(No Model.)

G. E. LLOYD.

MACHINE FOR FITTING STEREOTYPE PLATES AND THEIR BACKING.

No. 333,530. Patented Jan. 5, 1886.

Fig. 1.

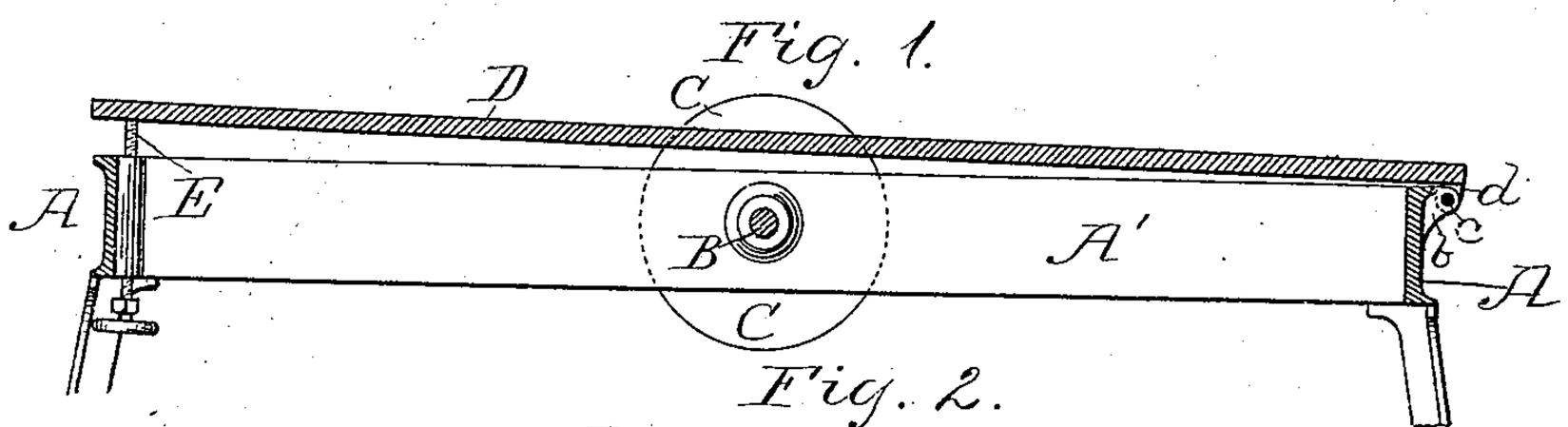


Fig. 2.

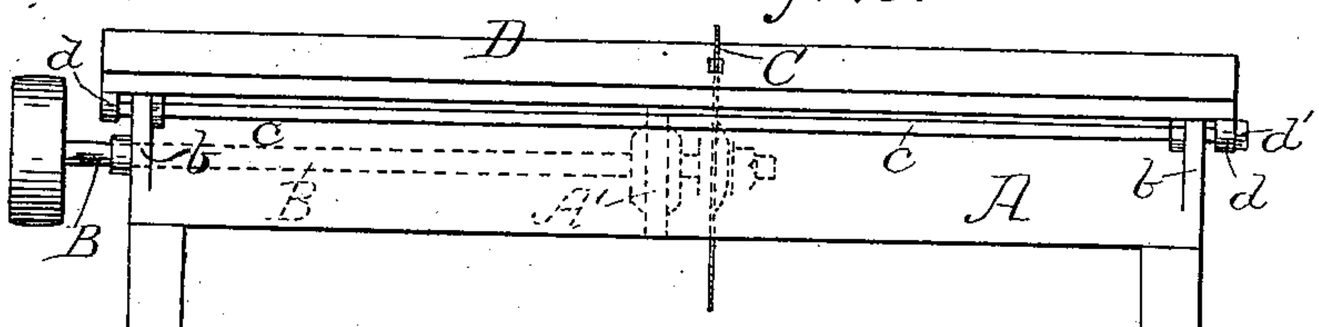


Fig. 3.

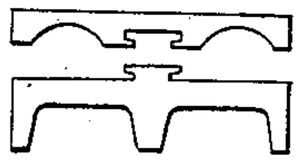


Fig. 4.

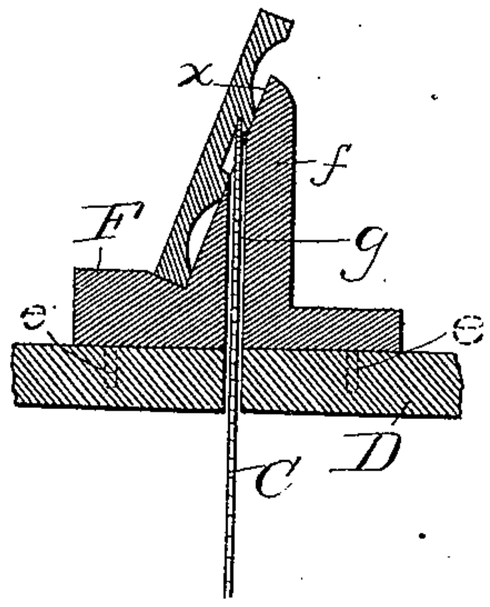


Fig. 5.

