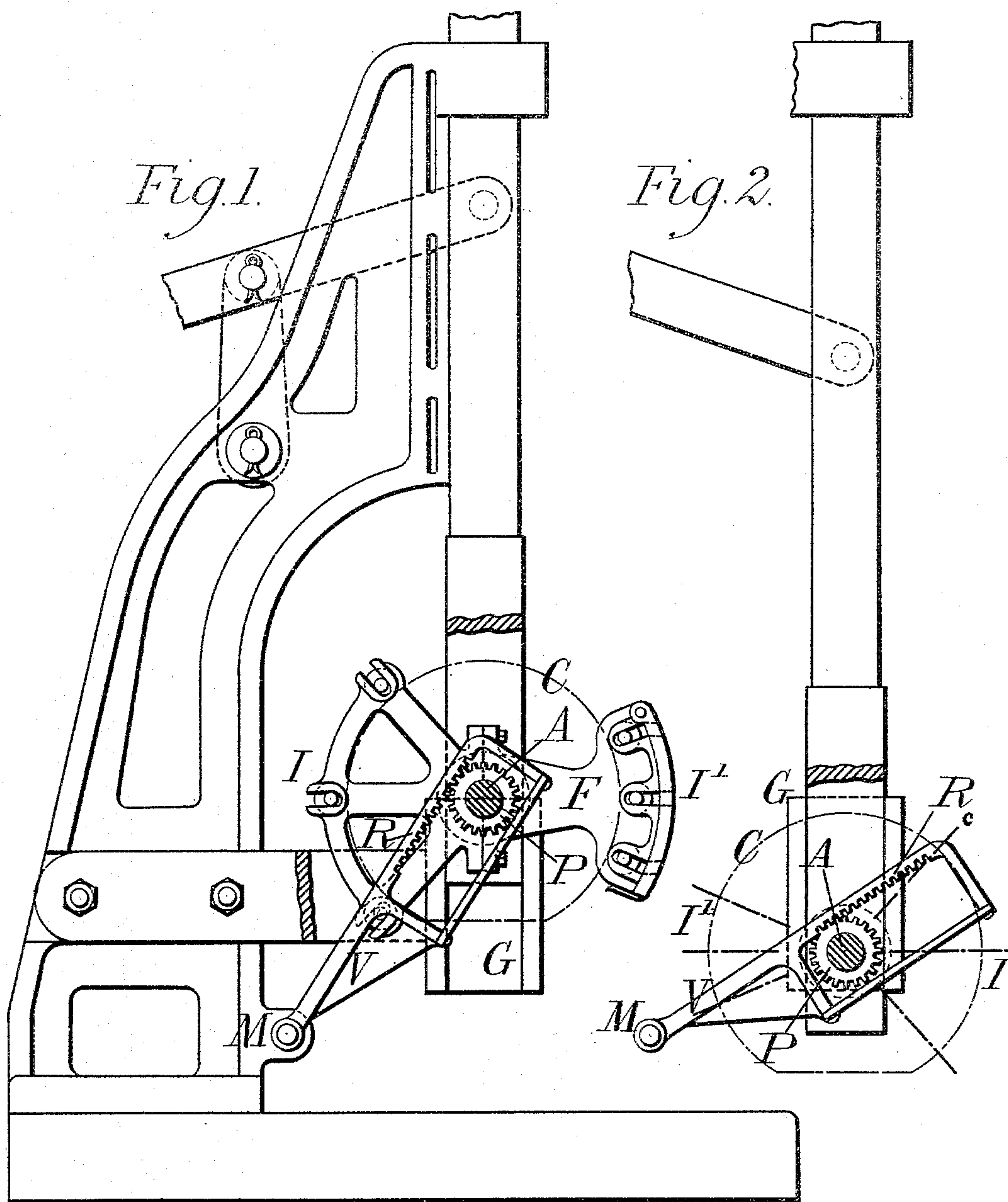


(No Model.)

R. F. SPROULE.
PRINTING MACHINE.

No. 545,387.

Patented Aug. 27, 1895.



Witnesses:
Geo. H. Rea.
Robert G. Smith.

Inventor:
Robert F. Sproule.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

ROBERT F. SPROULE, OF KITTSBURY, BERKHAMPSTEAD, ENGLAND.

PRINTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 545,387, dated August 27, 1895.

Application filed September 28, 1894. Serial No. 524,383. (No model.)

To all whom it may concern:

Be it known that I, ROBERT FRITH SPROULE, a citizen of England, residing at Kittsbury, Berkhamstead, in the county of Hertford, England, have invented certain new and useful Improvements in Printing-Machines, of which the following is a specification.

My invention relates to printing-machines of the known kind in which a cylinder having a printing form on a flat part on its under side ascends and descends, printing on the uppermost of a pile of envelopes or sheets, while distributing and inking rollers are caused to revolve partly around it.

I shall describe my improvements on a machine of this kind, referring to the accompanying drawings, of which—

Figure 1 shows a partial side view of the cylinder and parts connected therewith at the upper extreme of the stroke of the cylinder, and Fig. 2 shows a portion of these parts when the cylinder is at the extreme of its downstroke.

In order to give the cylinder C a steady, true movement as it reciprocates, I provide on its axis at each end a slipper c or a roller which works in a vertical guide G.

For giving the distributing-rollers I and the inking-rollers I' their revolving movement partly around the cylinder C and timing that movement to suit the stroke of the cylinder, I adopt the following arrangement: On the frame F, which carries the distributing and inking rollers I and I', and which is pivoted on the axis A of the cylinder C, I fix a pinion P, which gears with a rack R on a vi-

brating arm V pivoted at M to the back frame of the machine. As the cylinder C descends from the position shown in Fig. 1 to make an impression, the rack R as it descends with the cylinder gives rotation to the pinion P, and thus the frame F is caused to make about half a revolution, the inking-rollers in this movement passing over the form on the lower side of the cylinder and reaching the other side of the cylinder, as indicated at I' in Fig. 2. During the upstroke of the cylinder the frame F is caused to return to its former position.

Having thus described the nature of this invention and the best means I know for carrying the same into practical effect, I claim—

In a printing machine, the combination of a reciprocating and vertically guided cylinder, an oscillatory frame carrying inking rollers arranged in operative contact with the periphery of said cylinder, a pinion fixed on the axis of said frame, a vibrating arm pivoted at one end to the back frame of the machine and a rack carried by the other end of said arm and gearing with said pinion, whereby when the cylinder is reciprocated the inking rollers are oscillated about its periphery, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 17th day of September, A. D. 1894.

ROBERT F. SPROULE.

Witnesses:

WALTER J. S. RERTEN,
THOMAS LAKE.