FILED SEPT. 22, 1908.

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2 SHEETS—SHEET 2.

FIG. 4 -

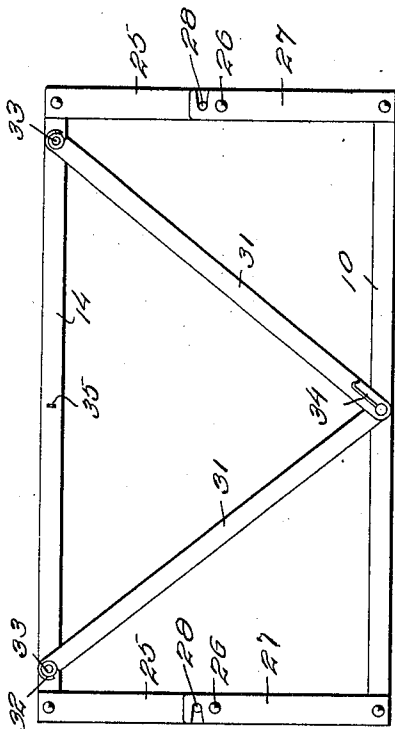


FIG. 5 -

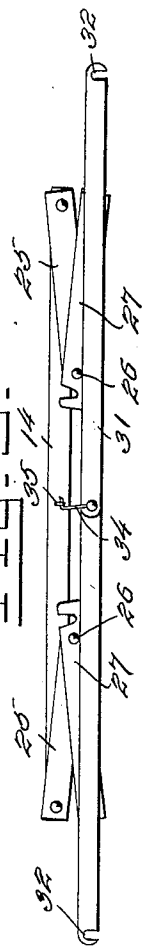


FIG. 6 -



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UNITED STATES PATENT OFFICE.

WILLIS ALBERT TOMISON, OF QUITMAN, TEXAS.

FOLDING CRATE AND COOP.

No. 926,367.

Specification of Letters Patent.

Patented June 29, 1909.

Application filed September 22, 1908. Serial No. 454,233.

To all whom it may concern:

Be it known that I, WILLIS ALBERT TOMISON, a citizen of the United States, residing at Quitman, in the county of Wood and State of Texas, have invented certain new and useful Improvements in Folding Crates and Coops, of which the following is a specification.

This invention relates to crates and coops having special reference to one which is adapted to be folded for transportation when not in use.

An object of this invention is to construct a crate of this character which will be retained in its open position and which will assume an open position under tension of a spring when the same is released.

The invention has for a further object the provision of a crate with folding sides which will cooperate with the frame when the same is being folded.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view of the crate in an open position, Fig. 2 is a side elevation of the same, Fig. 3 is an end elevation showing the operating spring therefor, Fig. 4 is a side elevation of the crate in a modified form, Fig. 5 is an end view of the modified form in a folded position, Fig. 6 is a longitudinal section through the modified form in a folded position.

Referring to the drawings, 10 designates the bottom frame of the crate which comprises strips of wood or metal which are rectangularly disposed to one another and which supports across its upper face a solid bottom 11 which is adapted to be removed from the frame when desired. The bottom 11 is reduced at its opposite ends to engage over the ends of the frame 10 when in position and recessed for the purpose of engaging about standards 12 which are hinged to the bottom frame 10 by the hinges 13. The standards 12 are of any number and are positioned at the opposite corners or along the edges of the bottom 10 and pivotally support a top frame 14 upon the hinges 15. The top frame 14 may be secured in any manner upon

the standards 12. The top frame 14 is of substantially the same structure as the bottom frame 10 with the exception that the cover 16 of the crate is adapted to be nailed or otherwise secured upon the same upon the upper face thereof. Both the bottom 11 or cover 16 may be formed of strips of wood or of metal, or other suitable material in any desirable form instead of one solid piece of wood or metal as shown in the accompanying drawings. For the purpose of automatically opening the crate a leaf spring 19 is positioned in one extremity of the bottom 10 and extends upwardly to engage the inner side of a transverse rod 20 which is carried across the standards 12 at the same end of the crate. Instead of the leaf spring 19 any form of spring hinge may be utilized in place of those 13 and 15 which will have the same tendency to hold the crate in a normal open position, though a particular object of the invention is to provide the novel form described and illustrated, which is effective and cheap.

