

(No Model.)

3 Sheets—Sheet 1.

J. W. BROOK.  
FOLDING CRATE.

No. 409,386.

Patented Aug. 20, 1889.

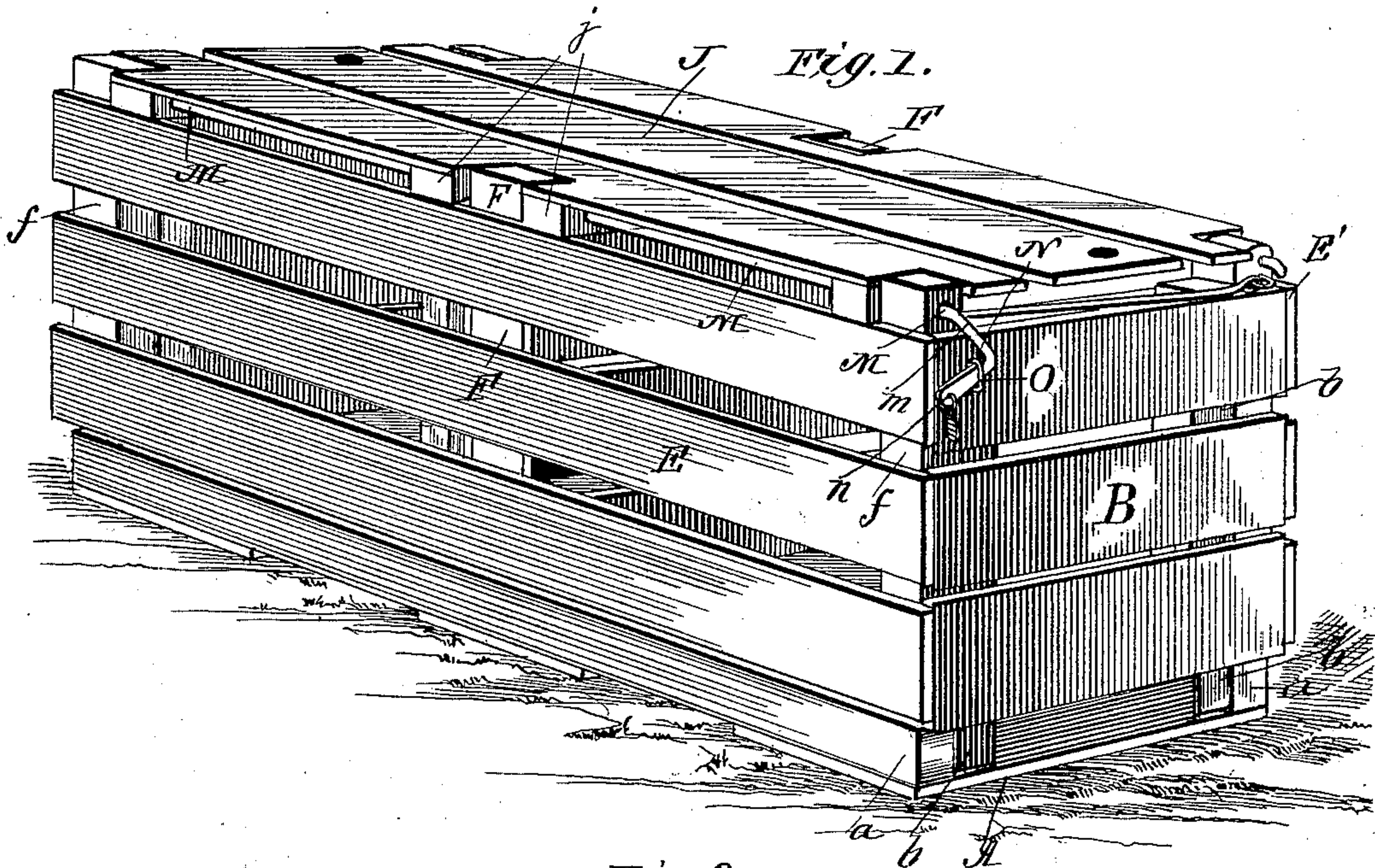
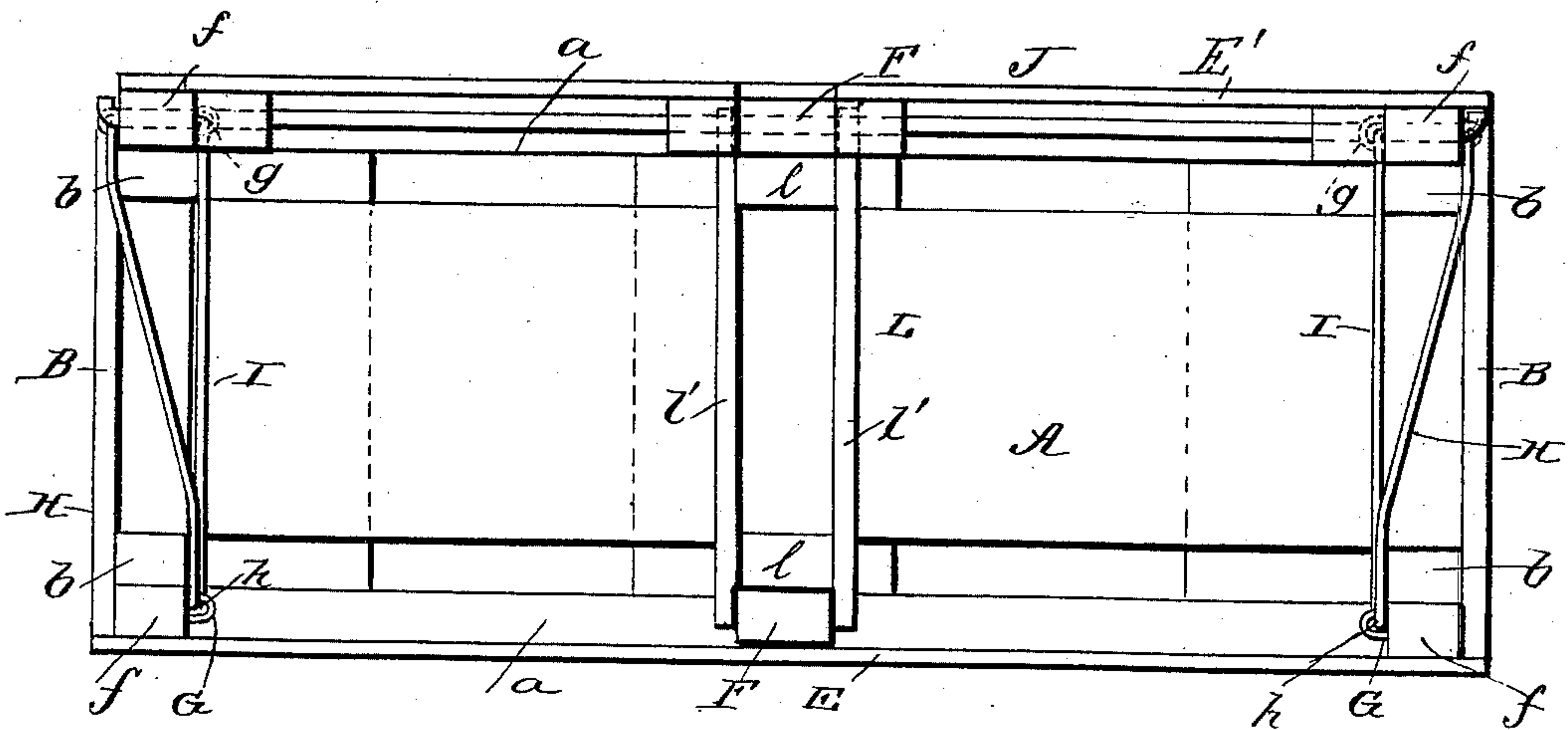