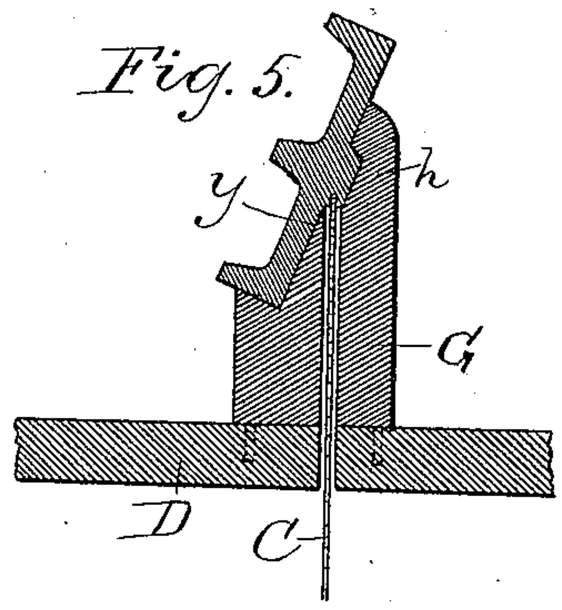


Fig. 6.

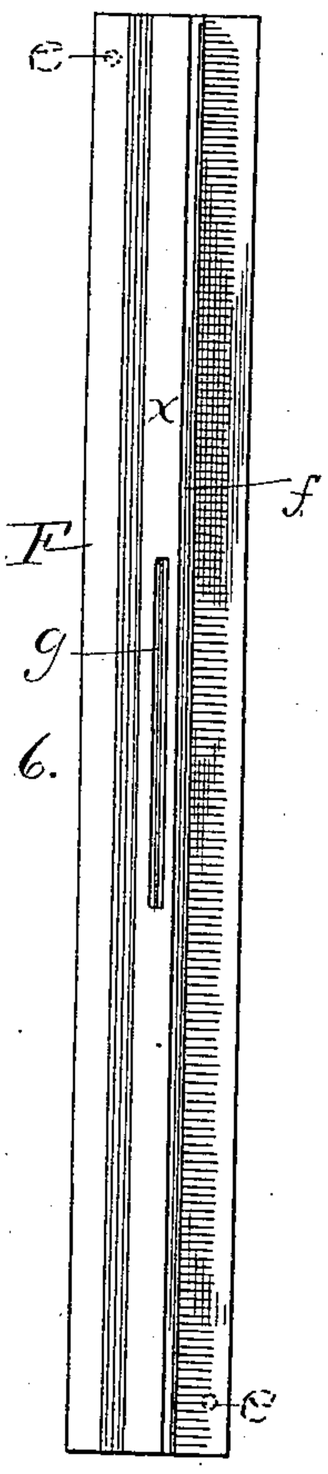
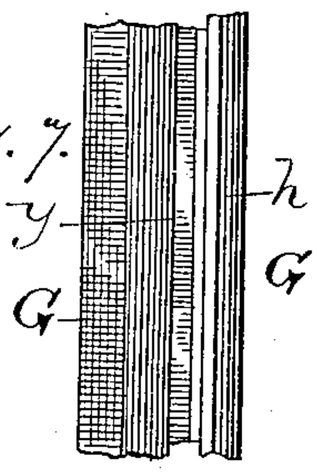


Fig. 7.



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GEORGE E. LLOYD, OF CHICAGO, ILLINOIS.

MACHINE FOR FITTING STEREOTYPE PLATES AND THEIR BACKING.

SPECIFICATION forming part of Letters Patent No. 333,530, dated January 5, 1886.

Application filed May 12, 1885. Serial No. 165,172. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. LLOYD, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Circular Saws and Attachments; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to furnish a circular saw and attachments especially adapted for use in the manufacture of stereotype plates and bases.

In the drawings, Figure 1 is a vertical longitudinal section of my invention. Fig. 2 is an elevation of the rear end of the same. Fig. 3 shows a stereotype plate and base in the manufacture of which the saw is used. Fig. 4 shows a transverse section of one of the attachments. Fig. 5 shows a transverse section of another attachment, and Figs. 6 and 7 show plan views of said attachments.

Reference being had to the drawings, A represents a rectangular table-frame supported on legs and having a longitudinal central beam, A′, supported by the end irons of frame A. This beam, A′, is provided at about its center of length with bearings for the shaft B, which extends transversely through suitable bearings in the side of frame A, and has a pulley on its outer end, and a saw secured in position by suitable arbors on its inner end, as illustrated in the drawings.

