

**No. 679,691.**

**Patented July 30, 1901.**

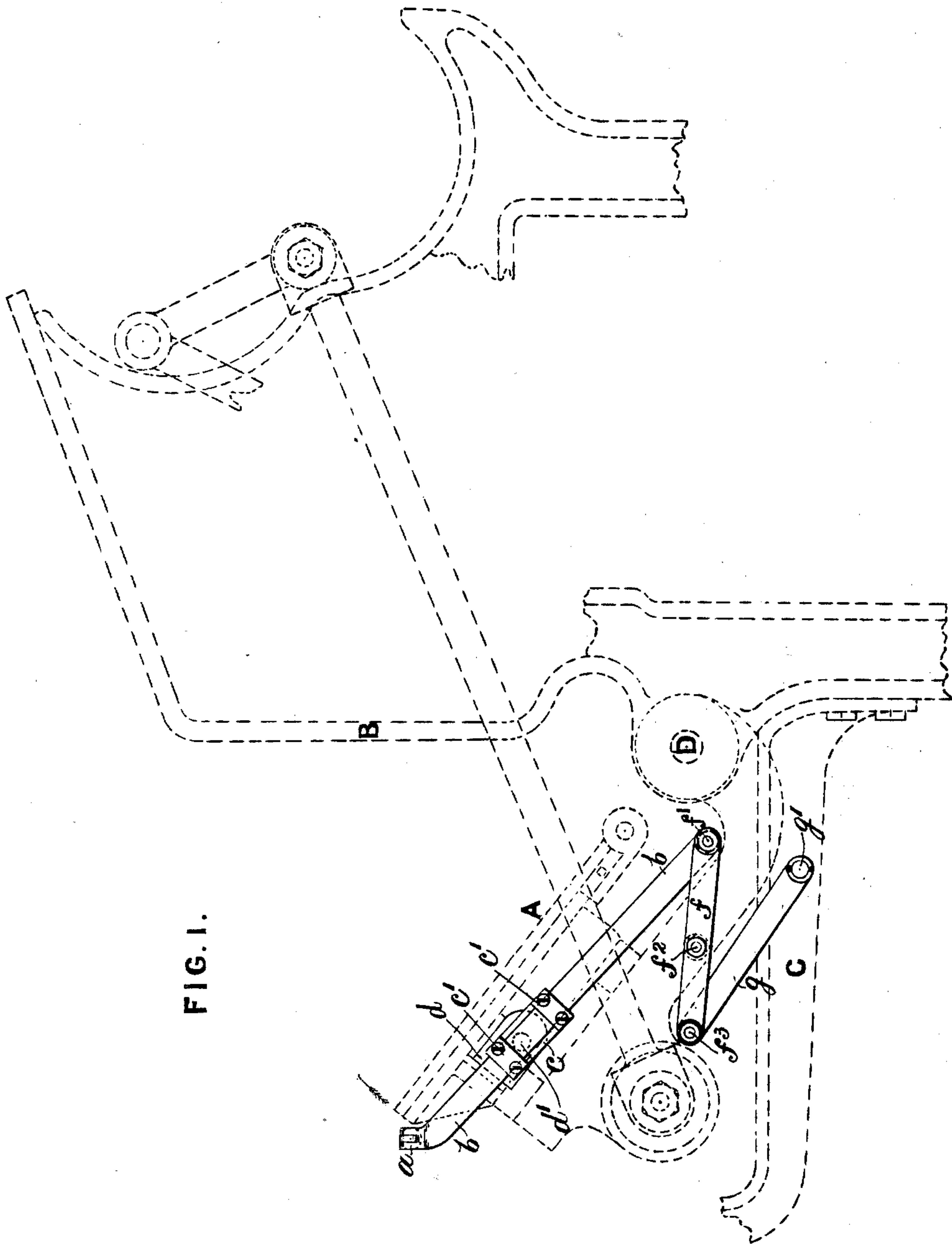
**M. T. BARBER.**

## GUARD FOR PLATEN PRINTING MACHINES.

(No Model.)

