

S. D. TUCKER.

Feed-Gages for Printing-Presses.

No. 168,685.

Patented Oct. 11, 1875.

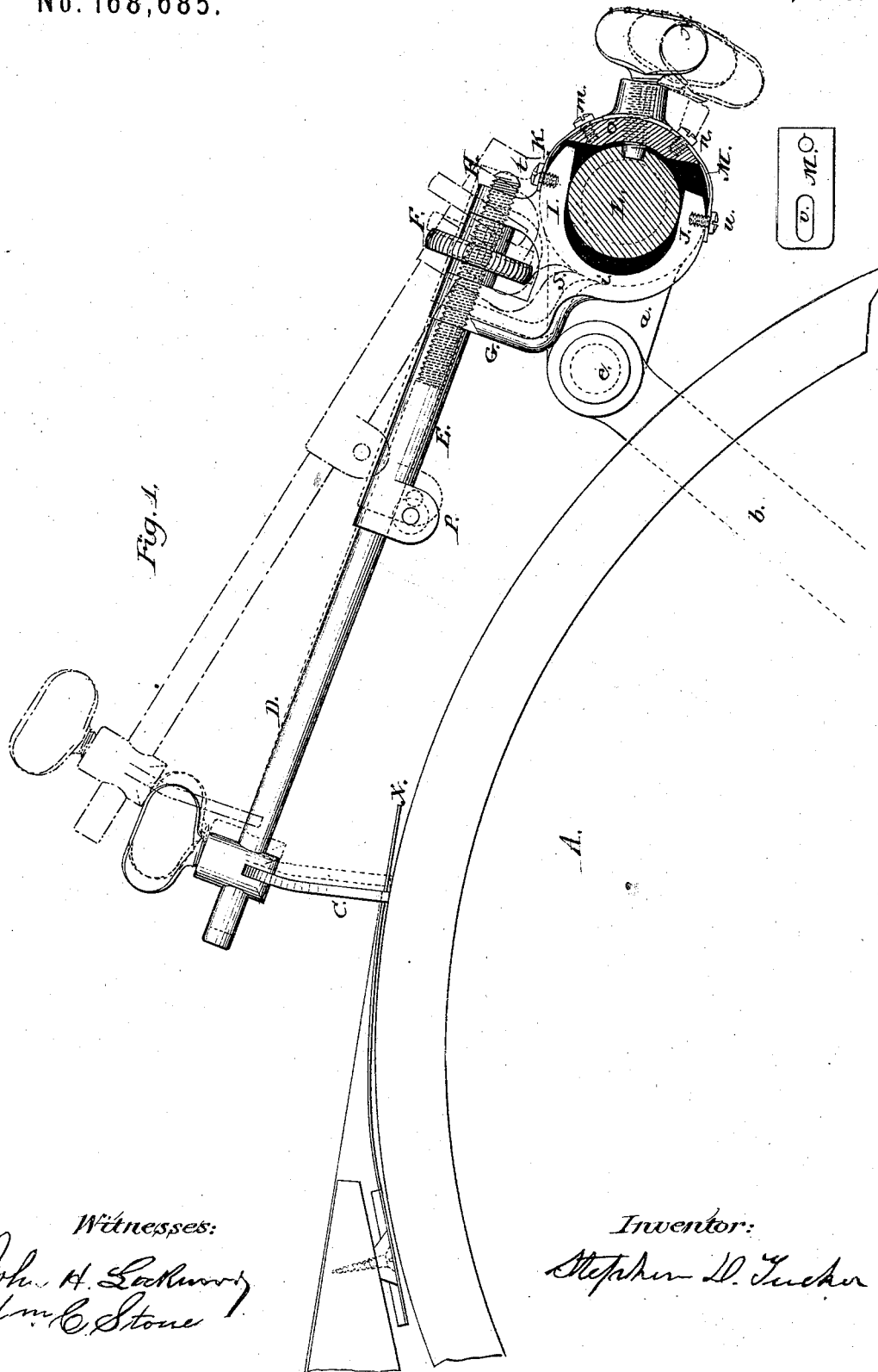


Fig. 1.

Witnesses:
 John H. Lathrop
 Wm. C. Stone

Inventor:
 Stephen D. Tucker

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Fig. 2.

