

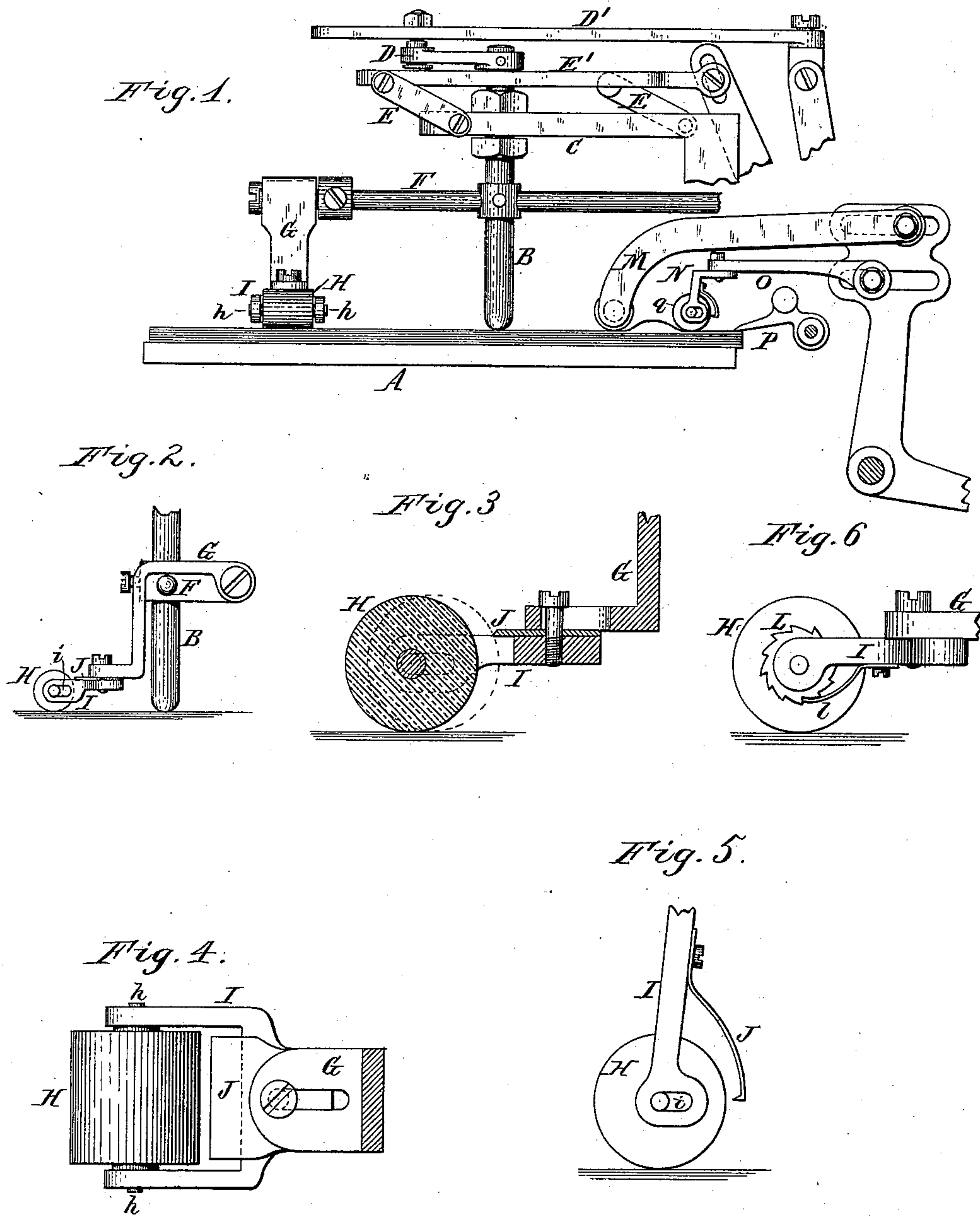
(No Model.)

A. SEDGWICK.

DEVICE FOR FEEDING PAPER.

No. 308,285.

Patented Nov. 18, 1884.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALONZO SEDGWICK, OF POUGHKEEPSIE, NEW YORK, ASSIGNOR TO THE
SEDGWICK MANUFACTURING COMPANY, OF SAME PLACE.

DEVICE FOR FEEDING PAPER.

SPECIFICATION forming part of Letters Patent No. 308,285, dated November 18, 1884.

Application filed December 10, 1883 (No model.)

To all whom it may concern:

Be it known that I, ALONZO SEDGWICK, of the city of Poughkeepsie, in the county of Dutchess and State of New York, have invented new and useful Improvements in Devices for Feeding Paper, of which the following is a specification.

This invention relates to an improvement in the construction of the fingers which are employed in paper-feeding machines, printing-presses, and other similar machines for feeding, moving, or separating sheets of paper by moving the finger over the surface of the sheet in the direction in which it is to be fed, moved, or separated.

Heretofore fingers provided with bearing-pieces of rubber or similar material have been employed, as described and shown, for instance, in Letters Patent of the United States No. 282,014, granted July 24, 1883, to R. J. Stuart. These bearing-pieces act upon the paper alike while moving forwardly and backwardly, and must be lifted from the paper while moving backwardly in order to prevent them from carrying the sheet backward or resisting the forward movement of the paper. When these bearing-pieces are affixed to the carrying-fingers, they become rough or uneven, and particles of paper accumulate on them and soon impair their efficiency.