(Application filed Feb. 11, 1901.)

**3 Sheets—Sheet 1.**



Witnesses.  
P. H. Bishop,  
J. L. Glorius

Inventor  
Maximilian P. Barber  
by  
W. H. Babcock  
Attorney

No. 679,691.

Patented July 30, 1901.

M. T. BARBER.

GUARD FOR PLATEN PRINTING MACHINES.

(Application filed Feb. 11, 1901.)

3 Sheets—Sheet 2.

(No Model.)

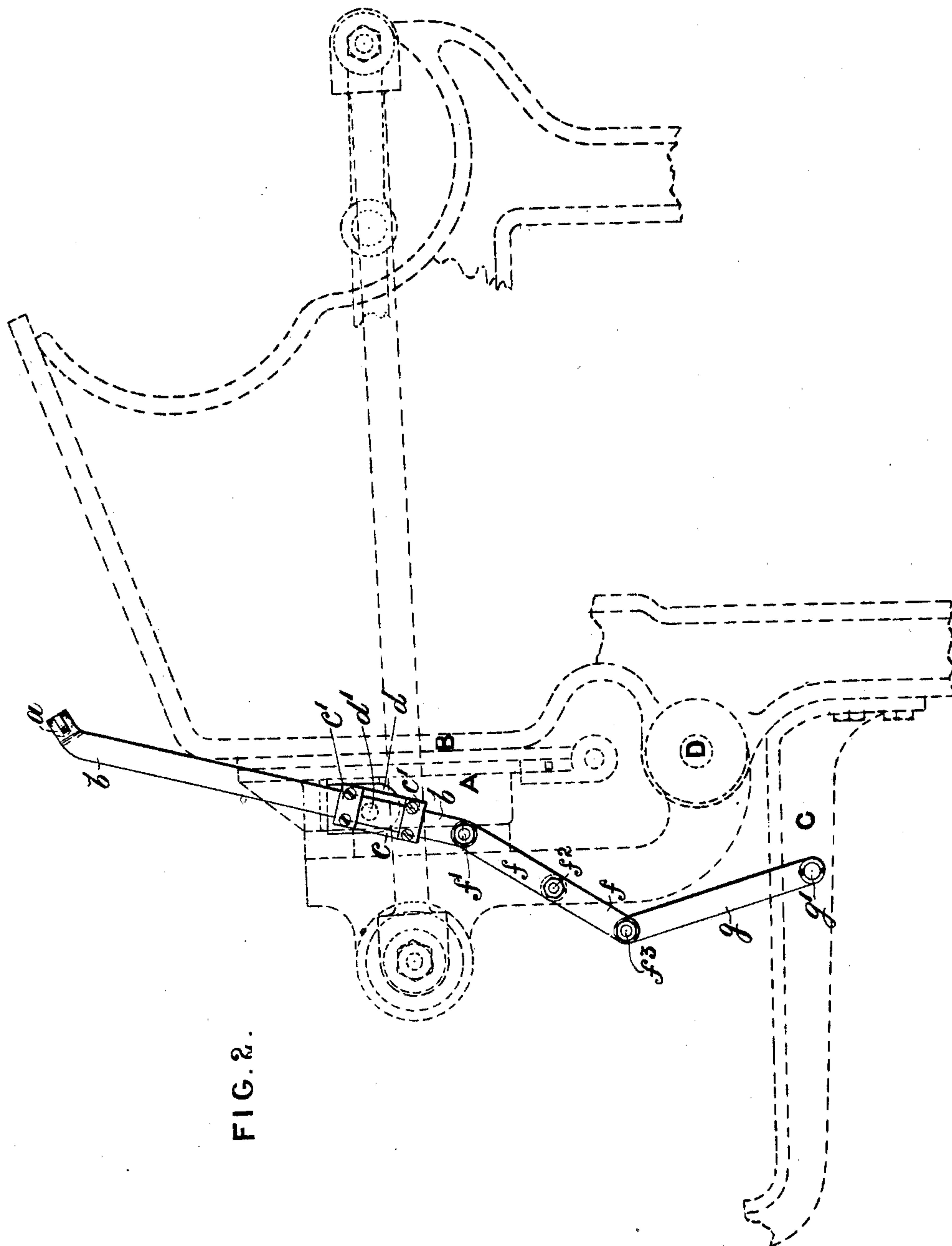


FIG. 2.

