

(No Model.)

H. P. FISKE.  
BOX BLANK CUTTER.

No. 360,674.

Patented Apr. 5, 1887.

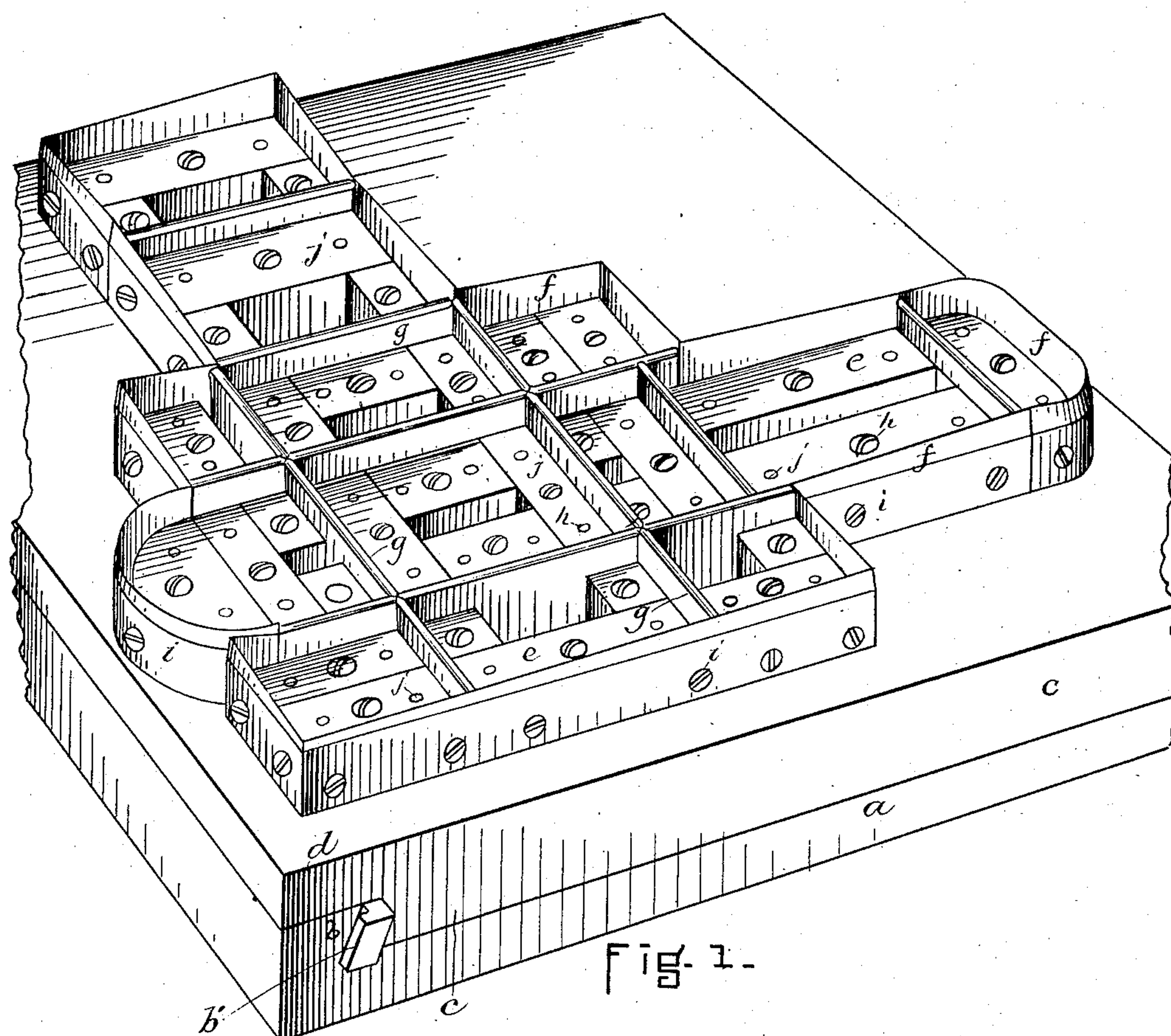


Fig. 1.

