R. R. MORTLAND & W. S. KAIL.

FOLDING CRATE.

APPLICATION FILED NOV. 10, 1916.

1,240,757. Patented Sept. 18, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

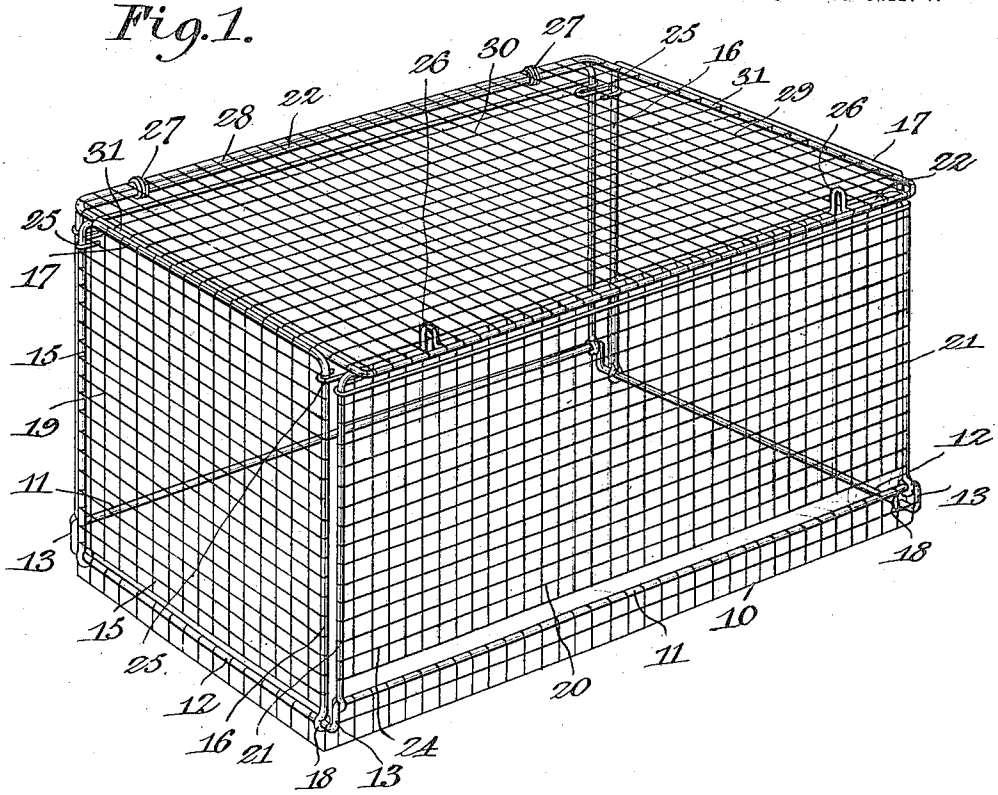


Fig. 4.

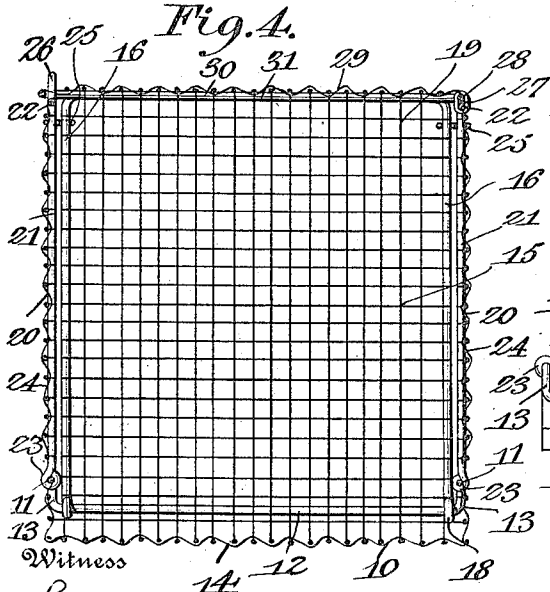
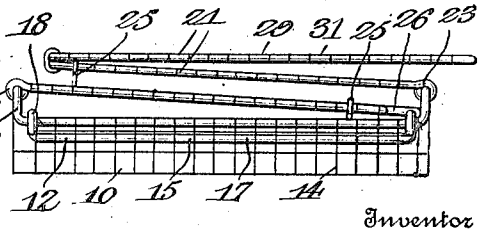


Fig. 5.