Witnesses  
R. St. Bishop  
J. L. Llorius

Inventor  
Maximilian T. Barber  
by W. H. Babcock  
Atty.

No. 679,691.

Patented July 30, 1901.

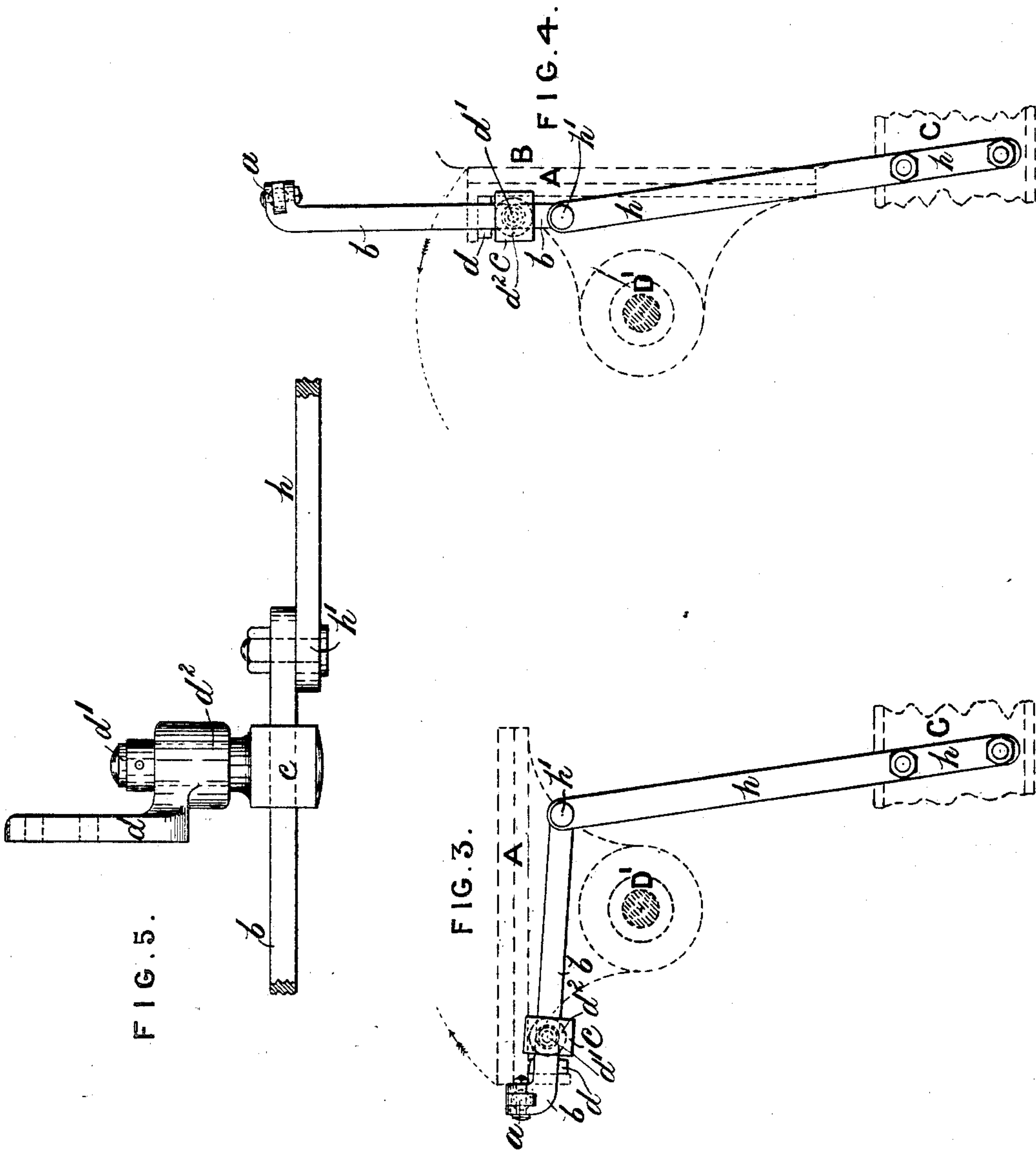
M. T. BARBER.

