(No Model.)

C. D. NARAMOR.

PACKING OR SHIPPING CRATE.

No. 593,180. Patented Nov. 2, 1897.

Fig. 1.

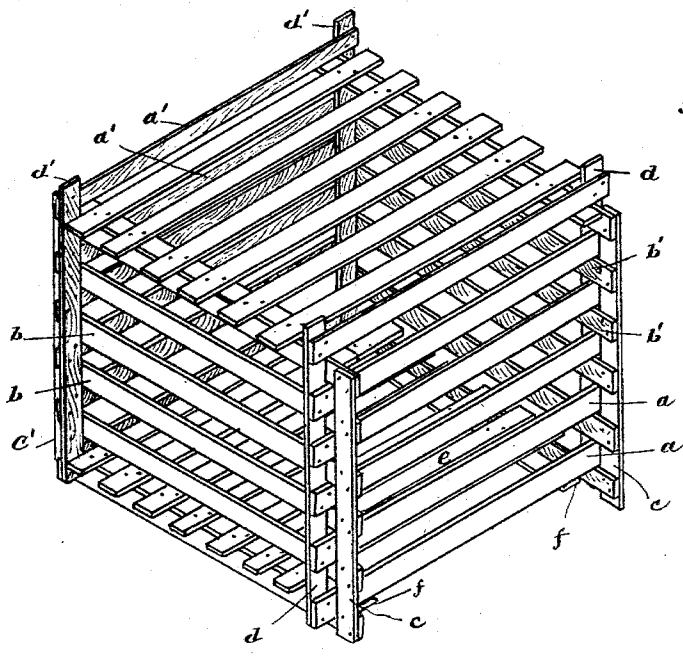


Fig. 2.

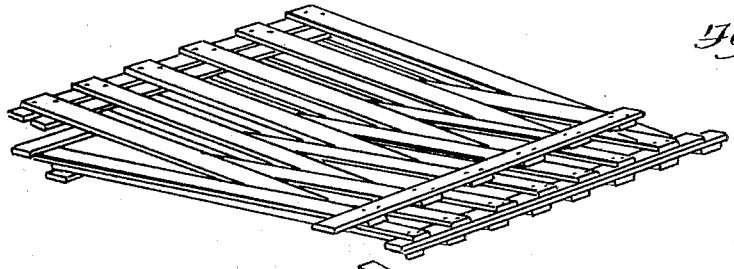
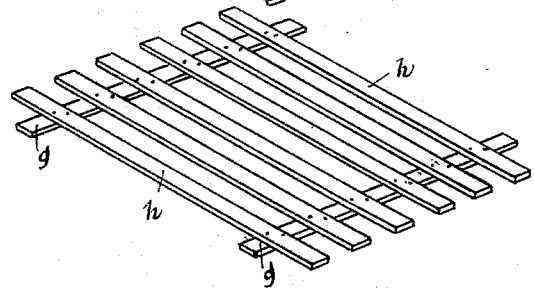


Fig. 3.



WITNESSES

D. A. Bradford

Celia Grant

INVENTOR

Colton D. Naramor

By Parker & Burton

Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

COLTON D. NARAMOR, OF WATROUSVILLE, MICHIGAN, ASSIGNOR OF TWO-THIRDS TO CHARLES MONTAGUE, OF CARO, MICHIGAN, AND CHARLES MONTAGUE, TRUSTEE.

PACKING OR SHIPPING CRATE.

SPECIFICATION forming part of Letters Patent No. 593,180, dated November 2, 1897.

Application filed January 9, 1897. Serial No. 618,573. (No model.)

To all whom it may concern:

Be it known that I, COLTON D. NARAMOR, a citizen of the United States, residing at Watrousville, county of Tuscola, State of Michigan, have invented a certain new and useful Improvement in Packing or Shipping Crates; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to crates for packing purposes, and has for its object an improved packing or shipping crate that can be folded into very compact shape or can be distended into crate form easily and readily and can be so distended without the use of any sort of fastening appliance whatever.

In the drawings, Figure 1 shows the crate in its distended form. Fig. 2 shows it folded and compact in form. In Fig. 3 the top or bottom piece (the two are similar in form) is shown at one side of the main bundle and only one of these pieces is shown in this figure.

The crate is made of four side pieces that are almost identical in form, and each one is composed of a number of parallel slats or bars, nailed or otherwise secured to two cross-bars, one cross-bar being at each end of the parallel bars. The parallel bars are spaced by intervals, each of which is slightly greater than the width of a single bar. Each side of the crate may be said to consist of a grating that is as wide in one direction as the crate is intended to be deep and is slightly wider in the other direction than the crate is intended to be wide. Four of these gratings are assembled at the time the parts are nailed together, so that the bars of two adjacent gratings interlock the bars of one grating passing through the intervals in the other grating, the cross-bars, which become vertical when the crate is in use, being in each case at the outside of the complete crate.

a a indicate the slats of what may be termed a "side", and *b b* the slats of what may be termed an "end," of the crate.

c indicates the vertical cross-bar that unites the slats *b*.

d indicates the vertical cross-bar that unites the slats *a*.

It will be noticed that the slats *b* and *b'* (the two ends) are both disposed between the vertical cross-bars *d d'*, and so also the slats *a a'* (of the two sides) are both disposed between the slats *c* and *c'*.

The bottom consists of an independent grating made of slats *e*, nailed across slats *f*, and the top consists of a similar grating that differs from the bottom grating only in the fact that the cross-slats *g* extend beyond the side slats *h h*. The ends of the grating, which is intended to be used for the bottom of the crate, should preferably not have the extending ends *g*, as the bottom grating is placed in position more easily if those slats are cut flush with the side slats *e* on the bottom grating; but on the top grating the ends should project, as the ends are utilized to secure the grating in place as a cover. The ends of the slats *h* which project beyond the cross-bars engage closely against the top slats *b b'* of the ends, and the projecting ends *g g* engage closely under the top slats *a a'* of the sides, thus very securely locking the top in place.

The operation of the crate is as follows: Suppose it to have been assembled, as shown in Fig. 1. To pack it in a small place, slip the top grating sidewise—that is, toward the side with the slats *a a'*—until the projecting ends *g* pass from under the top slat *a*. Then remove the top grating and lay it to one side. Turn the crate on an end so that the slats *b* or *b'*, as the case may be, are at the bottom and the slatted gratings *a a'* are at the sides, with the slats *a* vertical. Allow the grating *b*, which is now at the top, to drop downward, which it will do by gravity, and lift the bottom grating *f f* out from engagement between the gratings *b* and *b'*. The two gratings *b* and *b'* are now close together. The grating *a* may be dropped over in one direction and the grating *a'* pulled through the gratings *b* and *b'* and folded in in the opposite direction. The crate takes the position shown in Fig. 2 with the top and bottom detached, and these can be laid closely down on the bundle, and the entire crate is in compact form for packing away or for shipment, if desired.

What I claim is—

In a crate, the combination of four side grat-

ings interlocking as described, a bottom grating having longitudinal slats *e*, *e*, and cross-slats *f*, *f*, cut flush with the edge of the slats *e*, *e*, and adapted to engage within the gratings which form the sides, a top grating having longitudinal slats projecting beyond the cross-slats, and ends *g*, *g*, of the cross-slats projecting beyond the slats *h*, *h*, and adapted to engage closely under the upper slats of the side gratings when the cross-bars engage closely over the top slats of the end gratings, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

COLTON D. NARAMOR.

Witnesses:

CHARLES WILSEY,

E. S. KANOUSE.