No. 628,500. Patented July 11, 1899.

Z. B. TAYLOR & O. W. MOORE.

FOLDING CRATE.

(Application filed Mar. 6, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 6.

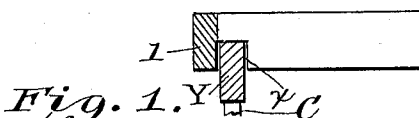


Fig. 1.

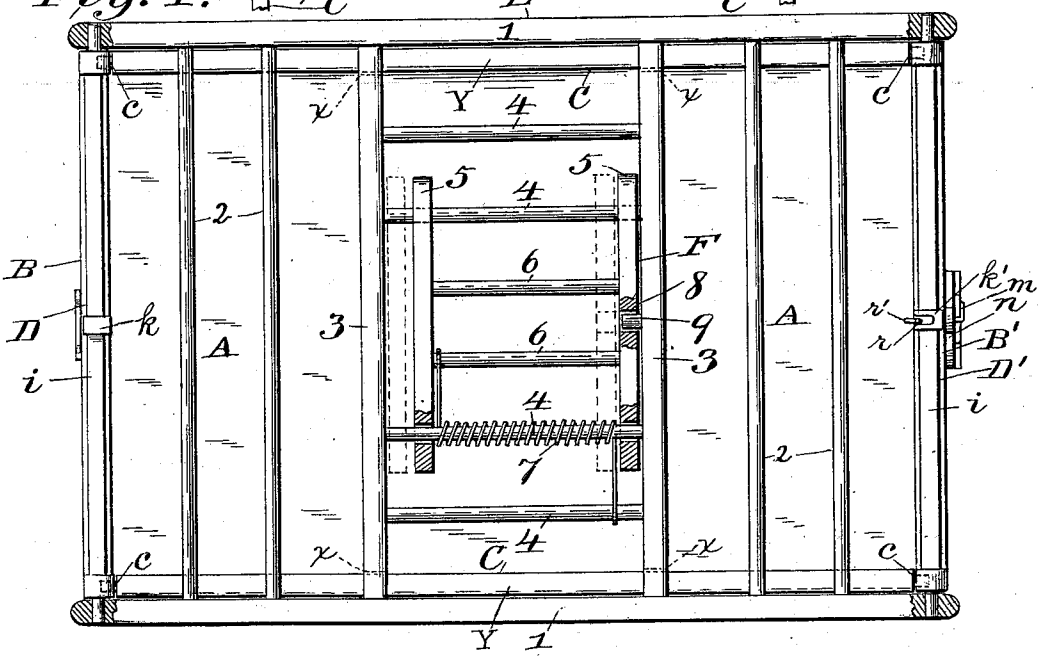


Fig. 4.

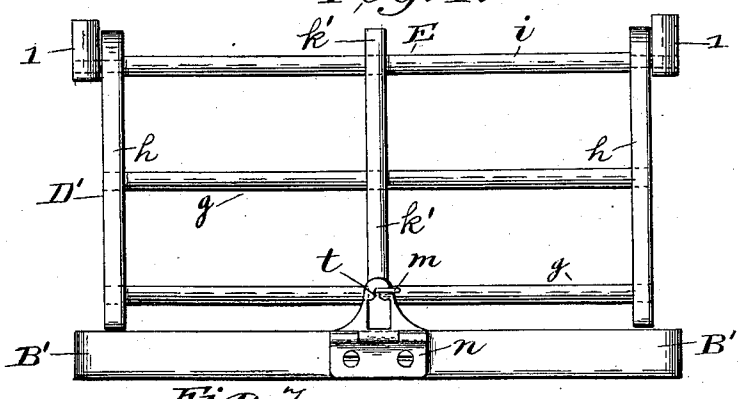


Fig. 7.



Fig. 8.

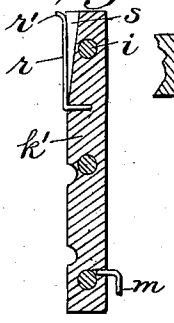
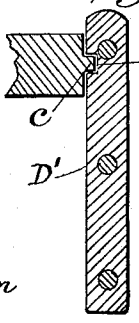


Fig. 9.



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No. 628,500. Patented July 11, 1899.

Z. B. TAYLOR & O. W. MOORE.

FOLDING CRATE.

(No Model.) (Application filed Mar. 6, 1899.) 2 Sheets—Sheet 2.

Fig. 2.

