R. H. THAYER,

PAPER-BAG MACHINE.

No. 190,097. Patented April 24, 1877.

Fig 3

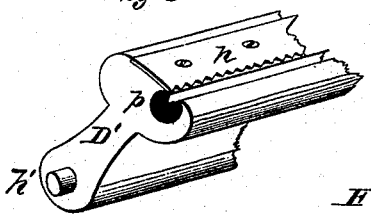


Fig 1

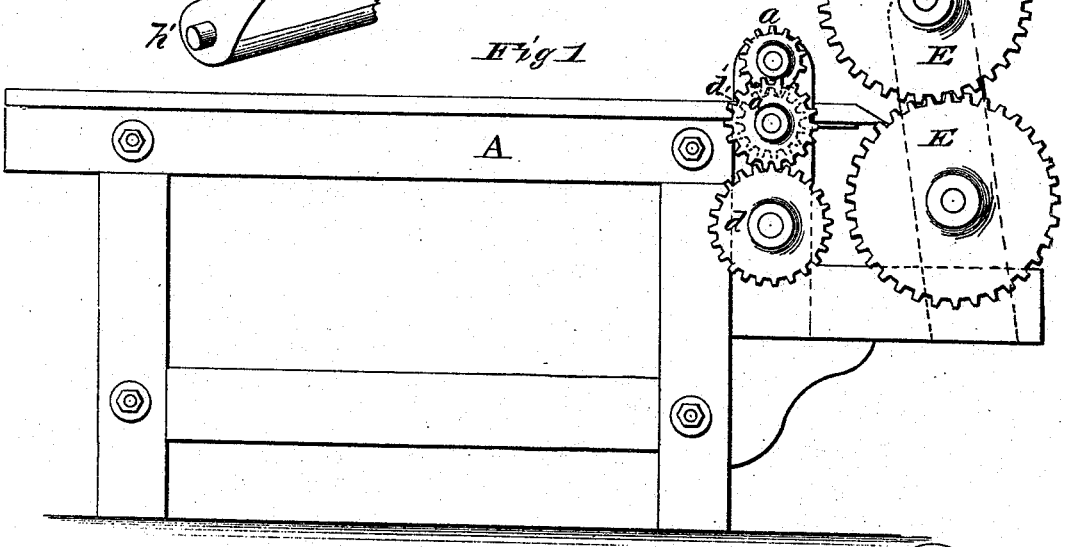
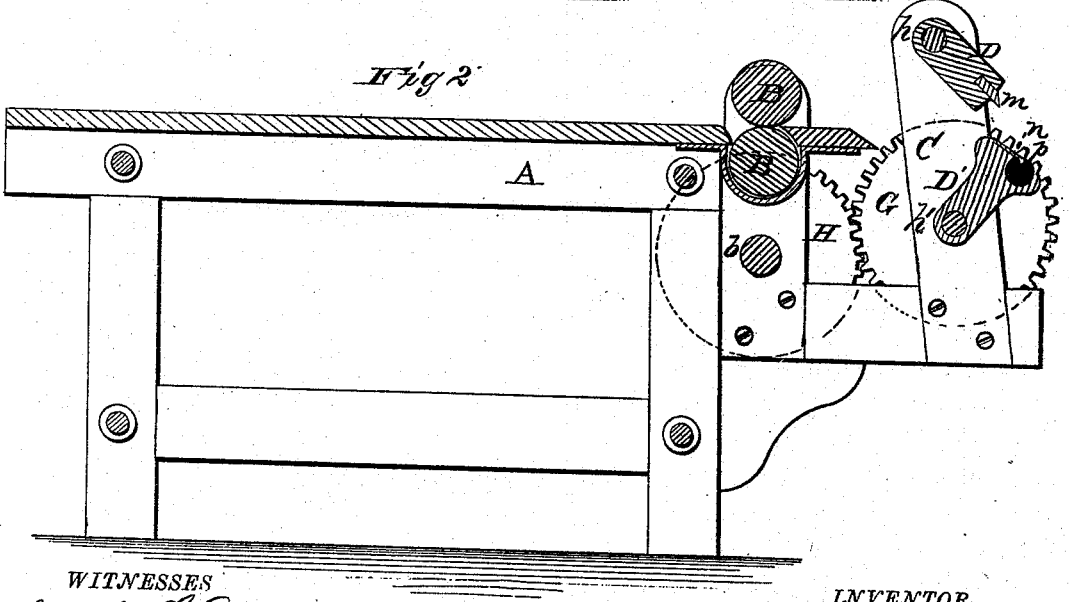


Fig 2



WITNESSES

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REUEL H. THAYER, OF BUFFALO, NEW YORK, ASSIGNOR TO ELLEN E. HUGHES, OF ERIE, PENNSYLVANIA.

IMPROVEMENT IN PAPER-BAG MACHINES.

Specification forming part of Letters Patent No. **190,097**, dated April 24, 1877; application filed May 26, 1876.

To all whom it may concern:

Be it known that I, R. H. THAYER, of Buffalo, in the county of Erie, and in the State of New York, have invented certain new and useful Improvements in Paper-Bag Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to machines for making paper bags; and it consists in the construction and arrangement of the cut-off mechanism and the feeding mechanism with the gearing, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a longitudinal vertical section of the same, and Fig. 3 is a detached view of a part thereof.

A represents a suitable frame-work, at one end of which are arranged the feed-rollers B B, geared together by pinions *a a*.

Underneath the feed-rollers is the main driving-shaft *b*, to which the power is applied, and on one end of said shaft is a pinion, *d*, to mesh with a pinion, *d'*, on one of the journals of the lower feed-roller, and thus communicate motion to said rollers. By changing the gears *d d'* to different sizes, the speed of the feed-rollers is varied at will, and thus shorter or longer bags may be cut on the same machine.

In front of the feed-rollers are two standards, C C, in which two shafts, *h h'*, have their bearings, said shafts being, respectively, provided with elongated arms or heads D D' or their equivalents.

The arm D carries the cutting blade or knife *m*, while the arm D' carries the surface-blade *n* and the griping-piece *p*. This griping-piece consists, simply, of a longitudinally-grooved rubber strip inserted in the arm, or it may be made of springs or other suitable material, and may be placed either before or behind the serrated blade, or it may be inserted in the arm D either before or behind the cutting-blade *m*.

These arms D D' are so arranged with relation to each other that they do not touch each other except at the point of severing the tube, and thus do not act as feeders for the paper.

The two shafts *h h'* are geared together by cog-wheels E E at one end, and at the other end the lower shaft *h'* has a cog-wheel, G, which meshes with a cog-wheel, H, on the main shaft *b*, so that the cut-off mechanism derives its motion direct from the driving-shaft.

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

1. In a paper-bag machine the rotating arms D D', carrying the cutting-blade *m*, surface-blade *n*, and griping-piece *p*, as described, and so arranged that they will not come in contact with each other except at the point of severing the tube, substantially as herein set forth.

2. The combination of the driving-shaft *b* with cog-wheel H, the shafts *h h'* geared together, the cog-wheels E E, the arms D D' carrying the cut-off mechanism, constructed substantially as herein shown and described, and the cog-wheel G placed on the shaft *h'*, and meshing with the wheel H on the driving-shaft, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of May, 1876.

REUEL H. THAYER.

Witnesses:

EDWARD L. LAWRENCE,
JOHN A. MCCANN.