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2 SHEETS—SHEET 2.

Fig. 2.

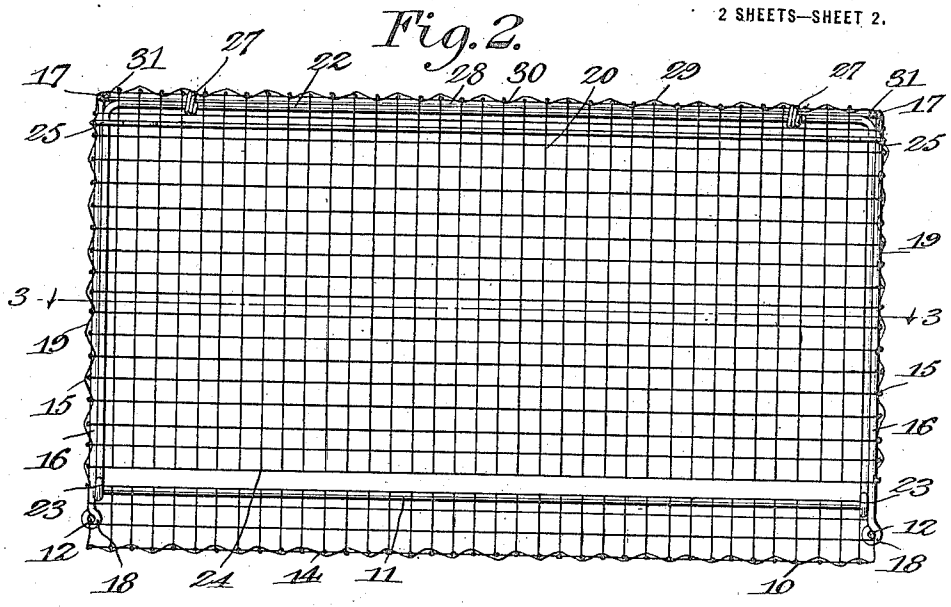
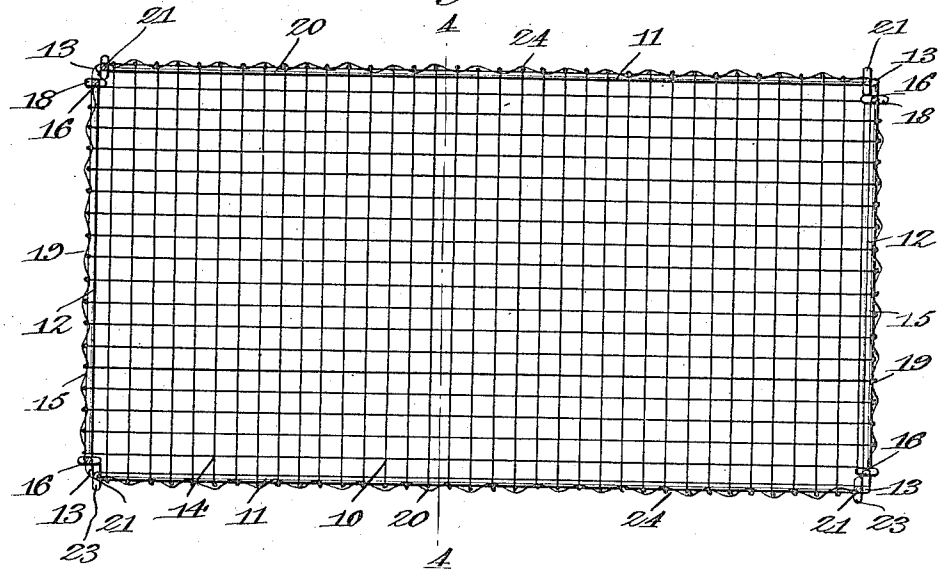


Fig. 3.