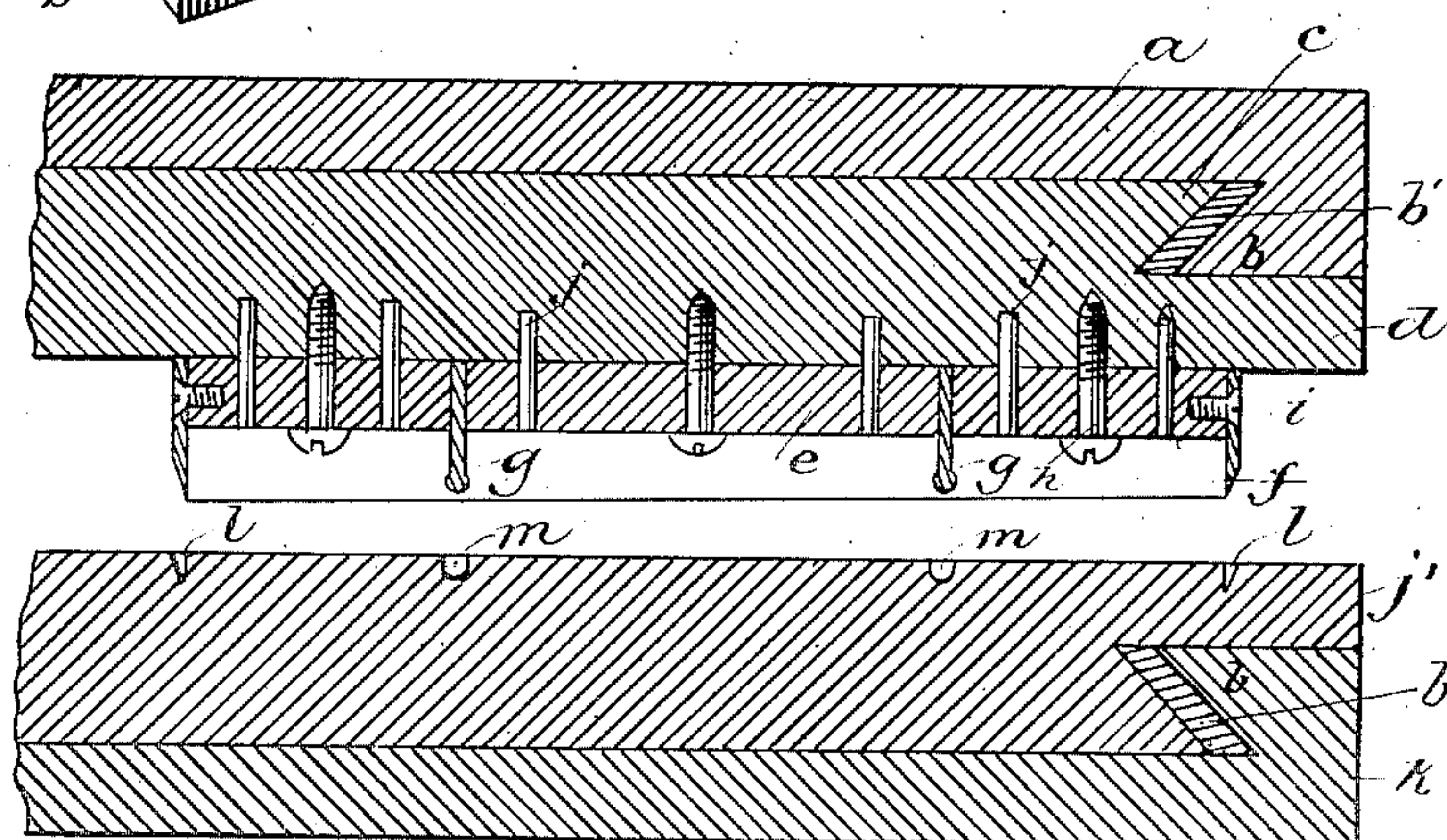


Fig. 2.

WITNESSES  
*C. Loomis,*  
*H. Brown.*

INVENTOR

*H. P. Fiske,*  
*by Wright, Brown & Crossley,*  
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# UNITED STATES PATENT OFFICE.

HENRY P. FISKE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CHARLES F. COPELAND, OF SAME PLACE, AND GRANVILLE W. DANIELS, OF SOMERVILLE, MASSACHUSETTS, TRUSTEES.

## BOX-BLANK CUTTER.

SPECIFICATION forming part of Letters Patent No. 360,674, dated April 5, 1887.

Application filed March 11, 1886. Serial No. 194,797. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY P. FISKE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Box-Blank Cutters, of which the following is a specification.

