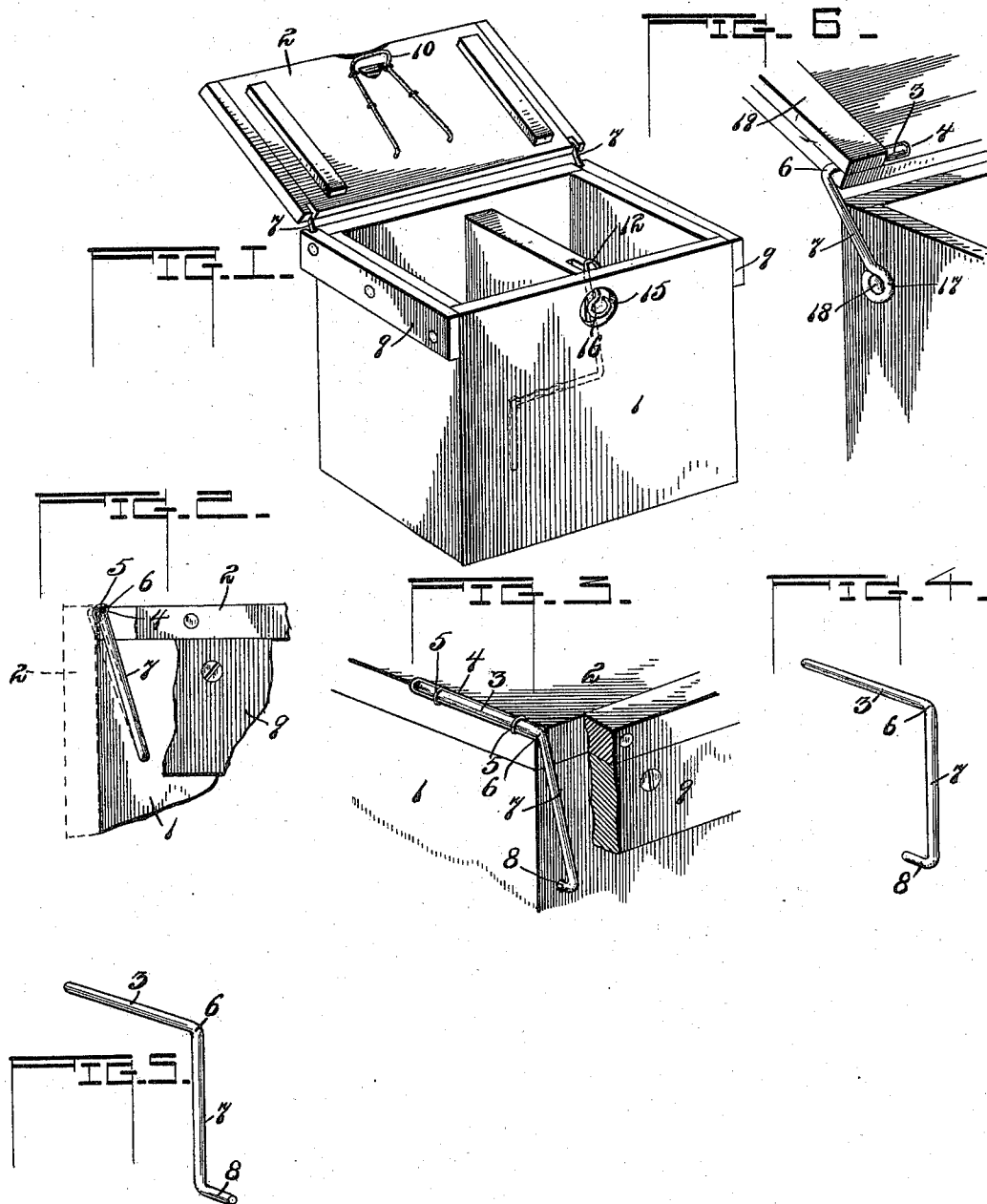


(No Model.)

L. L. PLETCHER.
BOX HINGE.

No. 579,178.

Patented Mar. 23, 1897.



Inventor

Levi L. Fletcher,

By *his* Attorneys,

C. Snow & Co.

Witnesses

Milton O'Connell,
R. M. Smith.

UNITED STATES PATENT OFFICE.

LEVI L. PLETCHER, OF MALTA, OHIO.

BOX-HINGE.

SPECIFICATION forming part of Letters Patent No. 579,178, dated March 23, 1897.

Application filed July 28, 1896. Serial No. 600,838. (No model.)

To all whom it may concern:

Be it known that I, LEVI L. PLETCHER, a citizen of the United States, residing at Malta, in the county of Morgan and State of Ohio, have invented a new and useful Device for Securing Lids to Crates or Boxes, of which the following is a specification.