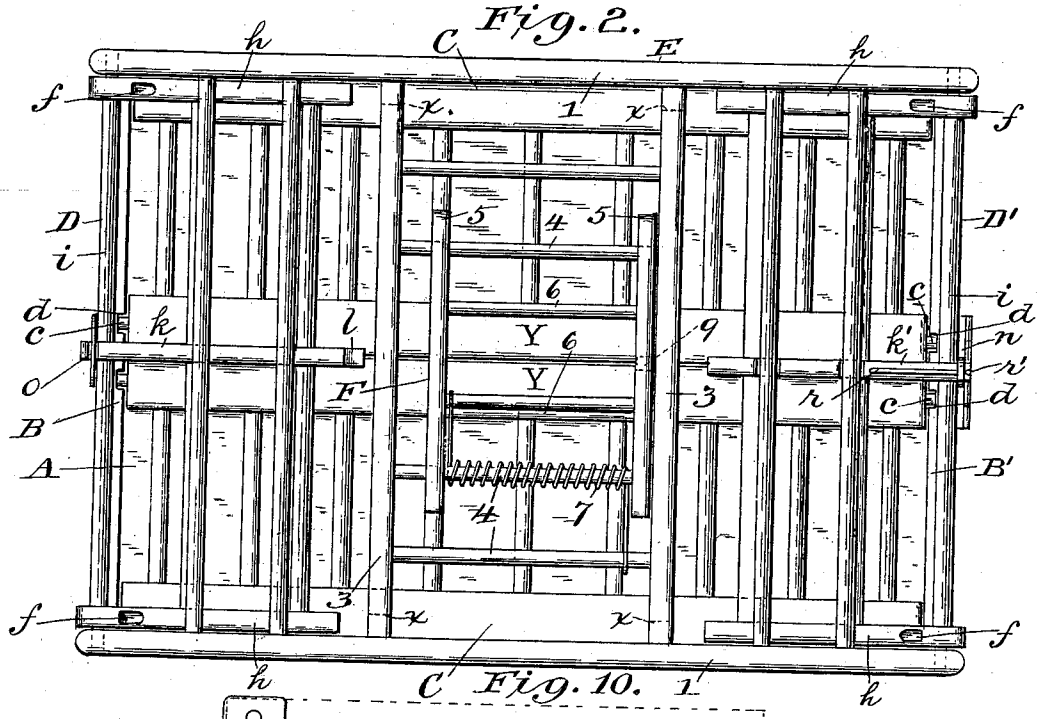


Fig. 10.

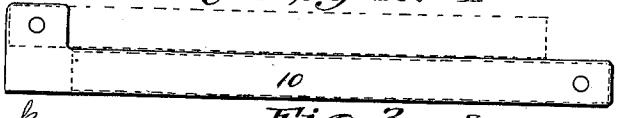


Fig. 3.

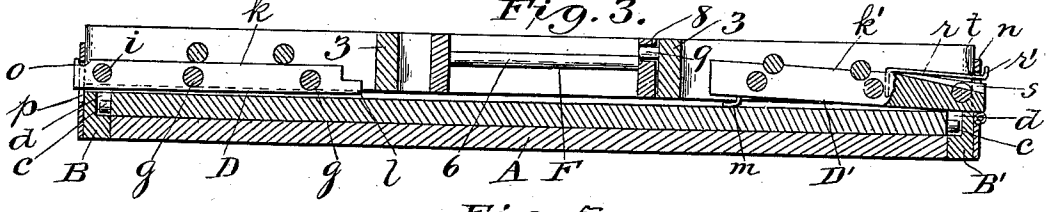
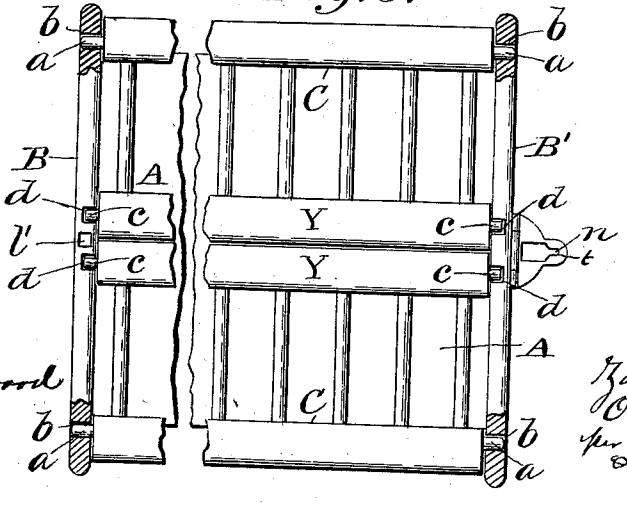


Fig. 5.



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UNITED STATES PATENT OFFICE.

ZANE B. TAYLOR AND ORLANDO W. MOORE, OF ORBISONIA, PENNSYLVANIA.

FOLDING CRATE.

SPECIFICATION forming part of Letters Patent No. 628,500, dated July 11, 1899.

Application filed March 6, 1899. Serial No. 707,850. (No model.)

To all whom it may concern:

Be it known that we, ZANE B. TAYLOR and ORLANDO W. MOORE, citizens of the United States of America, and residents of Orbisonia, county of Huntingdon, State of Pennsylvania, have invented certain new and useful Improvements in Folding Crates, of which the following is a specification.