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FOLDING CRATE.

1,240,757. Specification of Letters Patent. Patented Sept. 18, 1917.

Application filed November 10, 1916. Serial No. 130,635.

To all whom it may concern:

Be it known that we, Ross R. MORTLAND and WILBERT S. KAIL, citizens of the United States, residing at Scio, in the county of Harrison and State of Ohio, have invented new and useful Improvements in Folding Crates, of which the following is a specification.

This invention relates to improvements in folding crates.

An object of the invention is to produce a crate of this character constructed wholly of metal and comprising a foraminous body, the elements of which being hingedly connected, and interengaging means provided between the sides and ends for retaining the sides and ends set up, while means is also provided upon one of the sides to engage with the top and to receive securing devices, whereby the top may be locked upon the bottom.

It is a further object of the invention to construct a foldable crate that shall be made of a plurality of substantially rectangular and U-shaped frames, each of which being provided with a meshed facing, the ends of the facing being wound around the frames to connect the same with the frames, the sides and end frames being hingedly connected with the bottom frame, the top frame being hingedly connected with one of the side frames, the end frames being provided with hook-shaped catches to engage with the side frames to retain the sides in set-up position, while one of the said frames is provided with crooked or bent portions that are adapted to pass through the mesh in the top frame for receiving securing elements, the bottom frame being so constructed, and the mesh being so arranged thereon as to provide a substantially rectangular box or basket member, so that the said bottom may receive the paper partitions of egg nests, when the device is employed for carrying eggs and also whereby the bottom will snugly receive the ends, sides and top when the device is in collapsed or folded condition.

With the above and other objects in view, the improvement resides in the construction, combination and arrangement of parts set forth in the following specification and falling within the scope of the appended claim.

In the drawings:

Figure 1 is a perspective view of a crate constructed in accordance with the present invention;

Fig. 2 is an approximately central longitudinal sectional view through the same;

Fig. 3 is a horizontal sectional view approximately on the line 3—3 of Fig. 2,

Fig. 4 is a transverse sectional view approximately on the line 4—4 of Fig. 3;

Fig. 5 is a view illustrating the crate in its collapsed position.

As disclosed by the drawings, the facing of all of the members comprising the improved crate is in the nature of wire mesh, and the ends of the said wire are coiled or twisted around the frames that comprise the elements of the frames.

The bottom of the crate is indicated by the numeral 10 and the frame therefore is of substantially rectangular construction, comprising parallel side members 11—11 and end members 12—12 which connect with the sides. The sides 11 of the frame of the bottom are bent downwardly at their corners, as indicated by the numerals 13 whereby the end members of the frame of the bottom are disposed below the plane of the said members therefor. The wire mesh 14 comprising the body proper is bent to provide a substantially rectanglar box-like element, the sides of the said mesh extending above the ends of the mesh, whereby the end wires of the mesh may be wound around both the sides and ends of the frame and thereby securely connect it with the frame to provide the base.

The ends of the crate are designated by the numerals 15, and the frames for the said ends are substantially U-shaped, comprising parallel sides or arms 16, and a connecting member 17 for the said arms. The ends of the arms 16 are bent around the end wires 12 of the base or bottom frame, as indicated by the numerals 18, whereby the frame of the end of the crate is hingedly connected with the end members of the frame of the bottom. The mesh covering the frame of the ends of the crate is indicated by the numeral 19, and the end wires, therefore, are wound around the arms 16 of the said end frames, the mesh preferably terminating a suitable distance below the connecting member 17 for the arms 16. The end members of the crate are of a size to be received between the sides of the bottom member of the crate, and as the same are hingedly secured to the

said bottom, a suitable distance above the base thereof, it will be noted that a sufficient space is provided in the bottom to receive say the folded mesh of an egg receptacle, when the crate is adapted to be employed as a conveyance of eggs, but, of course, the basket or box-like bottom may be employed for conveying other articles.

