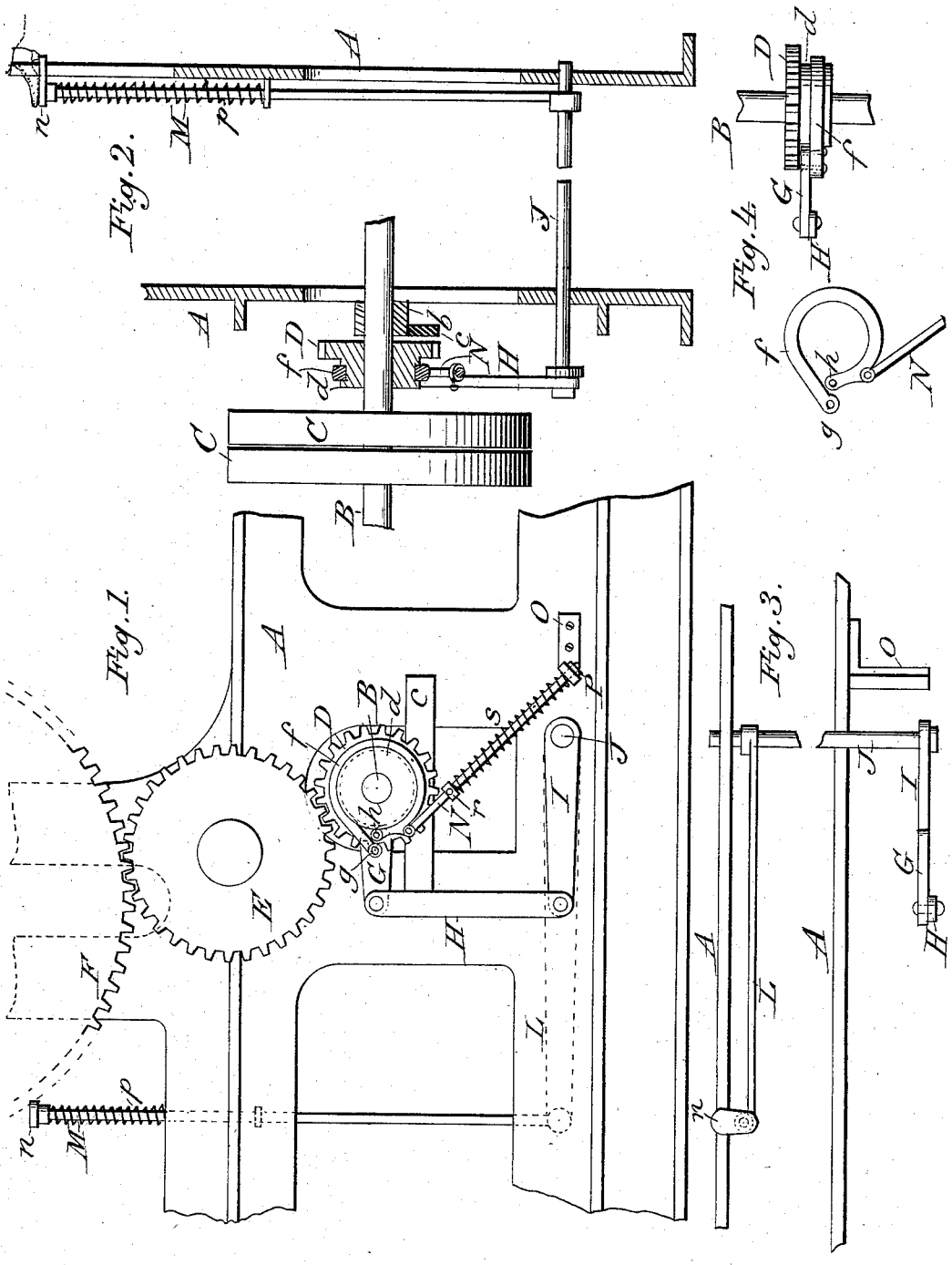
(No Model.)

J. H. CRANSTON.

PRINTING MACHINE.

No. 265,029. Patented Sept. 26, 1882.



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UNITED STATES PATENT OFFICE.

JOHN H. CRANSTON, OF NORWICH, CONNECTICUT.

PRINTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 265,029, dated September 26, 1882.

