(No Model.)

G. L. JAEGER.

SHEET DELIVERY APPARATUS.

No. 245,173. Patented Aug. 2, 1881.

Fig. 1.

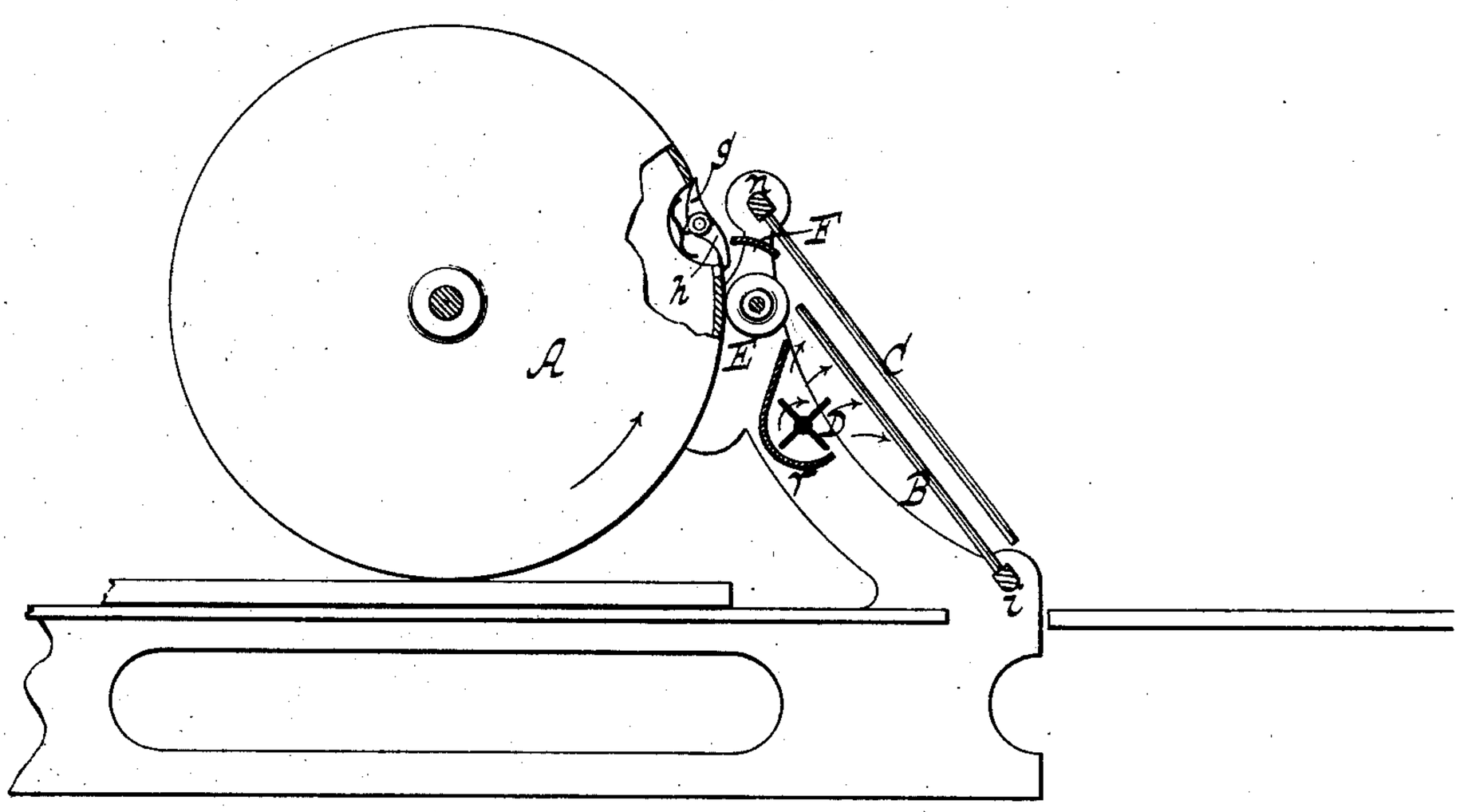
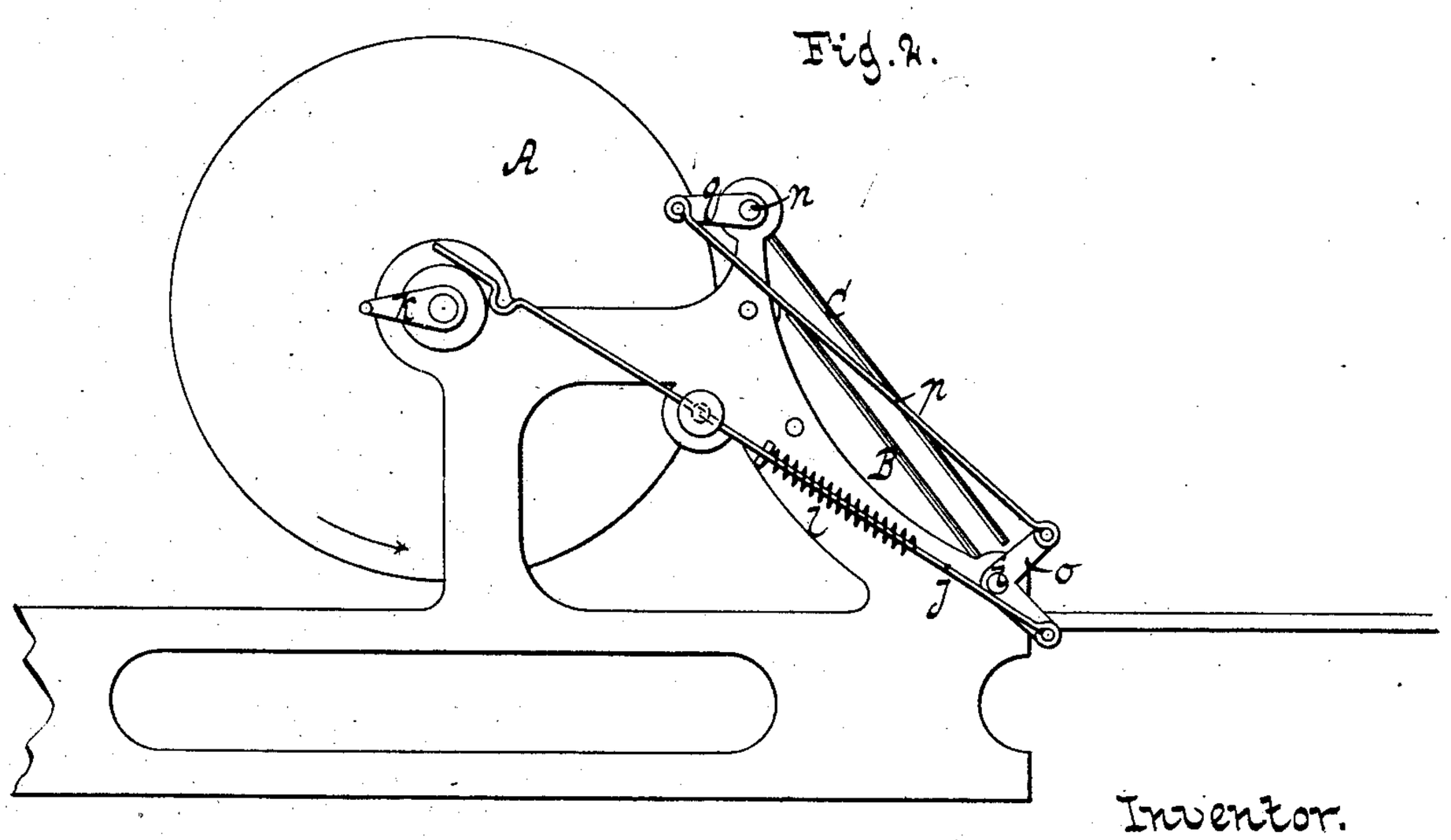


