

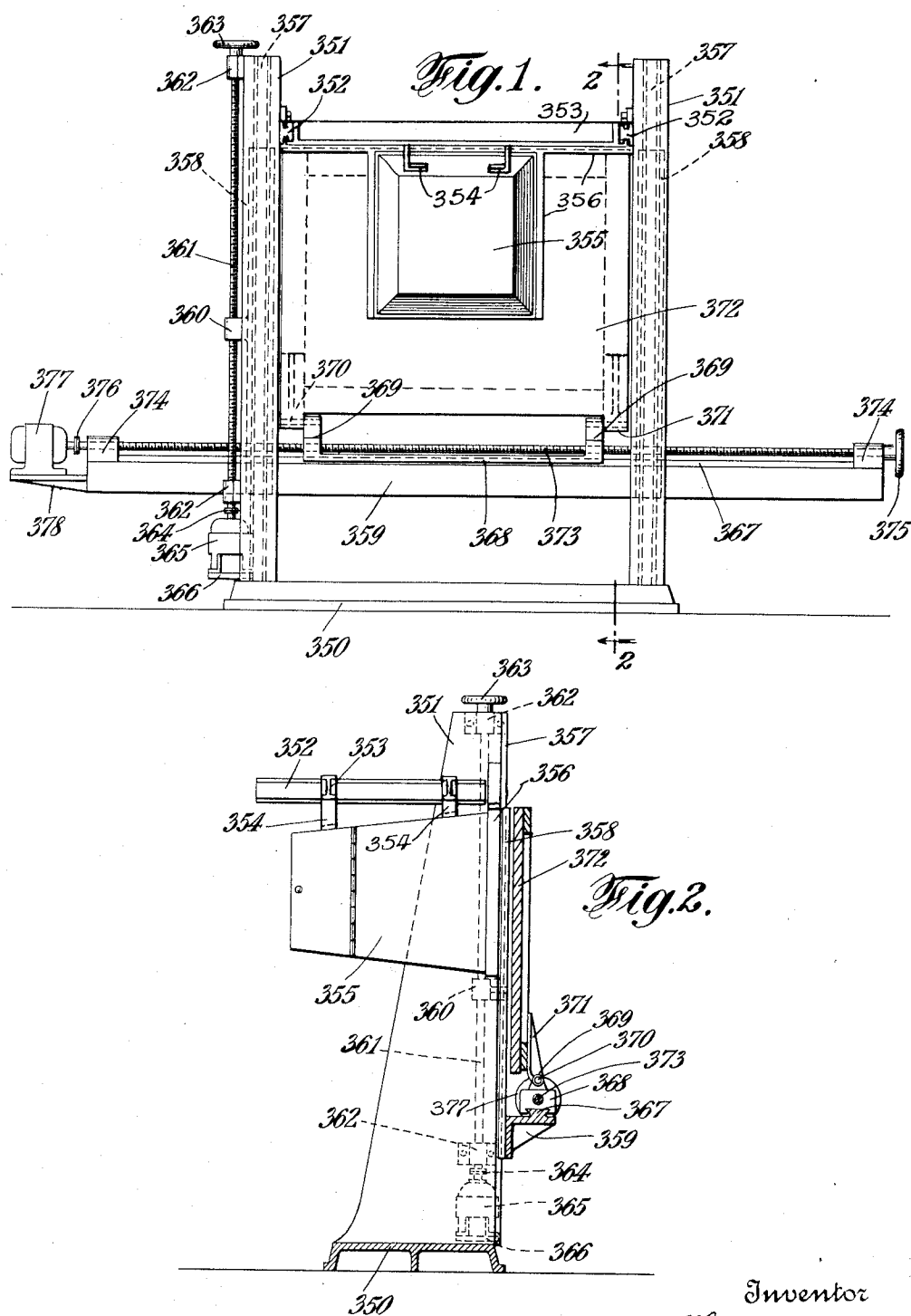
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PHOTOPRINTING MACHINE

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PHOTOPRINTING MACHINE

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7 Claims. (Cl. 95—73)

This invention relates to photo-printing machines and more particularly to commercial machines in which are combined power and hand actuated devices for accurately adjusting a negative carrying frame and a sensitized blank supporting bed relatively one to the other while both are in parallel planes.

This application is divided from a co-pending application on "Photographic machines" filed May 31, 1930, Ser. No. 458,789, which was divided from a prior co-pending application on "Photo-composing machines" filed Feb. 26, 1927, Ser. No. 171,126 upon which application Patent No. 1,920,399 has been granted.

The word "negative" as used herein, refers to any substance through which light can pass, as celluloid, and similar compounds, glass, paper and fabrics treated to become translucent, and bearing figural representations of objects, scribed, drawn or photographically deposited, or having the objects attached in such manner as to permit of photo-printing reproduction; similarly, the blank to receive the pictorial illustration of the object shown on the negative, may be of any substance having a sensitized surface.

In machines for making photographic prints for commercial work it is essential that any laxity or slackness be avoided as utmost accuracy is required.

It is also obviously important that all movements of the holders of these two elements be accomplished expeditiously, conveniently and without difficulty by an operator.