This invention relates to devices for securing lids to crates, boxes, &c., and while especially designed for egg-crates is applicable also to any other kind of crate or packing-box employing a hinged lid.

The principal object of the present invention is to provide a cheap and efficient hinge for box-lids which will afford no outside projection and which will allow the lid to be folded flatly against one side of the case or crate.

Most egg-crates are made with a detachable lid which must be removed in filling or emptying the same. This often results in the breakage or loss of the lids or in getting the same mixed, so that they will not fit the case upon which they are placed, and therefore the life of the lid is said to be about the life of the crate. The present invention overcomes this difficulty and enables the lid to fold against the side of the crate, and there being no projection caused by the securing devices there will be nothing to interfere with the sliding of the crates one upon another.

The invention consists in certain novel features and details of construction, as hereinafter fully described, illustrated in the drawings, and embodied in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a crate, showing the improved securing devices attached thereto. Fig. 2 is a detail end elevation of the crate, showing the position of the hinge with the lid closed and also showing in dotted lines the position of the hinge when the lid is open. Fig. 3 is a detail perspective view of one corner of the crate, showing the improved hinge. Fig. 4 is a detail perspective view of the hinge *per se*. Fig. 5 is a similar view of a modified form of hinge. Fig. 6 is a detail perspective view showing a slightly different form of hinge.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates a box or crate of any ordinary or preferred construction, the top of which is closed by a hinged lid 2. The hinge embodied in the present invention is formed from a piece of wire bent into angular shape and comprising a journal or spindle portion 3, which is received in a groove or recess 4 in the upper corner of the rear edge of the lid at one end, as shown, the said journal or spindle portion being retained in such groove by means of one or more staples 5.

At the corner of the lid the wire from which the hinge is formed is bent at a right angle at the point 6 and extended a sufficient distance to form a swinging arm 7, which may extend downward either upon the outside or inside of the end of the box or crate, the extremity of the arm being bent at a right angle either inward or outward to form a journal or spindle 8, which enters a perforation or socket in the end wall of the crate and forms one of the fulcrums of the hinge. It will thus be seen that in addition to the lid 2, swinging around the journal or spindle portion 3 as a center, the lid also has a movement about the journal 8 as a center, and by reason of this arrangement the lid when opened may be folded flatwise and closely against the outside of the crate, as shown in Fig. 2.

When the arm 7 lies upon the outside of the crate, the end cleat 9, if there be one, is cut away to allow the necessary vibration of the arm 7, and where the arm 7 lies upon the inside of the crate a staple may be passed over the arm 7 and into the end of the crate, said staple having sufficient width to permit the necessary movement of said arm. Fig. 4 shows the form of the hinge in which the arm 7 lies upon the outside of the crate, and Fig. 5 shows the form of said hinge when such arm is arranged inside of the crate.

The parts indicated by the numerals 10 to 16, inclusive, in Fig. 1 designate an improved form of catch and keeper for engaging and

holding the free edge of the box-lid, but as no claim is herein made to these parts a detailed description thereof is unnecessary.

In Fig. 6 is shown a slightly-modified form of hinge embodying the same principle. This hinge is substantially the same as the one above described, differing only in that the journal portion 8 is dispensed with and an eye 17 employed in lieu thereof. A suitable fastener 18 passes through the eye and into the side of the box, and the journal portion 3 is received in a recess 4 in the lower side of the lid and held in place by means of a cleat 19 or in any other convenient manner. This dispenses with the use of staples.

From the foregoing description it will be seen that the devices for securing the lid upon the crate are extremely simple and cheap in construction, and that they afford no projection for interfering with the sliding of the cases upon each other, and that the lid may be folded compactly and closely against the outside of the case or crate during the filling or emptying thereof.

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

1. A hinge for box-lids, &c., consisting of a metal rod or strip bent at an intermediate point and substantially at a right angle to form a journal portion for attachment to the lid and an arm portion by which the lid is adapted to swing bodily, the extremity of the

arm being bent substantially at a right angle to form another journal portion the same being adapted to enter a socket or perforation in the box or crate, substantially as described.

2. The combination with a box or crate, and a lid therefor having a groove or recess in its corner, of a hinge comprising a journal portion arranged in said groove or recess and retained by suitable fasteners, a swinging arm formed integrally therewith, and another journal portion formed by the angular extremity of said arm, such extremity being received in a socket or perforation in the box or crate adjacent to the hinged edge of the lid, substantially as described.

3. A hinge for box-lids, &c., consisting of a metal rod or strip bent intermediate its ends and substantially at a right angle, one arm forming a journal portion for attachment to the lid, and the other portion forming an arm adapted to permit the lid to swing bodily, said arm having provision at its end whereby it may be pivotally connected to the box, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEVI L. PLETCHER.

Witnesses:

DELMER I. PLETCHER,
LEE HUMPHREY.