

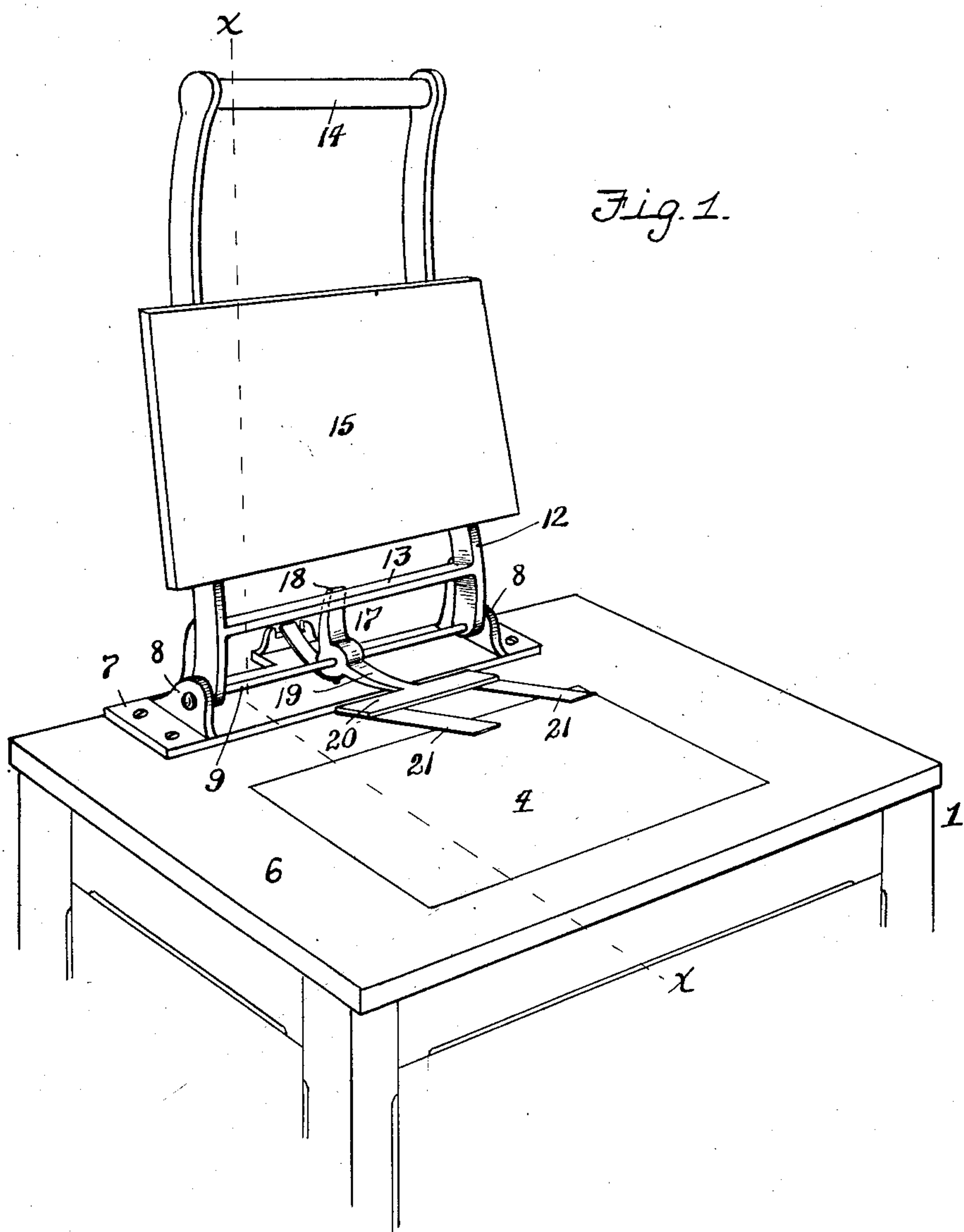
No. 860,127.

PATENTED JULY 16, 1907.

S. COLFAX.
PHOTOGRAPHIC PRINTING MACHINE.

APPLICATION FILED JULY 6, 1905.

2 SHEETS—SHEET 1.



Witnesses:

George Oltsch
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Schuyler Colfax.