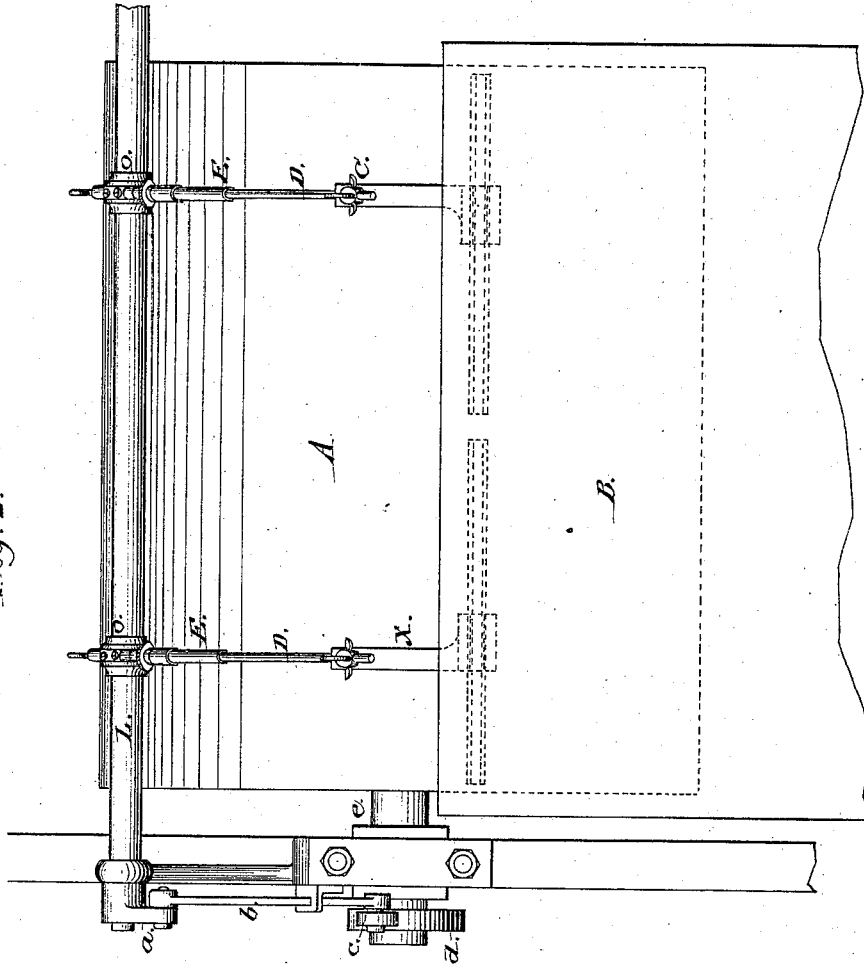
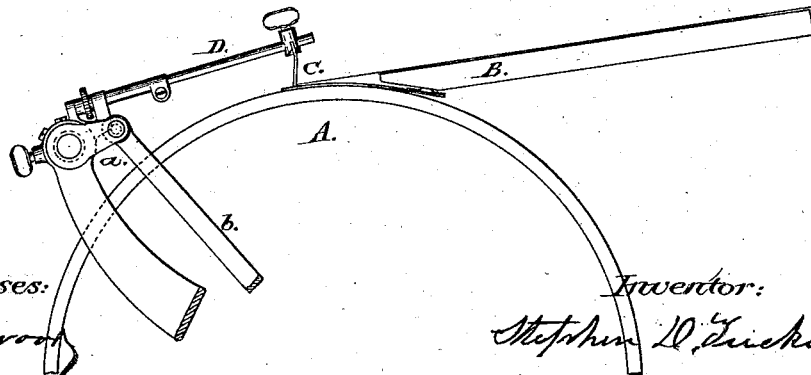


Fig. 3.



Witnesses:
John H. Lockwood
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UNITED STATES PATENT OFFICE.

STEPHEN D. TUCKER, OF NEW YORK, N. Y.

IMPROVEMENT IN FEED-GAGES FOR PRINTING-PRESSES.

Specification forming part of Letters Patent No. **168,685**, dated October 11, 1875; application filed June 23, 1875.

CASE B.