Fig. 2.



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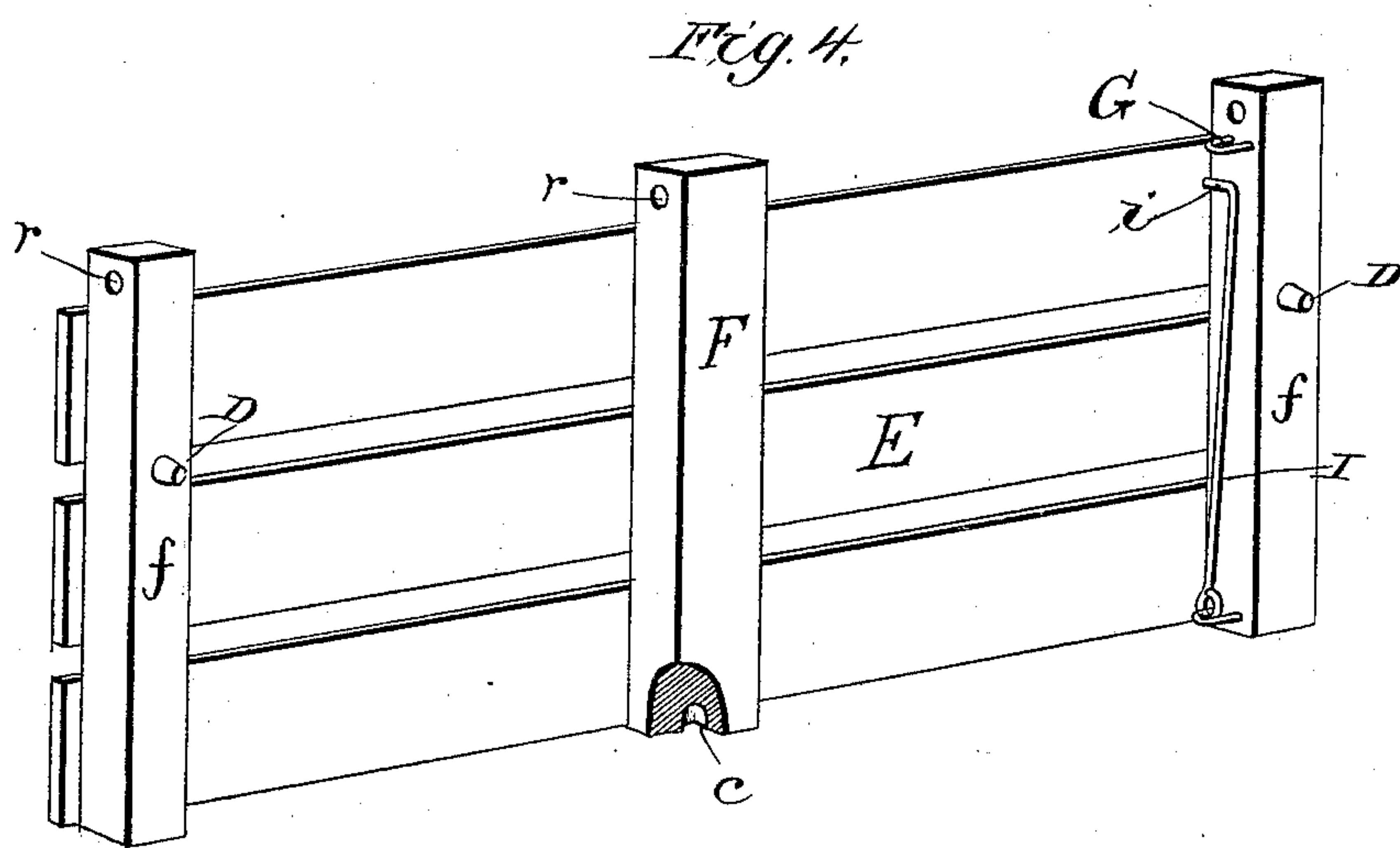
