

(No Model.)

G. W. BANKER.
TILTING CASE OR CRATE.

No. 577,409.

Patented Feb. 23, 1897.

Fig. 1.

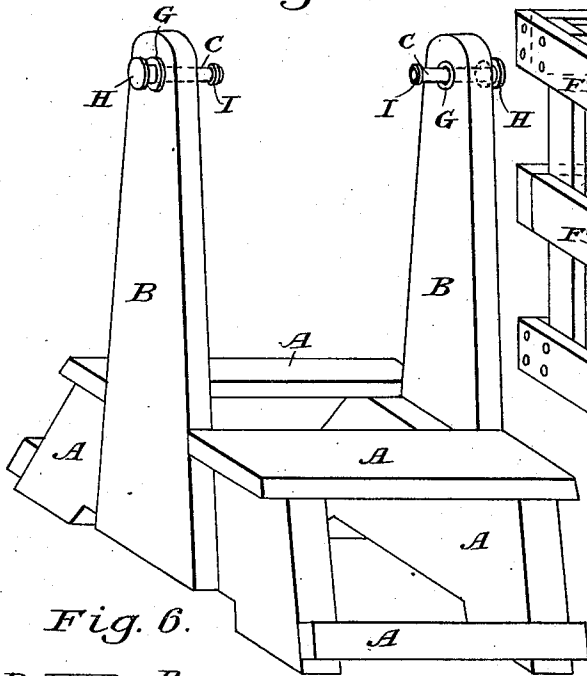


Fig. 2.

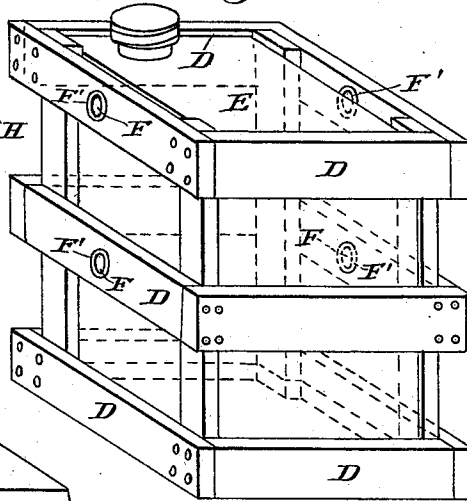


Fig. 6.

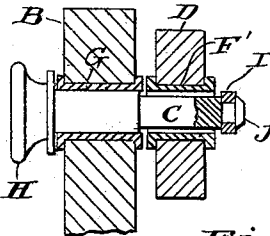


Fig. 9.

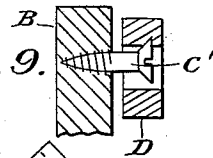


Fig. 7.

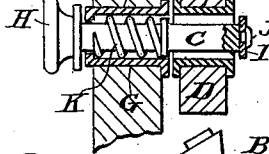


Fig. 8.

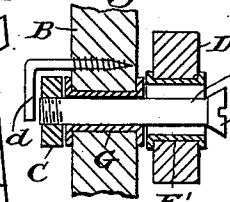


Fig. 3.

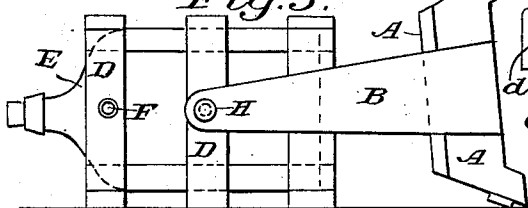


Fig. 4.

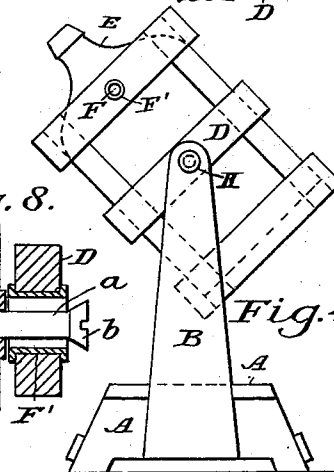
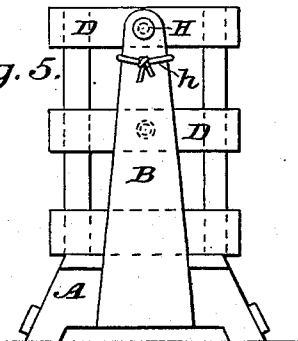


Fig. 5.



WITNESSES:

E. B. Bolton

N. B. Morrison

INVENTOR:

George W. Banker.

By *Phillips Abbott*

his Attorney.

UNITED STATES PATENT OFFICE.

GEORGE W. BANKER, OF KEENE, NEW YORK.

TILTING CASE OR CRATE.

SPECIFICATION forming part of Letters Patent No. 577,409, dated February 23, 1897.

Application filed February 29, 1896. Serial No. 581,307. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BANKER, a citizen of the United States, and a resident of Keene, in the county of Essex and State of New York, have invented a certain new and useful Improvement in Tilting Cases or Crates, of which the following is a specification.

My invention relates to improvements in tilting cases or crates for demijohns, cans, and like receptacles; and it consists, generally stated, in a crate or case and a frame embodying a base and two upright supports, upon which the case or crate is supported and held in such manner that it can assume two positions, in one of which the parts will be firmly held together in suitable condition for transportation, and in the other the crate and the can or demijohn inclosed within it will be pivotally supported, so that it may be readily tilted.