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

GUSTAV L. JAEGER, OF NEW YORK, N. Y.

SHEET-DELIVERY APPARATUS.

SPECIFICATION forming part of Letters Patent No. 245,173, dated August 2, 1881.

Application filed June 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV L. JAEGER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Sheet-Delivering Apparatus for Printing-Presses, of which the following is a specification.

This invention relates to apparatus for delivering the printed sheets from a printing-press; and it consists in certain novel combinations, hereinafter fully set forth, with the impression-cylinder, of a vibrating fly and a vibrating guard projecting in opposite directions one over the other, and receiving the sheet between them as it leaves the cylinder, an air-blast device adapted to force the sheet against the guard, a delivery-roller arranged in superficial contact with the cylinder, and a sheet-deflector arranged to throw the leading end of the sheet between the fly and the guard, as hereinafter more fully set forth.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a vertical longitudinal section. Fig. 2 is a side view.

Similar letters indicate corresponding parts.

The letter A designates the impression cylinder; B, the fly; C, the guard; D, the air-blast device; E, the delivery-roller, and F the sheet-deflector.

The cylinder A is provided with a griper, *g*, for seizing the sheet to be printed, and also, preferably, with a throwing-off dog, *h*, acting on the leading end of the sheet when it is released by the griper.

The fly B is fixed to a rock-shaft, *i*, receiving motion from the shaft of the impression-cylinder by a reciprocating rod, *j*, which is actuated by a cam, *k*, fixed to this shaft and a spring, *l*, coiled on the rod.

The guard C is fixed to a rock-shaft, *n*, and the reciprocating rod *j* is connected to one arm of an elbow-lever, *o*, which is fixed to the fly-shaft *i*, and the other arm of which is connected by a rod, *p*, with an arm, *q*, fixed to the guard-shaft, so that the motion of the fly-shaft is shared by the guard-shaft, both the fly and the guard thus receiving a vibrating motion.

The fly B projects upward and the guard C downward over the fly, both taking an inclined position parallel to each other when the fly is brought to a state of rest, as shown. The upper terminal of the fly B is below the guard-shaft *n*, and also below the place at which the sheet leaves the impression-cylinder A, so that the leading end of the sheet is allowed to pass between the fly and the guard. The air-blast device D is located in rear of the fly B, and consists of a revolving fan partially inclosed by a shell, *r*, which latter throws the blast of air produced by the fan through the fly, causing it to act on the sheet received between the fly and the guard with a tendency to force the sheet against the guard, so that its printed face is kept out of contact with the fly (the printed matter being at the same time dried by the action of the blast) until the fly takes hold of the sheet for delivering it to the fly-table. When the fly B begins its delivery movement the guard C swings upward, thus clearing the path of the fly.

The delivery-roller E is composed of the usual disks (one or more) arranged in superficial contact with the cylinder A at the upper end of the fly, and the sheet-deflector F is located above the delivery-roller, this deflector consisting of a curved plate or finger secured to the machine-frame, its curvature being toward the sheet-receiving space between the fly and guard. If the leading end of the printed sheet fails to pass over the delivery-roller E toward the fly when it is released by the cylinder-griper, such end comes in contact with the deflector F, and is thereby thrown in the desired direction, the sheet being at the same time acted on by the delivery-roller to carry it off from the cylinder.

If desired, the shell *r* of my fan may be made adjustable to allow the direction of the air-blast to be varied, or it may be made movable to cause the air-blast to follow the sheet; and if desired, moreover, a perforated pipe may be substituted for the fan and shell, this pipe being connected to a fan-blower.

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

1. The combination, substantially as herein-before set forth, with the impression-cylinder, of the vibrating fly and the vibrating guard

projecting in opposite directions one over the other and receiving the sheet between them as it leaves the cylinder.

2. The combination, substantially as herein-before described, with the impression-cylinder, of the vibrating fly and the vibrating guard projecting in opposite directions one over the other and receiving the sheet between them as it leaves the cylinder, and the air-blast de-vice adapted to force the sheet against the guard.

3. The combination, substantially as herein-before set forth, with the impression-cylinder, of the delivery-roller arranged in superficial contact with the cylinder, the vibrating fly, the vibrating guard, and the deflector arranged to throw the leading end of the sheet between the fly and the guard.

4. The combination, substantially as herein-before set forth, with the impression-cylinder, of the delivery-roller, arranged in superficial contact with the cylinder, the vibrating fly, the vibrating guard, the deflector arranged to throw the leading end of the sheet between the fly and guard, and the air-blast device adapted to force the sheet against the guard.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

GUSTAV L. JAEGER. [L. S.]

Witnesses:
W. HAUFF,
CHAS. WAHLERS.