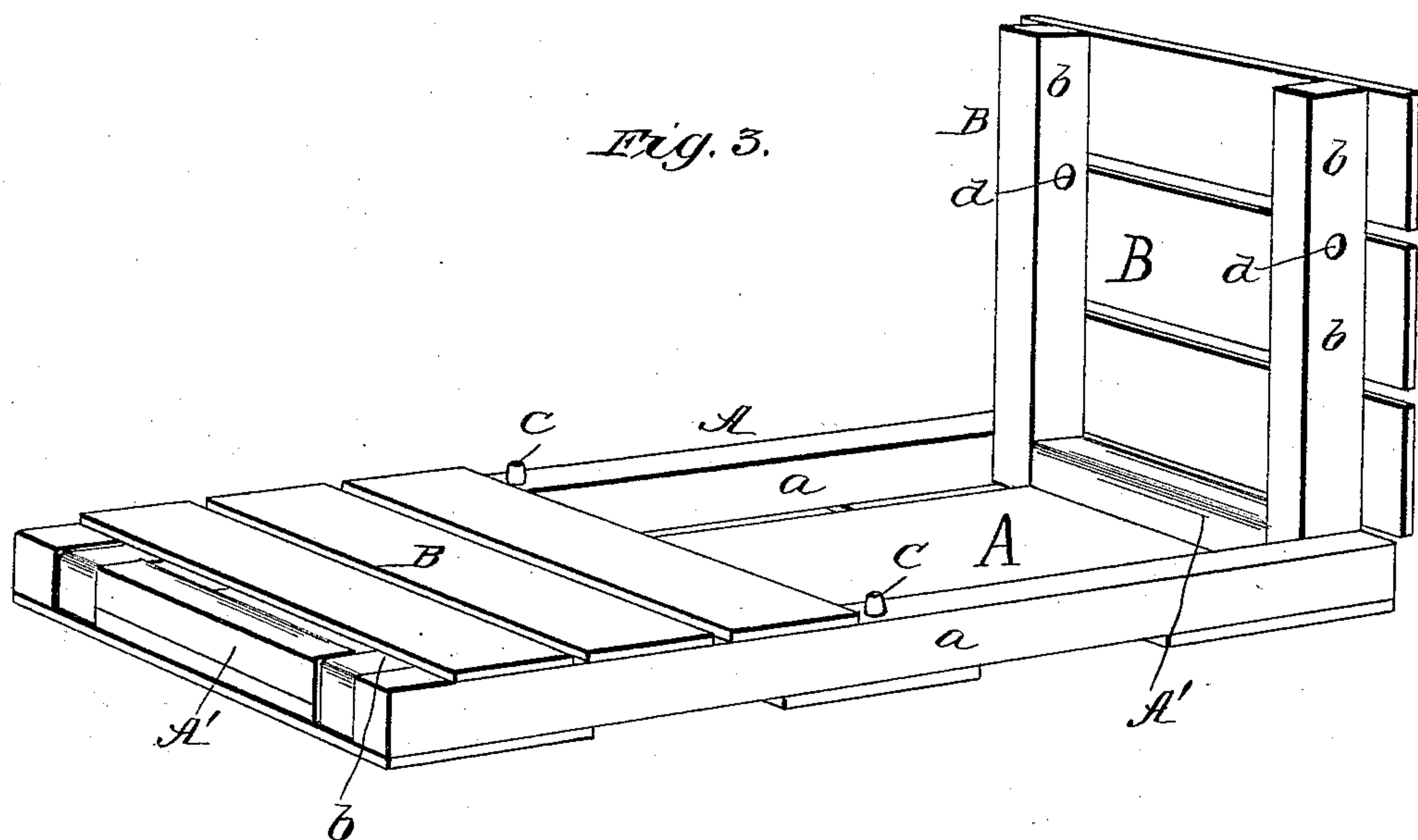
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