GUARD FOR PLATEN PRINTING MACHINES.

(Application filed Feb. 11, 1901.)

(No Model.)

3 Sheets—Sheet 3.



Witnesses.  
*A. H. Bishop*  
*J. L. Llorius*

Inventor  
*Maximilian T. Barber*  
by *Wm. T. Babcock*  
Attorney



# UNITED STATES PATENT OFFICE.

MAXIMILIAN THOMAS BARBER, OF MANCHESTER, ENGLAND.

## GUARD FOR PLATEN PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 679,691, dated July 30, 1901.

Application filed February 11, 1901. Serial No. 46,890. (No model.)

*To all whom it may concern:*

Be it known that I, MAXIMILIAN THOMAS BARBER, a subject of the King of Great Britain and Ireland, and a resident of 14 Cumberland street, Manchester, county of Lancaster, England, have invented certain new and useful Improvements in or Applicable to the Guards of Platen Printing-Machines, (for which I have filed application for British Patent No. 12,602, dated July 12, 1900;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

15 This invention relates to improvements in or applicable to guards for platen printing-machines.

In platen printing-machines the platen has a reciprocating oscillatory motion to and from the type-bed or form. When drawn back from the type-bed, the printed sheet is removed and a fresh sheet is laid on the platen to be printed at the next forward stroke of the platen. Accidents occur from the attendant not removing his fingers from the front of the platen before it strikes the type-bed, and several types of guards or fences are in use for preventing such accidents. In one type the guard or fence has imparted to it an up-and-down movement in a straight or curvilinear path parallel or approximately parallel to the face of the platen itself of such a nature that when the platen is drawn back the fence or guard descends to the level of or below the top edge of the platen, so as not to obstruct the feeding of the paper. The fence or guard rises relatively to the edge of the platen as the latter approaches the type-bed and lifts or pushes away the hand of the operator, and thus prevents it being trapped. Such a type of guard is described, for instance, in the specification of my Patent No. 637,916, of November 28, 1899.

Rising and falling guards or fences are now well known, and I make no general claim to such. Hitherto, however, the rising-and-falling motion (with reference to the edge of the platen) has generally been derived by links, levers, cams, or other devices from some moving part of the machine which serves to drive the platen, and owing to the great variety of means which are used for driving the

platen it has been necessary to devise many different methods of attachment or operation suited to such varied circumstances.

In some instances the guard has been operated independently of the actuating mechanism of the platen by mounting it on rods that slide endwise in fixed guides attached to the platen or attaching the rods pivotally to said platen, their lower ends being in contact with raising springs or cams. My present invention improves the guard-operating devices of this latter kind by extending the supporting-rods through pivoted guide-blocks and connecting their lower ends to toggle links or levers, one of which is pivoted to the platen, as hereinafter more particularly set forth and claimed.

In the accompanying drawings, which illustrate the invention, the platen and existing parts of a platen printing-machine are indicated by dotted lines. The full lines show the invention.

In all the figures the same letters indicate like parts.

The platen is marked A. The place of the type-bed is at B.

C is some fixed part of the framework of the machine.