Referring to the drawings, Figure 1 illustrates a perspective of the base and its uprights. Fig. 2 illustrates a perspective of the crate, a square tin can being shown therein. Fig. 3 illustrates a side view of the parts shown in Figs. 1 and 2 in the position which they assume when engaging or disengaging the crate from the uprights. Fig. 4 illustrates the position of the parts when in operative condition for tilting the vessel. Fig. 5 illustrates an elevation of the parts in proper condition for shipment. Fig. 6 illustrates the form of the axes between the uprights and the crate shown in Fig. 1. Figs. 7, 8, and 9 illustrate modified forms of the axes.

Referring first to Figs. 1 to 4, inclusive, A is the base of the apparatus, preferably made of wood, suitably braced, as shown.

B B are two uprights.

C C are the two axes upon which the crate tilts. They will be more particularly described hereinafter.

D is the crate. It may be made in any desired manner. I prefer to make it, as shown, in the form of open wooden framework. It may be solid, if preferred, and if the vessel be liable to fracture, especially if round in form, such as a glass demijohn, corner cushion-supports or other suitable means for reducing the effects of shock may be employed.

F F are holes made in the opposite side slats or parts of the crate or case, which I some-

times line with metallic bushings F', as shown. They may be in the form of eyelets, flanged over upon the wood on both sides, as illustrated, or they may be mere cylindrical tubes driven through holes previously made. They form no essential part of my invention, however.

G G (see Fig. 8) are similar bushings which may be placed in the upper ends of the uprights B B.

The axes (shown at C in Fig. 1) are more clearly shown in Fig. 6.

G is the bushing which passes through the uprights B B, and F' are the bushings which may be used in the holes in the frame D of the crate, if desired.

H is a flat head on the outer end of the axis C, as shown, and a nut or head I is riveted on its inner reduced end J.

The operation of the apparatus is as follows: During transportation and storage the parts are arranged as shown at Fig. 5; that is to say, assuming the parts to be separated, the axes being manipulated by their head H are drawn outwardly and the crate, with the can or demijohn inclosed, is placed between the uprights B B, resting upon the base A, and then the axes C C are shoved in again, passing through the holes F F in the upper part of the crate. The nut I is made so large that its periphery or laterally-projecting flange will prevent disengagement from the holes in the crate. At least such disengagement will not be apt to occur. It will be noticed that when the parts are in this position they are securely attached to one another and constitute, in effect, for all purposes of transportation and handling, a single structure. The crate cannot tilt, because the axes are in the upper holes, not the medial ones, and being in this position the bottom of the crate is held snugly down upon the top of the base, so that there can be but little lateral movement of it before a jamming action will take place between them. When the apparatus has reached the consumer, however, he pulls back the axes, removes the crate and the vessel within it from between the uprights, and places the crate either upon its side, as shown in Fig. 3, or preferably in an upright position, resting upon its bottom, and the base is tilted up upon one edge, as shown.

Then the upper ends of the uprights are made to straddle the crate, and when in this position it is very easy to bring the axes opposite the holes F in the central portion of the crate, and then the axes are pushed through the holes to their normal operative position. Thereupon the whole apparatus is set upright, as shown in Fig. 4, being properly supported upon the base A, and when so arranged the crate and the vessel contained within it may be easily tilted upon the axis in either direction.

In order to avoid the possibility of the axes escaping from the holes F in the upper part of the crate, as they might possibly do, owing to jar or other disturbing agencies, I sometimes make them as shown in Fig. 7, in which the parts are substantially as already described; but in this case I surround the spindle C with a spring K, which abuts against a flange H at the outer end of the bushing at one end and against a shoulder or equivalent stop on the spindle at the other, the arrangement being such that the spring normally presses the axes inwardly. Thus they maintain the engagement between the uprights and the crate.

In Fig. 8 I show still another modified form of the axes, which I prefer because of its inexpensiveness, simplicity, and reliability. In this construction the bushings may be used, as before, if desired; but for the axes I use an ordinary screw-bolt *a*, having a head *b*. *c* is a nut which is threaded onto the end of the bolt, and *d* is an ordinary screw-hook, and this hook, being screwed into the wood above the axes, may be easily turned downward over the end of the bolt, and which will prevent outward movement of it during transit or handling; but when desired the hook *d* may be turned upwardly, and then the bolt may be readily moved outwardly to disengage the parts *b* and *d*. The peculiar advantage of this form is its reliability, the absence of all springs or other parts which are apt to become deranged, the operation of which has to be overcome in manipulating the parts, and also the fact that all of the elements—to wit, the bolt, the nut, and the

threaded hook—are all articles of commerce and may be bought in large quantities very cheaply.

Instead of either form of axes shown by me above, ordinary screws, as shown in Fig. 9 at C', may be partially screwed into the uprights B, which will enter holes made in the sides D of the crate, and when this construction is used the parts may be separated and their relative positions changed, as stated, by reason of the elasticity or spring which the uprights possess, sufficient power being applied to them by the hand of the operator, and when screws are used I prefer not to employ any bushing in the holes in the crate because it is desirable that the sharp edges of the heads of the screws should cut into the wood within the holes, the better to retain the parts in their relative positions.

I claim—

1. The combination of a base, uprights thereon, axes on the uprights, composed of headed bolts, nuts on the outer ends thereof, and a hook or latch, adapted to swing over the ends of the axes and nuts, when the same are in their inward position, for the purposes set forth.

2. The combination of a base, uprights thereon, axes on the uprights, a crate having a pair of holes near its upper edge, one on each side of the crate, said holes being at the same distance from the bottom of the crate, that the axes are from the upper surface of the base, and a second pair of holes in the crate below the first-named pair, for the purposes set forth.

3. The combination of a base, uprights thereon, movable axes on the uprights, a crate having holes in its opposite sides, and means applied to the axes to insure their permanent inward projection, for the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 25th day of February, A. D. 1896.

GEO. W. BANKER.

Witnesses:

PHILLIPS ABBOTT,
D. SOLIS RITTERBAND.