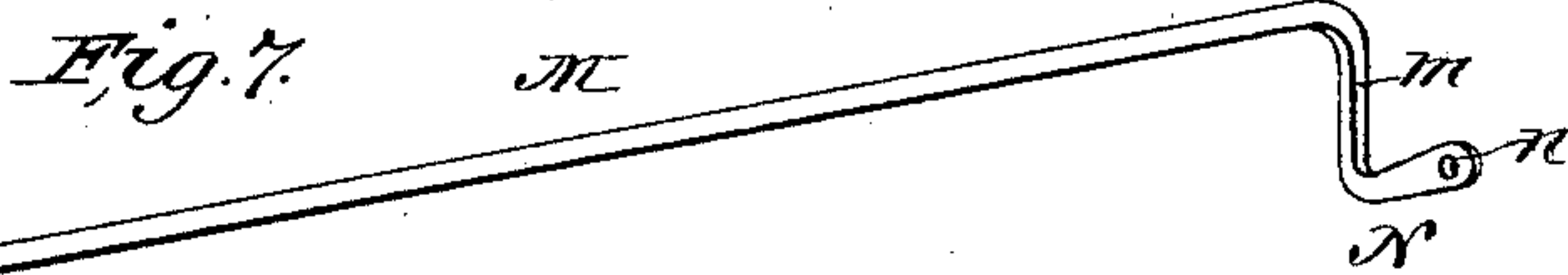
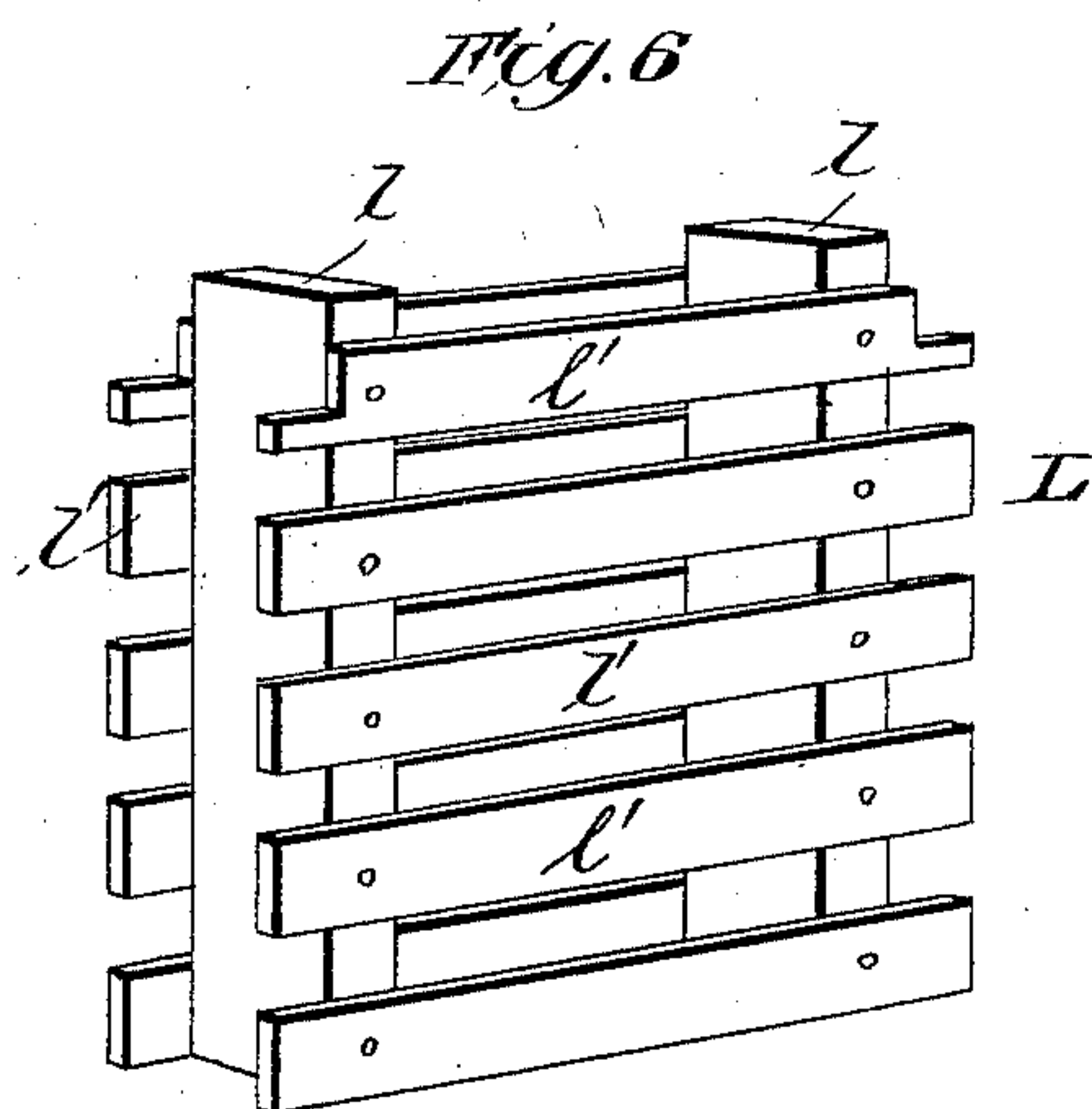
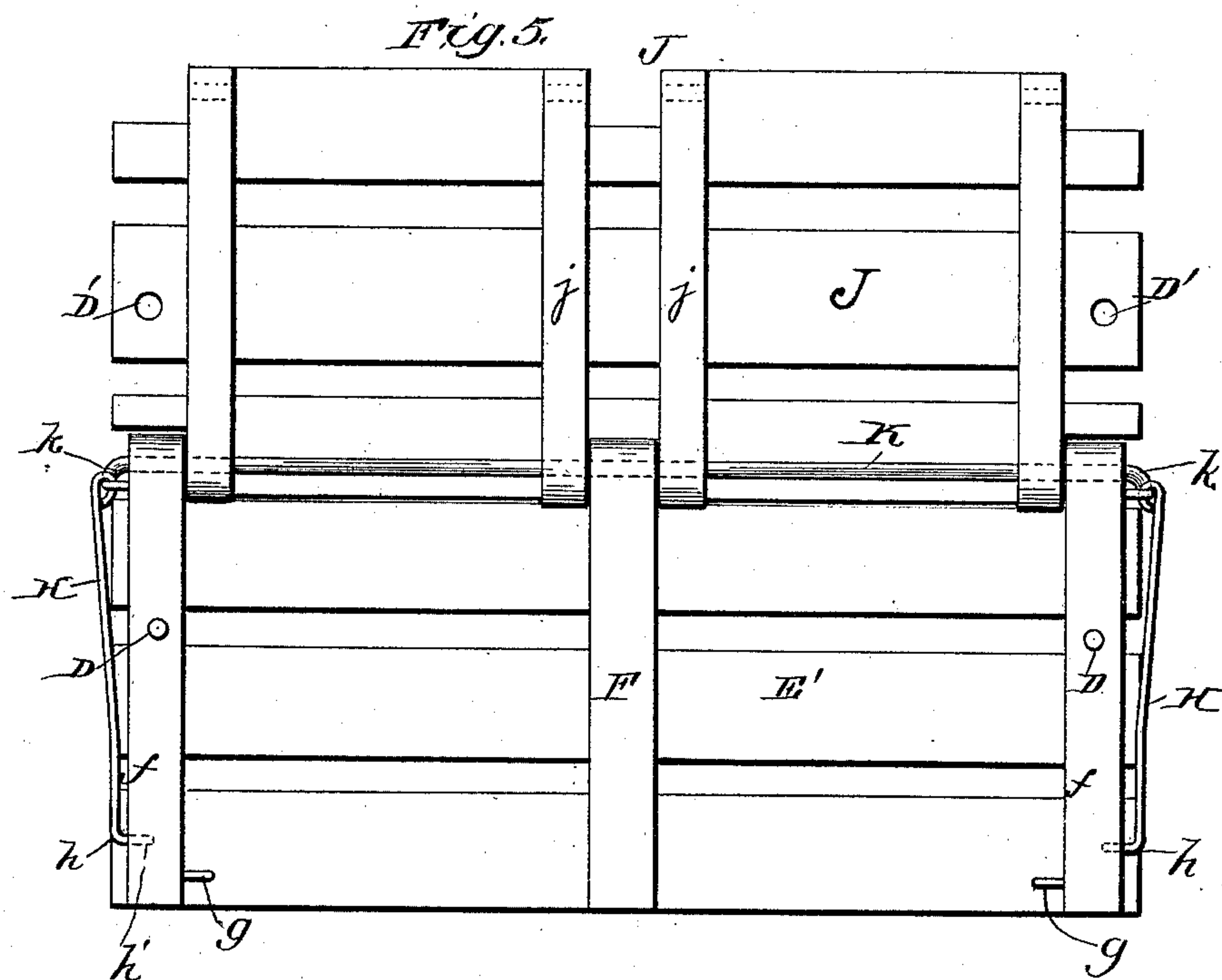
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# UNITED STATES PATENT OFFICE.