Application filed May 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. CRANSTON, a citizen of the United States, residing at Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Printing-Machines; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to an improvement in printing-machines, the object being to provide a simple and effective means of stopping the revolutions of the impression-cylinder and setting the same back when required; and the invention consists in certain peculiarities in the construction and arrangements of parts, as will be hereinafter more fully described.

In the annexed drawings, which fully illustrate my invention, Figure 1 is a side elevation of a portion of a cylinder-press with my improvement attached. Fig. 2 is a transverse vertical section of the same. Figs. 3 and 4 are details.

Like letters indicate like parts in the several views.

A represents the frame-work of an ordinary cylinder-press. B is a shaft journaled in a box, *b*, formed on or attached to a bar, *c*. On this shaft, outside of the main frame, are two pulleys or driving-wheels, C C, one fast and the other loose on the shaft. By shifting a belt which connects with a suitable motor from one pulley to the other the shaft B may be rotated or not at pleasure. A pinion, D, is also secured to the shaft B and meshed with a gear, E, which in turn meshes with a large gear-wheel, F, that rotates the impression-cylinder. The cylinder is not shown in the drawings.

Securely attached to or cast with the pinion D is a hub or wheel, *d*, the periphery of which is provided with a shallow groove, in which fits loosely a friction clutch or band, *f*, that is pivoted at its two extremities, *g* and *h*, to a lever, G. It will be observed that the band *f* does not extend entirely around the hub *d*, but is bent tangentially, forming one of its ends, *g*, which is pivoted slightly beyond and over the end *h*, which does not leave the groove. The lever G is pivoted in its turn to the upper end of a connecting-link, H, which is pivoted at its lower end to a lever, I, which forms part of a suitable mechanism extending to the opposite side of the press, as shown in the drawings, for convenience of operation by the feeder or pressman. (See Fig. 2.) This mechanism consists preferably of a shaft, J, connected by a lever, L, with the lower end of a vertical rod, M, which is provided with a treadle, *n*, at its upper end. A short distance from the end *h* of the band *f* is pivoted, at one end, a rod, N, the other end of the rod passing through a box, O, secured to the side of the press, as shown in Fig. 1. A collar or stop, *r*, is adjustably secured to the rod N, between which stop and the box O, and coiled around the rod, is a spiral spring, S, or other yielding substance. On the end of the rod N is a screw-nut, P, for adjusting the tension of the band *f*. The spring S, in connection with the rod N and the box O, forms a yielding resistance or fulcrum to the lever G.

The operation of the device is as follows: When the shaft B and impression-cylinder are in motion, if it is desired to stop the cylinder, the driving-belt is first shifted to the loose pulley, and then the operator depresses the treadle *n* and rod M, (shown in drawings,) thereby causing the band or clutch *f* to bear with friction against the hub *d*, causing a stoppage of the pinion D, the intermediate gear, E, and in consequence the impression-cylinder. In case the cylinder has revolved somewhat more than is desired, so that it becomes necessary to reverse its motion for the purpose of giving it a proper set back or bringing it to the desired position for starting, the operator will further depress the rod M, causing the rod N to yield or slide through the box O, thus revolving the band or clutch *f*, which tightly grips the hub *d*, thereby causing the pinion D to reverse, and through the intermediate gear, E, turn the cylinder in the opposite direction to that in which it usually rotates. The descent of the rod M compresses the springs attached thereto, and by releasing the treadle *n* the springs S and *p* throw the mechanism back to its original position. It is evident that a few depressions only of the treadle and rod M will be neces-

sary to bring the cylinder to any desired position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a printing-press, the combination, with the impression-cylinder, gears F E, shaft B, and gear D, secured thereon and provided with a hub or wheel, *d*, having a grooved periphery, of a friction-clutch consisting of the band *f*, the lever G, attached to said clutch, the yielding fulcrum N, and means, substantially as described, for imparting motion to the lever G for the purpose of stopping or reversing the cylinder, as specified.

2. In a printing-press, the combination, with the cylinder, gears F E and D, friction-clutch *f*, and yielding fulcrum N, of the levers G I, link H, shaft J, lever L, and spring-rod M, having treadle *n*, substantially as described.

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

JOHN H. CRANSTON.

Witnesses:
M. H. SISSON,
LUCIUS BROWN.