The side members of the crate are indicated by the numerals 20 and the frame for these sides comprises a substantially U-shaped member, the arms 21 of which being arranged in parallel relation, and the connecting member 22 for the said arms being disposed at a right angle to the plane of the arms. The arms have their ends bent around the longitudinal members, providing the sides of the frame of the bottom, as indicated by the numerals 23, whereby the sides are hingedly secured to the bottom. The mesh for the sides of the crate is indicated by the numerals 24, and the ends of this mesh, as previously stated, are wound around the arms of the connecting member of the frame for the sides. The arms 21 of the sides are provided with spring substantially hook-shaped members comprising clasps 25 which are adapted to engage with the arms 16 of the end members of the crate to hold the said end members in a set-up position. By reference to the drawings, it will be noted that the ends of the crate are projected a slight or suitable distance above the sides of the crate, when the said crate is in its set-up position, and the purpose for this arrangement will be presently described.

The connecting member 22 of the frame of one of the sides is crimped or otherwise bent upon itself to provide projecting portions which I shall term eyes and which are indicated by the numerals 26, while the connecting member 22 of the other or second side frame of the crate has wound around the same, at a suitable distance from the ends or arms 21 of the said side, strands of wire 27—27, the said wire being likewise wound around one of the longitudinal members 28, providing the edges of the rectangular frame for the top 29 of the crate. The wire mesh 30 for the top has its ends bent around the longitudinal members 28, as well as bent around the transverse or connecting members 31 for the said top. The top 29 is of a slightly greater width than that of the ends so that the same projects a suitable distance over the side opposite that to which it is hingedly connected and by this arrangement when the device is in its set up position and the top swung to a closed position, the eyes 26 will be received between one of the longitudinal bars in the top frame and the mesh 30. A securing element, such as the hasp of a lock or any other suitable securing means may be arranged in the eye members 26 to lock the top upon the body of the crate.

By reference to the drawings, it will be noted that the connecting or end members 31 for the frame of the top are disposed to lie between the connecting members for the ends, so as to prevent the inward swinging movement of the said end members when the crate is set up, and by this means, in connection with the spring clasps 25 engaging with the said ends of the crate, the said crate may be effectively sustained in its set-up condition.

In the drawings we have illustrated a simple and separate reduction of the improvement to practice, or as the same now appears to us, but it is to be understood that the construction is susceptible to changes in the minor details thereof, all of which changes, however, falling within the scope of the appended claim.

Having thus described the invention, what is claimed as new, is:

In a folding crate, a bottom frame comprising a substantially rectangular member having its ends disposed below its sides, a flanged mesh connected to the frame and depending therefrom, side frames including substantially U-shaped members having their ends wound around the sides of the bottom frame to hingedly secure the side frames to the bottom, end frames comprising substantially U-shaped members having the ends of their frames wound around the sides of the bottom frame to hingedly secure the sides to the said bottom frame, the longitudinal member of one of the sides being crimped to provide outwardly projecting eyes, a top frame comprising a substantially rectangular member, means wound around one of the longitudinal portions of the top frame and one of the connecting members of the side frames for hingedly securing the said top frame to the said side frame, spring hooks upon the end members of the side frames to engage with the end members of the end frames, said top adapted to be swung between the end frames, when the device is set up, to prevent the inward movement of the said end frames, a facing comprising a wire mesh for all of the frames, the eyes of one of the side frames adapted to project through the mesh of the top frame and to receive securing means, all as and for the purpose set forth.

In testimony whereof we affix our signatures.

ROSS R. MORTLAND.
WILBERT S. KAIL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."