JAMES W. BROOK, OF LYNCHBURG, VIRGINIA.

## FOLDING CRATE.

SPECIFICATION forming part of Letters Patent No. 409,386, dated August 20, 1889.

Application filed April 26, 1889. Serial No. 308,743. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. BROOK, of Lynchburg, in the county of Campbell and State of Virginia, have invented a new and  
5 useful Improvement in Folding Crates, of which the following is a specification.

My invention is an improvement in crates; and it consists in certain novel constructions and combinations of parts, as will be herein-  
10 after described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my crate. Fig. 2 is a top plan view of same, the cover being raised. Fig. 3 is a detail view of the bottom and end pieces.  
15 Fig. 4 is a detail view of the front side piece. Fig. 5 shows the rear side piece and top. Fig. 6 is a detail view of the partition, and Fig. 7 is a detail view of the fastening-bar, all of which will be described.

20 The crate, when in position for use, presents the appearance of an ordinary crate with a hinged top.

I construct the box with a bottom section A, having the ends B hinged at their lower  
25 ends to it, such bottom having frame beams or sills *a*, and the ends having frame beams or uprights *b*, such beams *a* and *b* being arranged to lie side by side when the ends are folded down on the bottom, so that the parts  
30 A and B may be compactly folded together. I provide the sills *a* centrally between their ends with the upwardly-projected dowels C, to enter the sockets in the side pieces presently described. I also form the end up-  
35 rights *b* with sockets *d*, to receive the dowels on the side pieces.

It will be understood from the foregoing that when not in use the ends and bottom may be detached from the other parts of the  
40 crate and be compactly folded, the ends folding down close on the bottom piece.

For convenience of reference, I shall refer to the side pieces E and E' as respectively the front and rear sides. Each of such sides  
45 is provided in its lower edge with a socket *c*, to receive the dowels C of the base, and at each end with dowels D, to enter the sockets *d* in the end pieces. It will be seen, therefore, that when the ends B are turned up at right an-  
50 gles to the base A, and the sides are applied by fitting the sockets *c* on dowels C, and the dowels D into sockets *d*, and the sides are

firmly clamped together, a strong rigid box is provided. By preference each of the sides has a central upright F and end uprights *f*. 55

The front side E is provided at its ends, near its upper edge, with eyes G to receive the hooks *h* on one end of rods H, which are secured to the rear side section E'.

It will be noticed that the eyes or staples G 60 are arranged on the inner sides of the end uprights *f*, and the hooks are connected with the end uprights *f* of the rear section at the outer side thereof, the result of such peculiar arrangement being that the hook-rods H extend 65 diagonally between the front and rear sides, at the end of same, and serve as a closure of the space at the ends of the top, as shown.

The hooks *h* are locked in the eyes or staples G by the mechanism presently described. 70

The front section is provided near its lower end with the hook-rods I, secured at one end to the end uprights *f*, near the lower ends of the latter, and provided at their other ends with hooks *i* to enter eyes or staples *g*, pro- 75 vided on the uprights *f* of the rear side piece. It will be understood that these rods will in use be held in engagement with the eyes *g* by the material packed in the crate above said rods I. The rods H I and the eyes engaged 80 thereby serve as simple efficient means for clamping the front and rear sides together. The top J is hinged at its rear edge to the upper edge of the rear side piece E', preferably by means of the pintle-rod K, which ex- 85 tends through coincident opening in said top and side pieces, and has its ends bent at *k*, being thereby secured. This rod K, running between the upper edge of the side piece E' and the rear edge of the top piece, operates 90 in a measure to close the gap between such parts at said place.

I provide in my crate a hollow ventilating-partition L, such partition serving to divide and give strength to the box by bracing the 95 same, and also operating to give ventilation to the articles packed in the middle of the crate. By preference, the partition is formed with bars or posts *l* and slats *l'*, nailed to the opposite side of same, such slats being ex- 100 tended beyond the posts *l*, so as to lap on opposite sides of the central uprights F of the side pieces and brace the partition in place. At its upper end the partition fits between



beams or bars *j j*, secured to the under side of the top.