Inventor
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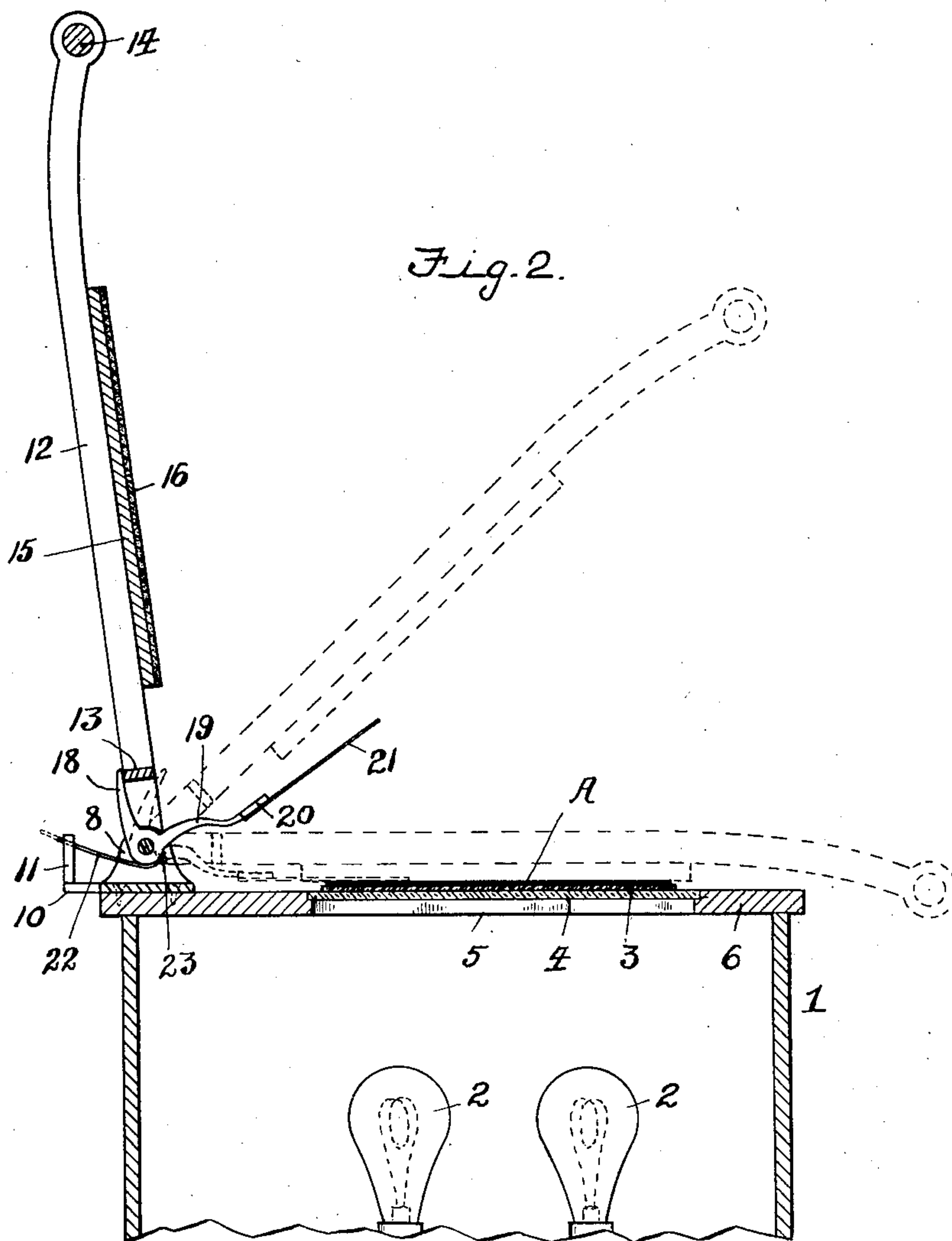
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L. M. Cole.

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UNITED STATES PATENT OFFICE.

SCHUYLER COLFAX, OF SOUTH BEND, INDIANA.

PHOTOGRAPHIC-PRINTING MACHINE.

No. 860,127.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed July 6, 1905. Serial No. 268,314.