The object of our invention is to provide a folding crate which shall be light, durable, without hinges, folding down to occupy the smallest possible space, and consisting, substantially, of only two detachable pieces.

The nature of our invention will be described below and pointed out in the claims.

In the drawings, Figure 1 is a broken plan view of the crate set up. Fig. 2 is a plan view of the crate folded down. Fig. 3 is a longitudinal vertical section of the crate folded. Fig. 4 is a detail end view. Fig. 5 is a broken plan view of the bottom board and folding sides. Figs. 6, 7, 8, 9, and 10 are detail views.

Like letters and figures refer to like parts.

A is the bottom board, which may be suitably attached to the end cleats B B'. To the cleats the folding sides C may be attached by dowel-pins *a*, turning in dowels *b* in said cleats, whereby the sides may be easily raised or lowered to rest on the bottom board. At each end of the top rail Y of sides C are dowel-pins *c*, and when the sides are down said pins enter recesses *d* on the inside of the cleats B B', permitting said sides to lie flush with said cleats. (See Fig. 5.) When the sides are up, pins *c* are to enter dowels *f* on the inside of folding ends D D'. The horizontal rods *g* of said ends engage with the side bars *h*, which turn upon the end rods *i* of the cover E. To strengthen the ends D D', there are central bars *k k'*, the bar *k* ending below in a cut-away or square pin *l*, which enters a recess *l'* in end cleat B and prevents the lower side of end D from moving when the crate is set up. The end D' rests on the top of cleat B' and is held from moving when vertical by a metallic bent arm *m* engaging with hinged eye or latch *n*, secured to the outside of said cleat.

When the crate is to be folded, the sides are put down under the cover. Then the cover, with the ends folded under, is laid on. The upper end of bar *k* is transversely notched to form a hook *o*, which should be slipped into metallic eye or loop *p*, attached centrally to the outside of cleat B. The bar *k'* in the opposite end D' has a spring-rod *r*, bent at right angles at its free end to form a hook *r'*. The bar *k'* is channeled at *s* to permit said rod to sink into it as latch *n* is pushed over hook *r'* to hold end D' securely fastened down, and to permit rod *r* to spring up thereafter said latch *n* is notched at *t*. The latch may be released by simply pressing rod *r* into channel *s*. It will also be noticed that when the crate is set up loop *p* and latch *n* will form braces for bars *k k'*.

The cover E apart from the ends D D', attached thereto, consists of quite heavy overhanging side bars 1, transverse rods 2, and transverse bars 3. The latter are cut away (see Fig. 6) underneath at *x*, where they join side bars 1. Hence when the crate is set up the top rails Y of sides C will enter said opening *x* and bars 1 will overhang or come down outside of rails Y, which, together with the fastening above mentioned, firmly binds the crate together and gives rigidity.

Between transverse bars 3 are rods 4, a central opening being left for a door F, consisting of sides 5 and rods 6. The door is closed by a spring 7, coiled about one of the rods 4, one of the free ends of the spring resting upon another of the rods 4 and the other free end bearing against one of the rods 6 in the door. The door is smaller than its opening and has a dowel 8 in one of its sides, into which pins 9 on one of the bars 3 may enter when the door, which turns loosely upon one of the rods 4, is pushed to the right, thus rendering it impossible for anything inside the crate to lift the door until it is pushed to the left, or as the case may be, according to the position of the operator.

In a very large crate it would be better for one side to fold down first and the opposite side to fold upon it, thus preventing a width out of proportion to the height. To do this, the ends of the cleats next to the side to be last folded should be elevated to a height equal to the thickness of the side first folded, or one side could not fold upon the other properly. How this modified cleat should be

shaped is seen at 10 in Fig. 10 of the drawings, and no further description will be needed in view of what has been shown.

It will be seen that the crate consists of only two detachable parts, the cover carrying the folding ends and the bottom board carrying the folding sides. The manner of setting up or closing the crate will be understood from the above, as well as its extremely small thickness when closed and locked.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a crate, the combination with a cover provided with overhanging side bars and transverse bars shouldered or cut away where they join said side bars, of folding ends turning between said side bars, folding sides having top rails entering the cut-away portion of said transverse bars, and a bottom board, as set forth.

2. In a crate, the combination with the folding ends having dowels on the inside, of the folding sides with dowel-pins on the ends of their top rails entering said dowels when the crate is set up, as set forth.

3. The combination with the cover, of folding end D having bar *k* with inside notch *o*, folding end D′ having bar *k′* with a hooked spring-rod *r*, the bottom board having cleat B with an outside loop *p* and an opposite cleat B′ with a hinged latch *n* having notch *t*, and folding sides, as set forth.

Signed by us at Orbisonia, Huntingdon county, Pennsylvania, this 23d day of February, 1899.

ZANE B. TAYLOR.
ORLANDO W. MOORE.

Witnesses:
ANNIE M. LESSIG,
IRA PUCKEY.