Some platens, which I refer to as "Case 1," swing bodily about a fulcrum or center of motion at or near the lower end of the platen. Others (which I refer to as "Case 2") oscillate about a center of motion which is behind and about midway between the upper and lower edges of the platen, and in this case the type-bed itself may also have imparted to it a reciprocating motion, so as to meet the platen at the moment of printing.

I will refer first to Figures 1 and 2, which are side elevations illustrating the invention as applied in Case 1. Fig. 1 shows the position of the parts when the platen is drawn back to receive the paper. In this case the platen swings to and fro about its center of motion D. The fence or guard *a* extends along the platen. It is carried by a side rod *b*, which slides longitudinally in guides *c' c'* in a slide-block *c*. The slide-block *c* is mounted on a pin or pivot *d'*, attached to the side of the platen or to a bracket *d*, secured thereto in such a manner that the slide-block *c* can swivel thereon and accommodate itself



to the varying angle which the side rod *b* makes with the platen when being operated. The lower end of the side rod *b* is hinged at *f'* to one end of the lever *f*, which has its fulcrum or stud *f*<sup>2</sup> on the platen or on an attachment thereto. The other end of the lever *f* is hinged at *f*<sup>3</sup> to the link or radius-rod *g*, whose fulcrum *g'* is carried by some fixed part of the framework *C* of the machine. As the platen *A* advances toward the type-bed *B* the constraint exercised by the radius-rod *g* causes the lever *f* to turn about its fulcrum *f*<sup>2</sup> and to push the side rod *b* upward in its guides *c' c'* and to raise the guard above the edge of the platen. The swiveling slide-block *c* turns at the same time about its axis or pin *d'*, so that by the time the platen reaches the type-bed the parts have assumed the position shown in Fig. 2. On the retreat of the platen the parts gradually return in a reverse direction to their original position, as shown in Fig. 1.

Figs. 3 and 4 are side elevations showing the application to Case 2. In Fig. 3 the parts are shown in the position they occupy when the platen is withdrawn from the type-bed to receive the paper. In this case the platen oscillates about an axis *D'*. The fence or guard-bar *a* is carried, as before described, by a side rod *b*, which is guided in a slide-block *c*, swiveling about an axis carried by the platen. This case, however, permits of a simplification of the parts. Instead of a radius-rod *g* and an intervening lever *f*, as in Fig. 1, the lower end of the side rod *b* is hinged to a fixed fulcrum or center of oscillation *h'*, which is conveniently carried by a rod or bracket *h*, secured to some stationary part of the machine. In this case when the platen *A* turns about its axis *D'* the constraint of the fixed part *h* causes the rod *b* to slide through the slide-block *c* (which at the

same time turns about its axis) and to lift the guard *a* until finally the parts assume the position shown in Fig. 4, when the platen and the type-bed are in contact.

Fig. 5 is a plan showing one form of the swiveling slide-block *c*. The pin or pivot *d'* is carried by a bearing *d*<sup>2</sup>, forming part of the bracket *d*, which is suitably shaped for easy attachment to the platen. The particular shape or construction of the slide-block may be varied in many ways, so long as the two essential features are preserved—viz., it must form a guide for the longitudinal travel of the side rod *b* and must be free to accommodate itself to the varying inclinations of the latter.

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

1. In combination with the platen of a printing-machine, a guard or fence, a rod supporting the same, a swiveled guide on the platen, permitting the said rod to slide freely through it and a pair of jointed links connecting the lower end of the said rod to a fixed support, one of said links being pivoted to the platen substantially as set forth.

2. In combination with the platen of the printing-machine and a pivoted guide carried thereby, a rod sliding through the said guide, a guard carried by the said rod and means of connection between said rod and a fixed part of the frame whereby the said rod is caused to move up and down through the said slide as the platen moves to and from the bed substantially as set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

MAXIMILIAN THOMAS BARBER.

Witnesses:

JOHN HALL,  
A. T. WHITELOW.