To all whom it may concern:

Be it known that I, SCHUYLER COLFAX, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented new and useful Improvements in Photographic-Printing Machines, of which the following is a specification.

This invention relates to improvements in photographic printing machines.

10 The object of the present invention is to provide means for gripping the print paper in advance of the platen so as to prevent the former from being shifted or dislodged before the latter contacts therewith, thereby enabling the operator to properly position
15 the print paper upon the negative.

Another object of the invention is to so associate the parts and mechanisms that the platen will control the movement of the gripping device.

20 Other objects and advantages will appear as the nature of my invention is better understood by reference to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of the top of a photographic printing machine with the platen shown in
25 raised position and embodying all the features of my invention. Fig. 2 is a vertical section on the line $x-x$ of Fig. 1, showing in dotted lines certain positions of the platen and the gripping device.

30 Making renewed reference to the drawings, 1 designates a suitable case or cabinet which contains the usual electric lamps 2 that emit light to a negative 3 positioned upon the ground glass 4 that covers the opening 5 in the top 6 of the case.

At the rear of the top 6 is secured a plate 7 having
35 ears 8 in which is mounted a rod 9. This plate has a rearward projection 10 that terminates in an upstanding recessed keeper 11 the purpose of which will appear hereinafter.

Pivoted on the rod 9 is a swinging platen frame 12
40 having a cross bar 13 arranged parallel to and just above the rod 9 and also provided at its free end with a handle bar 14. To this swinging frame is secured the platen 15, the face of which is preferably covered with some yielding material 16 such as felt or rubber
45 so as to form a perfect contact when brought into engagement with the photographic paper on the negative.

Associated with the platen and its frame is a gripping device 17 which preferably consists of a lever which is fulcrumed on the rod 9 at approximately the
50 center thereof and having an upwardly extending arm 18 and a forwardly extending arm 19 that terminates in a T-shaped head or plate 20 which extends parallel with the rod 9. To the ends of the plate 20 and projecting forwardly therefrom are secured gripping fin-
55 gers 21, 21, which preferably consist of spring metal so

that they will yieldingly engage the photographic paper A, and hold it in position upon the negative 3 during the downward movement of the platen. These gripping fingers 21 are also preferably made of very thin metal so as not to interfere with the perfect
60 contact of the platen with the photographic paper, the fingers being adapted to be compressed up into the cushion 16 of the platen when the latter engages the print paper. The operation of the gripping device is automatic to the extent that it is elevated by raising
65 the platen and lowered by a spring 22 which is attached at one end to the bottom of the lever by a screw 23 and extends rearwardly with its free end disposed within the recess of the keeper 11 as shown in Fig. 1. This spring 22 has a tendency to draw the lever around upon
70 the rod 9 on which it is fulcrumed and thereby project its upwardly extending arm 18 forwardly to the position shown in dotted lines in Fig. 2, and its forwardly extending arm 19 downwardly into engagement with the print paper as also shown in Fig. 2. The action of
75 the spring, however, is arrested by the cross bar 13 of the platen frame which is disposed within the path of the upwardly extending arm 18 and therefore the gripping device can only be lowered when the platen frame is lowered to release the cross bar 13 from engagement
80 with the arm 18, and thus the cross bar 13 engages the arm 18 of the gripping device when the platen is raised.

Let it be premised that the parts are in the position shown in full lines in Fig. 2, and the operator may, by grasping with one hand, the handle bar 14 of the platen
85 frame, bring the platen down half-way to the position shown in dotted lines and thus release the upstanding arm 18 of the gripping device from engagement with the cross bar 13 of the platen frame permitting the gripping device to be forced down by the spring 22. It
90 being assumed that the operator, has with his other hand placed the print paper in position upon the negative, the gripping fingers will clasp the print paper and firmly hold it upon the negative and the operator may
95 then remove his hand from the print paper and continue to lower the platen which will contact with the print paper and hold it against the negative as shown in dotted lines. When the picture has been printed and the platen raised, the cross bar 13 will strike the upright arm 18 and elevate the gripping fingers 21 re-
100 leasing the print paper and permitting it to be removed, and the parts are now in a position to be again lowered.