The purpose of this invention is to produce a machine having a base provided with two spaced vertical columns, cross connected near their tops and adapted to support a negative frame, movable in a horizontal path back and forth relative to the faces of the columns only; these columns also having vertical slides carrying a cross beam on which is mounted a slide movable longitudinally thereon and provided with a hingedly connected bed plate for supporting a sensitized blank.

A further feature is in the provision of independent means, both motor and manually actuated, for moving the sensitized blank vertically and horizontally each movement being exclusive of the other.

These and other highly essential objects are attained by the unusual construction and arrangement of elements hereinafter described and illustrated in the annexed drawing, constituting

a material component of this disclosure, and in which:—

Figure 1 is a rear elevational view of a machine made in conformity with the invention.

Figure 2 is a vertical sectional view taken on line 2—2 of Figure 1.

As shown in the drawing, the numeral 350 designates a base from which rise a pair of columns 351 having fixed near their upper ends, rear reaching rails 352 on which are longitudinally slidable connecting bars 353 having downwardly reaching brackets 354 carrying a lamp housing 355 and a negative frame 356.

The front faces of the columns 351 are provided with undercut guide-ways 357 on which ride vertical slides 358 having fixed at their lower ends a beam 359 extending beyond the uprights at both ends.

One of the slides has a threaded nut-like bracket 360 engaging a vertical lead screw 361, journaled in bearings 362 on the outer side of the adjacent column.

A hand wheel 363 at its upper end provides for manual adjustment and a friction clutch 364 at its lower end connects with a motor 365 carried on a support 366 formed on the base 350.

Formed on the upper surface of the beam is an undercut longitudinal guide 367 on which rides a carriage 368 having upstanding lugs 369 carrying pins 370 connected by leaves 371 to the outer face of a rectangular plate bed 372 to carry the sensitized positive plate.

The carriage 368 is threaded to engage a lead screw 373 journaled in bearings 374 at the outer ends of the beam 359, the screw having a hand wheel 375 at one end and a friction clutch 376 at the other to connect with an electric motor 377 carried on a support 378 formed on the adjacent end of the beam.

Thus by revolving the lead screw 361, the plate bed 372 may be moved in a vertical plane and by operating the screw 373, the bed 372 can be actuated in a horizontal plane relative to the negative, each movement being accomplished by independent means.

The negative frame 356 is attached to the lamp housing 355 and slidable with it forward and rearwardly, relative to the front of the machine and hence the plate carried by the bed 372, in a straight path.

Means, not shown, are provided for adjusting the registration of the frames, both vertically and horizontally, and to firmly clamp the frames in adjustment.

A sensitized plate is secured on the press bed

which is then swung upwardly and held in a vertical position, parallel with the negative frame, and the bed and frame mutually adjusted.

Separate controls for each are provided, all being conveniently accessible to an operator, making final or complete adjustments by the hand wheels.

It will be understood that the relative positions of the negative and blank positive may be reversed if desired.

As changes of construction could be made within the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawing shall not be interpreted as illustrative and not in a limiting sense.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent, is:—

1. In a photo-printing machine comprising in combination with a non-transitory negative holder and a universal adjustable sensitized plate bed, of independent means for moving said bed in two directions at right angles one to the other, and means to swing said bed towards and from said holder.

2. In a photo-printing machine having a rigid upright frame, a negative holder substantially central thereto, and movable only forward and back relative to the frame, a plate bed hinged at its lowermost edge to swing into horizontal and vertical positions, and positive means to move said bed in planes parallel with and relative to said holder.

3. In a photo-printing machine, a base, two spaced columns thereon having guide ways on their front faces, a bar connecting said columns, a negative frame carried by said bar, a horizontal beam movable into different heights along the faces of said columns, a plate bed mounted to swing on said beam, and means to move said bed along said beam.

4. In a photo-printing machine, a supporting

structure, a negative frame carried centrally of said structure, a lamp housing adjustably supported by said structure, movable toward and from the front of said structures, a slide on said structure, means to move said slide vertically, a hinged plate bed carried by said slide and means to move said bed longitudinally.

5. In a photo-printing machine having a rigid upright frame, a negative holder slidably secured substantially central thereto, a sensitized plate bed hingedly supported at its lower edge, means for raising and lowering said bed, other means for moving said bed horizontally, a lamp supported in relation to the negative holder, and means whereby said lamp may be moved away from the negative and returned in operative relation thereto.

6. In a photo-printing machine, a base, two spaced columns thereon having guide-ways on their front faces, a bar connecting said columns, a negative frame carried by said bar, slides movable on said guide-ways, a nut bracket fixed on one of said slides, a vertical screw engaging said bracket, a horizontal beam fixed to said slides to extend outwardly at both ends, a carriage slidable on said beam, means to actuate said carriage, and a plate bed hingedly attached to said carriage.

7. In a photo-printing machine, a base, two spaced columns thereon having guide-ways on their front faces, a bar connecting said columns, a negative frame carried by said bar, rails extending rearwardly from contiguous sides of said columns, connections between said rails, a lamp house having supports slidable on said rails, slides movable on said guide-ways, a nut bracket fixed on one of said slides, a vertical screw engaging said bracket, a horizontal beam fixed to said slides to extend outwardly at both ends, a carriage slidable on said beam, means to actuate said carriage, and a plate bed hingedly attached to said carriage.

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