Projecting from the rear end of the frame A are lugs *b b*, having suitable bearings for the pintle or pivotal shaft *c*, on the ends of which is secured the bed-plate D by means of lugs *d*, extending downward therefrom, as shown, from the rear corners. This I accomplish by securing the ends of shaft *c* fast in the lugs depending from the bed-plate, screw-threading said shaft and placing nuts *d′* thereon contiguous to the outer surfaces of the lugs *d*. Thus by tightening one nut and loosening the other the shaft and bed D may be adjusted to a nicety.

Other arrangements of the shaft *c* and nuts *d′* can obviously be resorted to to give a lateral adjustment of the bed; but these I claim as coming within the scope of my invention.

The bed-plate D is provided with a suitable slot for the accommodation of the saw, and it can be oscillated vertically by means of the hand-screw E passing vertically through the tapped portion of frame A in the front end of the machine, and in such position that its top end bears against the under surface of said bed D. Thus by manipulating said screw the bed is raised or lowered and the depth of the kerf of said saw regulated.

In Fig. 3 will be seen a stereotype plate and base. The plate has a T-mortise in its under surface, and the base a T-tenon on its upper surface corresponding in dimensions to the T-mortise in the plate, into which it is designed to enter. In making these plates and bases the tenon is cast with vertical side walls and the mortise likewise.

To obtain the construction shown in Fig. 3, I make a guide, F, as shown, which is placed longitudinally across the bed and secured in position by dowel-pins *e*, arranged as shown in dotted lines in Fig. 6, which enter suitable holes in the bed D. This guide F is provided with a vertical flange, *f*, running longitudinally and centrally its entire length. One side, *x*, of this vertical flange *f* is slightly inclined, (say about eighty degrees to the horizontal plane of the bed D,) and the upper surface of the guide F contiguous to the base of this inclined side surface, *x*, is inclined at right angles to the same. This guide F is placed in alignment with the saw C, and is provided with a vertical slot, *g*, which intersects the inclined side *x* thereof for said saw to pass through. The distance from the transverse center of the opening of the slot to the base of the inclined side *x* corresponds to about one-half the width of the stereotype-plate. Thus, if the saw is put in motion and the plate placed against said side *x* and pushed over the saw, an incision will be made in the side wall of the mortise, as shown in Fig. 4. The plate is then reversed and the incision made in the other side wall of the mortise, converting it into a T-mortise.

It will now be observed that, if the incision f the saw is too deep in the sides of the mor- se, by manipulating the hand-screw to raise ıe bed-plate it can be made shallower, or vice ersa, or, if the saw does not cut into the sides f the mortises at the proper point, the slots in ıe bed-plate and guide are wide enough to ermit of the lateral adjustment of the bed- late.

In Fig. 5 is shown the guide G for feeding ıe bases to the saw. In order to form the T- enon, I place the guide G in alignment with ıe saw and secure it on the bed-plate in the ıme manner as the guide F. Like guide F, uide G has a vertical flange, *h*, one side, *y*, f which is inclined, and the surface contigu- us to the base of said inclined side is inclined t right angles to the same. In the inclined ide a distance from the base corresponding to ne-half the width of the stereotype base is a ongitudinal mortise corresponding in depth nd width to the tenon of the same. The slot ı said guide in which the saw operates strikes hrough the lower side wall of the mortise nd into the side wall of the tenon of the base ed thereto. When one side of the tenon of ıe base is mortised, the base is reversed and ıe other side cut in the same manner.

The location and depth of the incisions of ıe tenon form a T-shaped tenon which cor- esponds to the T-mortise in the plate.

If desired, I do not deem it a departure from ıe spirit of my invention to make the bed- late oscillate by means other than those de- cribed—*e. g.*, a cam or cams having handles ith which to operate them may be used.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a circular saw, of a bed-plate having a slot through which a segment of said saw projects, and means for adjusting said plate laterally.

2. The combination, with a vertical saw and frame in which the shaft thereof is journaled, of a bed-plate, pivotal shaft, and nuts thereon, through the medium of which said bed-plate is made adjustable.

3. The combination, with a circular saw, of the bed-plate and guide placed thereon in alignment with said saw, said guide having a vertical flange, one side of which is inclined and is intersected by a vertical slot through which said saw passes.

4. The combination, with a circular saw, of the bed-plate capable of vertical adjustment, and a guide one side of which is inclined and is intersected by a vertical slot, and which is placed in alignment with said saw.

5. The combination, with a circular saw, of a bed-plate, means for adjusting the same laterally, and a guide one side of which is inclined and intersected by a vertical slot, and which is placed in alignment with said saw.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

GEORGE E. LLOYD.

Witnesses:
JAMES H. COYNE,
FRANK D. THOMASON.