Having thus described my invention, what is claimed as new is:—

1. In a photographic printing machine, the combination
105 with the case having means to hold a negative and photographic paper, and a platen hinged to said case and adapted to engage with the photographic paper, of a gripping member yieldingly held in engagement with the photographic paper and constructed and arranged to be re-
110 leased and lifted from said paper by the platen.

2. In a photographic printing machine, the combination with a case having means for holding a negative and photographic paper, of a platen hinged to the case and adapted to press the photographic paper in contact with the negative, and a gripping member having means to force it in contact with the photographic paper, and also constructed and arranged to be released from said print paper by the platen.
3. In a photographic printing machine, the combination with the case having means to hold a negative and photographic paper, of a swinging platen, a swinging gripping device, means operating independently of the platen for automatically swinging the gripping device to engage it with the photographic paper, and means carried by the platen to disengage the swinging device from the photographic paper.
4. In a photographic printing machine, the combination with the case having means to hold a negative and photographic paper, and a platen hinged to said case, of a swinging gripping device normally held in engagement with the photographic paper and having a temporary engagement with the platen during the upward movement of the latter, whereby the platen elevates the gripping device.
5. In a photographic printing machine, the combination with the case adapted to hold a negative and a sensitized element, a frame hinged to the case, and a platen carried by the frame, of a lever pivoted to the case and having forwardly extending gripping fingers adapted to engage the sensitized element and also provided with an arm disposed within the path of the platen frame, and means operating independently of the platen for automatically projecting the arm forwardly and the gripping fingers downwardly into engagement with the sensitized element.
6. In a photographic printing machine, the combination with the case having means to hold a negative and a sensitized element, a pivoted platen frame and a platen carried by the frame, of a lever having a forwardly extending arm provided with gripping fingers and also having an upwardly extending arm in the path of the platen frame and adapted to be engaged thereby when the latter is raised, and a spring to force the gripping fingers into engagement with the print paper when the upwardly extending arm is released by the platen frame.
7. In a photographic printing machine, the combination with the case having means to hold a negative and a sensitized paper, a platen frame hinged to the case, and the platen carried by the platen frame, of a gripping device pivoted beneath the platen frame and comprising an upstanding arm projected within the path of the platen frame and adapted to be engaged therewith when the platen frame is raised, and a forwardly extending gripping finger arranged to engage the sensitized element when the upwardly extending arm is released by the platen frame.
8. In a photographic printing machine, the combination with the case having means to hold a negative and a sensitized element, a platen frame pivoted to the case, and a platen carried by said platen frame, of a lever mounted on the pivot of the platen frame and having an upwardly extending arm adapted to be engaged with the platen frame when the latter is raised and also provided with a forwardly extending arm, resilient gripping fingers secured to the forwardly extending arm, and a spring having one end secured to the lever and its other end engaged with the case and serving to normally force the gripping fingers of the lever into engagement with the sensitized element.
9. In a photographic printing machine, the combination with the case having means to hold a negative and the photographic paper, of a plate having a recessed keeper and also provided with ears, a rod mounted in the ears, a platen frame pivoted on the rod and having a cross bar arranged parallel with the rod, a platen carried by the platen frame, a lever pivoted on said rod and having an upwardly extending arm adapted to be engaged by the cross bar of the platen frame when the latter is elevated and also provided with a forwardly extending arm, resilient gripping fingers mounted on said arm, and a spring having one end secured to the bottom of the lever and its free end disposed within the recess of the keeper, substantially as specified.
10. In a photographic printing machine, the combination with the case having means to hold a negative and photographic paper, and a platen hinged to said case and adapted to engage with the photographic paper, of a gripping member to engage the photographic paper and arranged to be released and lifted from the paper by the platen.
11. In a photographic printing machine, the combination with a case having means for holding a negative and photographic paper, of a platen hinged to the case and adapted to press the photographic paper in contact with the negative, and a gripping member having means to force it in contact with the photographic paper.
12. In a photographic printing machine, the combination with a case having means for holding a negative and photographic paper, of a platen movable to press the paper into contact with the negative, a gripping member, and means moving said gripping member to the paper independently of the platen.

In testimony whereof I affix my signature, in presence of two subscribing witnesses.

SCHUYLER COLFAX.

Witnesses:

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G. M. COLE.