The standards 12 may be of any suitable construction and may be hingedly supported between the bottom 10 and the top 14 in any well known adaptable manner.

When the crate is in its folded position and it is desired to open the same the crate is unbound and the tension of the spring 19 will cause the standards 12 to be raised into a vertical position and carry the frame 14. Carried by the standards 12 adjacent their ends at diagonally opposite corners of the crate, there are pivoted hooks 36 adapted to engage in eye-bolts 37 carried by the adjacent frame to prevent closing action of the crate when open. Eye-bolts 38 are secured centrally of the opposite frame to be engaged by the hooks to hold the crate in closed position.

It will be noted that retractive action of the spring 19 will be checked by the engagement of the ends of the uprights 12 with the adjacent portions of the frames 10 and 14, when the crate has reached its full open position.

It will be noted that the hinges have their pivotal points offset inwardly of the crate, so that when in folded position the uprights 12 lie in spaced relation with the frames 10 and 14, to allow the disposition of the floor 11 therebetween.

In Figs. 4, 5, and 6, there is shown a modified form of the device which it is believed

may be manufactured more cheaply than the first described form, and which will fold more compactly. This form of the device includes the opposite frames 10 and 14 but the corner pieces 5 comprise centrally jointed members 25, adapted to be folded inwardly of the ends of the crate. The members 25 comprise opposite arms pivoted by their outer ends at the corners of the frames 10 and 14, and pivotally connected midway between the frames, 10 upon a rod 26 which serves the same function as the bar 20 in the first described form. The arm 27 has an extension beyond its pivotal point, provided with a lateral slot opening 15 on the edge of the arms and adapted to receive slidably therein a pin 28 carried by the opposite section, and adapted to engage against the inner ends of the slots to prevent the bending of the joints outwardly of the 20 crate. A spring 30 is carried by one of the frames and arranged to bear against the bar under tension to normally force the bar upwardly and extend the corner pieces, to force the opposite frames apart. As may be seen, 25 the corner pieces in this form of the invention are adapted to be made from sheet material.

In order to brace the modified form of this device to prevent collapsing, diagonal braces 31 are provided, connected pivotally at a 30 common point to the frame 10. At their outer ends, the members 31 are provided with lateral hooked portions 32 adapted to engage over pins 33 carried by the frame 14 adjacent the corners of the crate. It will be 35 understood that any other form of suitable bracing may be utilized, within the scope of the claims. Carried at the common pivotal point of the members 31 there is a hook 34 adapted to engage with the member 35 carried by the opposite frames, to hold the crate in closed position, against the action of the 40 spring.

It will be understood that in the last described form of the device any suitable form of foldable or detachable sides may be utilized for closing the sides of the crate when in 45 open position. It will also be understood that the floor 11 may be made detachable, if desired.

What is claimed is:— 50

1. In a folding crate the combination of a lower frame, standards hingedly disposed at the opposite corners of said lower frame, an upper frame hingedly mounted upon the upper extremities of said standards, a rod transversely disposed at one extremity of the 55 crate between two of said standards, a spring positioned in one extremity of said lower frame, said spring being forced upwardly against the inner face of said rod for normally holding the same in a vertical position, and detachable sides positioned in the crate. 60

2. In a folding crate, the combination of a lower frame, an upper frame, standards hingedly disposed between said frames, said 65 standards comprising two sections hinged intermediately and adapted to fold inwardly between said frames, a rod positioned transversely between said frames and supported across two of said standards at their intermediate portions, a leaf spring carried by said 70 lower frame and extended upwardly and inwardly against said rod for retaining the same in an extended position and diagonal braces pivotally secured to the sides of said 75 lower frame and diverged upwardly therefrom to engage over pins carried in the edges of said upper frame.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIS ALBERT TOMISON.

Witnesses:

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J. W. CORLEY.