The object of my invention is to remedy these difficulties by so constructing the bearing-pieces that they will operate like a fixed bearing-piece while moving forwardly over the paper, and so that they will roll over the paper while moving backwardly; and my invention consists to that end in the improvements in the construction of the finger and bearing-pieces, which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of a portion of a paper-feeding machine provided with my improvements. Fig. 2 represents a side elevation of the finger. Fig. 3 represents a longitudinal section on an enlarged scale of the bearing-piece. Fig. 4 represents a top plan view thereof. Figs. 5 and 6 represent modified constructions of the bearing-piece.

Like letters of reference denote like parts in the several figures.

A represents the feed-table of a paper-feeding machine. B represents the pivot resting on the pile of paper. C represents the bracket or frame in which the pivot is supported. D represents the arm, and D' the connecting-rod, by which the pivot is turned. E E represent the links, and E' the connecting-rod, whereby the pivot is raised and lowered. F represents the horizontal arm secured to the pivot B, and G the finger attached to the arm F. All of these parts are of ordinary and well-known construction.

H represents a roller attached to the end of the finger G by means of a bifurcated carrier, I.

h represents the journals of the roller H, seated in elongated openings i in the jaws of the carrier I in such manner that the journals move backwardly in the openings i when the roller moves forwardly over the paper, and so that the journals rest against the front ends of the openings i when the roller moves backwardly over the paper.

J is a blade secured to the carrier I, and having its front edge arranged at a short distance in the rear of the roller H, so that the latter can turn freely when the journals rest in the front portions of the openings i, but will impinge against the roller and prevent it from rotating when the roller-journals are moved backwardly in the openings i. When the finger G moves forwardly over the paper, the pressure of the roller upon the paper causes the roller-journals to move backwardly in the carrier I until the blade J impinges against the roller. The roller is thereby prevented from turning and moves over the paper like a fixed bearing-piece. During the backward movement of the roller the journals of the latter move forwardly in the openings i until they rest against the front ends of the openings i, in which position the roller is free to turn, and consequently the roller rolls over the paper during the backward movement of the finger. The roller may be constructed of rubber or other soft material; or it may be constructed of metal, when its surface should be finely grooved. The roller changes its po-

sition with reference to the blade J with every forward and backward movement of the finger, whereby the roller is prevented from getting out of shape and kept clear of particles of paper.

If desired, the roller may be provided with a ratchet-wheel, L, and the carrier I with a pawl, l, arranged in such manner that the pawl will prevent the rotation of the roller during the forward movement of the finger, and will permit its rotation during the backward movement of the finger, as represented in Fig. 6; but this construction is not as simple or noiseless as the one first described.

M represents the finger which bears upon the paper, and against which the top sheet is buckled by a finger, N, attached to a lever, O. P represents a finger pivoted to the frame of the machine and resting upon the corner of the pile of paper on the feed-table. The finger N, which moves the top sheet in the operation of buckling it against the retarding pressure of the finger M, is provided with a roller, q, provided with a stop device like that of the roller H of the feeding-finger G, so that the roller q operates like a rigid bearing-piece in moving forwardly and buckling the paper and rolls over the underlying pile of paper in moving backwardly.

By the combined action of the buckling-finger N and the feeding-finger G, each provided with a stop device, as hereinbefore specified, the sheets are fed more uniformly and with greater certainty than heretofore.

I claim as my invention—

1. In a device for feeding, moving, or separating paper, the combination, with a carrying-finger, of a roller adapted to bear upon the paper, and a stop device whereby the roller is prevented from rotating during the movement of the finger in one direction, and permitted to rotate during the movement of the finger in the opposite direction, substantially as specified.

2. The combination, with a carrying-finger provided with a blade or stop, of a roller made movable in the finger toward and from said blade or stop, and adapted to bear against the blade or stop during the movement of the finger in one direction, and to be released therefrom during its movement in the opposite direction, substantially as specified.

3. The combination, with a carrying-finger provided with a blade, J, and elongated openings i, of a roller, H, having its journals arranged in said openings, substantially as specified.

4. The combination, with the pivot B, of the arm F, the finger G, provided with blade J and elongated openings i, and the roller H, journaled in the openings i, substantially as specified.

5. The combination, with a resisting-finger bearing upon the paper, of a buckling-finger provided with a roller acting upon the paper, and having a stop device, whereby the roller is prevented from revolving when the finger moves in one direction, and permitted to revolve when the finger moves in the opposite direction, substantially as described.

6. In a device for feeding, separating, or moving sheets of paper, the combination of a feeding-finger and a buckling-finger, each provided with a roller acting upon the paper, and each having a stop device, whereby the respective rollers are prevented from rotating when the fingers move in one direction, and permitted to rotate when the fingers move in an opposite direction, substantially as described.

Witness my hand this 1st day of December, 1883.

ALONZO SEDGWICK.

In presence of—

CHAS. F. GEYER,
F. L. BROWNE.