The top *J*, when closed down in position, is secured by the fastening-rod *M*, passed through coincident holes *r* in the bars of the front side piece *E* and of said top. To lock this bar *M*, I prefer to provide it at one end with a crank like arm *m*, having a tongue-like portion *N*, which turns into and through a staple *O* on one of the end pieces, and is perforated at *n*, so it may receive a padlock or a wire the ends of which may be fastened by a metal seal in the well-known manner. This arm and portion turning into the staple operates to draw the front side more closely against the end piece and braces such front, as will be seen. It will also be seen that the fastening-rod *M* extends above and close to the hooks *h* and secures such hooks in their staples. When taken apart, the bottom and end pieces are folded together, as before described. The top is folded down on the rear side piece, it being provided at *D'* with sockets for the dowels thereof, so it may be folded flat down, and the rear side piece having sockets *h'* for the hooks *h* when the parts are folded.

The fastening-rod *M* is placed in the holes in the front side piece, and the said parts, together with the partition, may be packed together and secured, or the crates may be made in different sizes and the small ones be folded and packed in the large ones when being returned to the shipper.

Cross beams or sills *A'* are provided at the ends of the bottom piece and cover the space below the slats of the end pieces when the ends are raised, and also serve to give strength and rigidity to the bottom.

Having thus described my invention, what I claim as new is—

1. An improved crate provided with a hollow ventilating-partition *L*, consisting of the bars or posts *l*, and slats *l'* nailed to the opposite sides of bars *l* and separated, providing spaces between them, substantially as set forth.

2. In a crate substantially as described, the combination of the bottom, the sides having uprights *F*, and the hollow ventilating-partition formed of posts or uprights and slats, the slats being secured to the opposite sides of the said uprights and extended at their ends beyond the same whereby to lap on opposite sides of the uprights *F*, substantially as set forth.

3. In a crate, substantially as described, the combination, with the sides having uprights *F* and the top having beams or bars *j j*, of the ventilating-partition formed to fit between the bars *j*, and having slats arranged to extend on opposite sides of the uprights *F*, substantially as set forth.

4. The combination, in a crate, of the bottom, the ends hinged to said bottom, the side pieces fitted to said ends and bottom, inter-

engaging dowels and sockets being provided on said parts, and connections between the opposite side pieces whereby to clamp them firmly together, substantially as set forth.

5. The bottom having dowels *C*, and the ends connected with the bottom and having the sockets *d*, combined with the sides having sockets *c* and dowels *D* to fit in the sockets *d* of the end pieces, and the connections between said sides, substantially as set forth.

6. As an improvement in crates, the combination, with the front side pieces having the eyes or staples, and the hooks *h*, entering said staples, of the top, and the fastening-rod by which to secure said top closed, such rod in its locked position being extended close to the hooks *h*, whereby to hold the same in their staples, substantially as set forth.

7. In a crate, substantially as described, the combination of the front and rear side pieces having near their ends uprights *f*, the top, the eyes or staples *G*, secured on the inner sides of the uprights *f* of the front section, and the rods *H*, secured at one end to the outside of the uprights *f* of the rear side section, and having at their other ends hooks engaging the eyes *G* of the front side section, whereby said rods *H* will extend diagonally and serve to fill in a measure the space at the end of the top, substantially as set forth.

8. In a folding crate, the combination of the front side piece, the end piece having a staple *O*, the top, and the lock-rod *M*, passed through coincident openings in the top and side piece, and having at its end a crank-like arm *m*, provided with a portion *N*, arranged to enter the staple *O*, substantially as and for the purposes set forth.

9. The improved crate herein described, consisting of the bottom having dowels *C*, the ends *B*, having sockets *d*, a staple *O* on one of said ends, the front side piece *E*, having eyes or staples *G* and hook-rods *I* and provided with dowels *D* and sockets *c*, the rear side section having dowels *D* and sockets *c*, the hook-rod *H*, connected with the rear side section, the top hinged to the rear side section, the partition, and the lock-rod *M*, having at one end a crank-like arm *m*, having a portion *N*, arranged to enter the staple *O*, substantially as set forth.

10. In a folding crate, substantially as described, the combination of the bottom piece or section *A*, having frame beams or sills *a*, and the end pieces *B*, hinged or pivoted to the bottom *A* and having frame beams or uprights *b* arranged to lie alongside the sills *a*, whereby the ends may be folded flat down against the bottom piece, all substantially as and for the purposes set forth.

JAMES W. BROOK.

Witnesses:

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