My invention relates to box-blank cutters, and has as its object to provide improvements in machines of that character, as will be hereinafter fully described, and subsequently set forth in the claim.

Of the accompanying drawings, hereto annexed and forming part of this specification, Figure 1 represents a perspective view of an inverted platen and its carrier provided with blades and creasers embodying my invention, parts being pictured as broken away. Fig. 2 represents a section on the line *x x* of Fig. 1, showing also a sectional view of the bed and its carrier opposite to and co-operating with the cutters and creasers.

Similar letters of reference indicate similar parts in both figures.

*a* represents the movable carrier of the platen *c*, provided with dovetail flanges *b* at the edges of its under side, forming a substantial dovetail groove, permitting the cutter-platen *c*, provided with a projection corresponding to said groove, to be secured thereto by sliding said projection into said groove, as shown. The cutter-platen *c* is extended at its sides, so as to project out even with the sides of the bed *a*, as shown at *d*.

*e* represents sectional strips, to which the cutting-knives *f* and creasers *g* are secured by means of screws *h* or otherwise, and said strips *e* are secured to platen *c* by means of screws *i*, guide or steady pins *j*, attached to said strips and adapted to enter holes formed in the platen, being employed to insure the getting of the knives into precisely the same position at each time of replacing after removing them for the purpose of sharpening or repairing them, or for any other cause.

It is important that the knives should always have exactly the same position on their platen, since a change of their position thereon to any appreciable extent would render the co-operative cutting parts of the bed *j'* ineffective

in severing the paper or paper-board designed to form the box-blank, and it has been found quite impossible to secure this preciseness of position of the cutting-blades by the securing-screws alone.

The cutting-edges of the blades or knives *f* are formed at an angle with respect to the face of the opposite co-operating bed *j'*, for a purpose to be presently explained. The faces of the creasers are parallel with the face of the bed *j'*, and are on a plane substantially even with the lowest point of the cutting-knives *f*.

A bed, *j'*, is formed as disclosed in my pending application, filed December 2, 1885, No. 184,503, and is secured to its carrier *k* in the same manner that cutter-platen *c* is attached to carrier *a*.

By the construction and arrangement of parts as shown and described, upon the first operation of the machine the knives *f* will cut through the copper or hard face of the bed and into the softer portion thereof, forming the cutting-grooves *l*, the creaser sinking into the bed and forming the creaser-grooves *m*. In the subsequent operations of the machine the straight or perpendicular part of the knives will move in close contact with the corresponding part of the grooves *l*, and the deepest or widest part of said knives being the first to come in contact with the side of said grooves, it follows that they will operate with a shearing cut in connection therewith, so that paper or paper-board to form the box-blank placed between the knives and the bed will be cleanly and smoothly cut, as with a pair of shears, which would not be the case if the cutting-edges of the knives were formed parallel with the face of the bed and said knives were to operate on the paper or paper-board at the same instant throughout their entire lengths.

It is not only essential that the knives or cutters should be replaced on their strips after removal for any cause in precisely the same position they previously occupied, and that the strips should be given the same position on the platen *c*, but that the latter should be locked in precisely the same position on its carrier *a* upon replacement each time after removal, and that the same thing should be



done with respect to the bed  $j'$  and its carrier, and to secure these ends the platen  $c$  and its carrier  $a$ , as well as the bed  $j'$  and its carrier, are not only provided with tongue-and-groove connections, as shown, but a key,  $b'$ , is driven in between the dovetail flange  $b$  and the sides of the carriers, to insure their retention in position, it being understood of course that the platens  $c$  and beds  $j'$  are used in pairs—that is, a platen,  $c$ , and its particular arrangement of cutters and creasers is used each time with the bed  $j'$  with which it was first used, a bed,  $j'$ , being provided for each platen  $c$  and its dies.

By my invention I am enabled to form box-blanks with perfectly clean-cut edges and properly creased for folding at each operation of the machine, and provision is made for removing the knives or blades whenever occasion may require and getting them in precisely the same position in replacing them that

they previously occupied—very important matters in contrivances of this kind.

What I claim is—

The platen, a series of backing-strips detachably secured thereto and provided with guide or steady pins for guiding them to proper position, and a series of sectional blades and a series of sectional creasers secured to said backing-strips, all arranged, related, and combined substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 12th day of February, 1886.

HENRY P. FISKE.

Witnesses:

ARTHUR W. CROSSLEY,  
C. F. BROWN.