To all whom it may concern:

Be it known that I, STEPHEN D. TUCKER, of New York city, N. Y., have invented an Improvement in Feed-Gages for Printing-Presses, of which the following is a specification:

In the accompanying drawings, forming part of this specification, in which like letters indicate the same parts, Figure 1 is an enlarged side view of the gage, partly in section, showing its relation to the feed-table and its operating-shaft. Fig. 2 is a top view of part of a printing-press, showing a set of gages mounted upon their operating-shaft and the means for actuating them; and Fig. 3 is an end view of the same parts.

The object of my invention is to prevent the edge of the paper which is presented to the gage from being lifted when the latter is raised to permit the grippers on the cylinder to seize and carry the paper into the press. It consists in devices by means of which the gage is caused to retreat from the paper before being raised, to clear its path of movement into the press.

In its general features this gage does not materially differ from the device made the subject-matter of a companion application. It is adapted, as is usual, to be mounted upon a rock-shaft, L, which is vibrated by means of a crank-arm, *a*, connecting-rod *b*, friction-roller *c*, and a cam, *d*, fast on the cylinder-shaft *e*. The gage C is adjustable by a set-screw to fixed positions on the gage-arm D, and the latter, by its screw-threaded stem, is independently adjustable longitudinally in a sleeve, E, supported by an arm, G, which projects from the stock S, being actuated by means of a nut, F, having its bearings between the arm G and a second arm, H, which rises from the stock S. These devices provide a ready means for a nice adjustment of the gage relatively to the feed-table B. The stock S is cut away or divided by a recess, which has a curved front side and is open at the rear, thus forming two arms, I J, which are adapted to so straddle the rock-shaft L that their inner faces shall rest thereon. The stock S of the gage-arm is hung between the sides of the bifurcated hub O, which is fastened to the shaft

L by a set-screw, N, by its arms I J, which are, respectively, connected thereto by curved flexible metal straps or springs K M, which are held at their opposite ends by screws *t m u n*. The upper strap or spring K forms a flexible hinge, which provides for the oscillation of the gage-arm upon the hub O, and the lower strap M, being slotted, as shown in the detached view, operates, by means of the screw *u* which plays therein, as a stop to limit the extent of this oscillation, for a purpose which will presently appear.

When a sheet has been laid against the face of the gages C, and the grippers on the cylinder A are about to grasp the sheet, the rearward vibration of the rock-shaft L is commenced, which, being communicated to the gage-arm D by means of the metal strap K, draws it backward with it until the gage is in the position indicated by dotted lines in Fig. 1, a short distance from the edge of the sheet. This movement of the rock-shaft continues until the screw or stop *u* reaches the rear end of the slot *v* in the strap M, against which it seats itself, and thereby causes the motion of the rock-shaft to be communicated, through the arm J, to the gage-arm, thus raising the latter vertically from the guard or finger X, which projects from the feed-board and overlies the cylinder, thus clearing the gage from the path of the sheet. When the limit of its upward movement has been reached, and a reverse motion of the rock-shaft takes place, after the sheet has passed the arm D is lowered until the gage again rests upon the finger X. A continuation of the motion of the shaft L forces the arm D forward, through the medium of the plate K, until the stop *u* rests against the forward end of the slot *v*, and the gage C is in position for registering a new sheet. The function of the slot *v* may be that of a guide only, and the stock be so recessed that the surface I shall bear against the shaft L when the proper extent of rearward movement has been effected, and thus act as the stop or bearing by which the vertical movement is given to the arm D; or both may operate conjointly, or the surface *i* may form the stop or bearing for one movement, and the slot *v* for the other. When

the slot *v* alone acts as the stop for both motions the stock will be so cut away that the surface *i* of its recess shall not bear upon the shaft.

The strap M may be wholly omitted, and the arm J be so shaped that its end will impinge against the surface of the shaft to form a stop for one movement, while the surface *i* forms the other, as will be apparent from Fig. 1.

What I claim is—

1. A feed-gage, whose stock or base forms arms which embrace the actuating rock-shaft, to which it is connected by means of a flexible strap, so as to swing thereon when a horizontal reciprocation is imparted to it, and having

a suitable stop, which connects it to the rock-shaft so as to produce its vertical movement, substantially as described.

2. The combination of the arms I J of the gage-arm with the flexible strap K and the rock-shaft L, substantially as described.

3. The combination of the arms I J of the gage-arm with flexible strap or spring K, slotted strap M, and rock-shaft L, substantially as described.

STEPHEN D. TUCKER.

Witnesses:

JOHN H. LOCKWOOD,
WM. C. STONE.