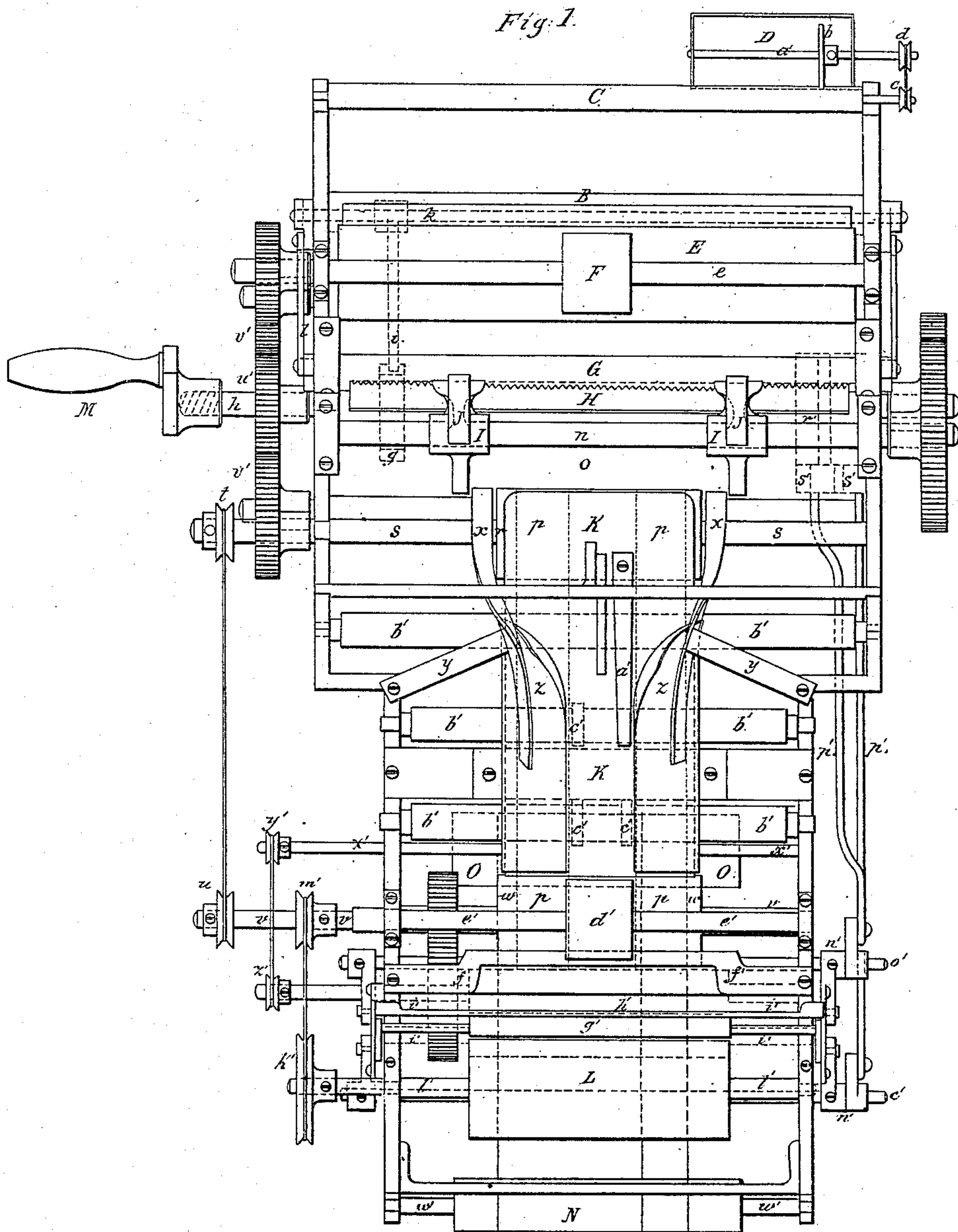


C. AMAZEEN.  
PAPER BAG MACHINE.

No. 84,076.

Patented Nov. 17, 1868.



Witnesses.  
H. A. Hartman,  
Leopold Evers

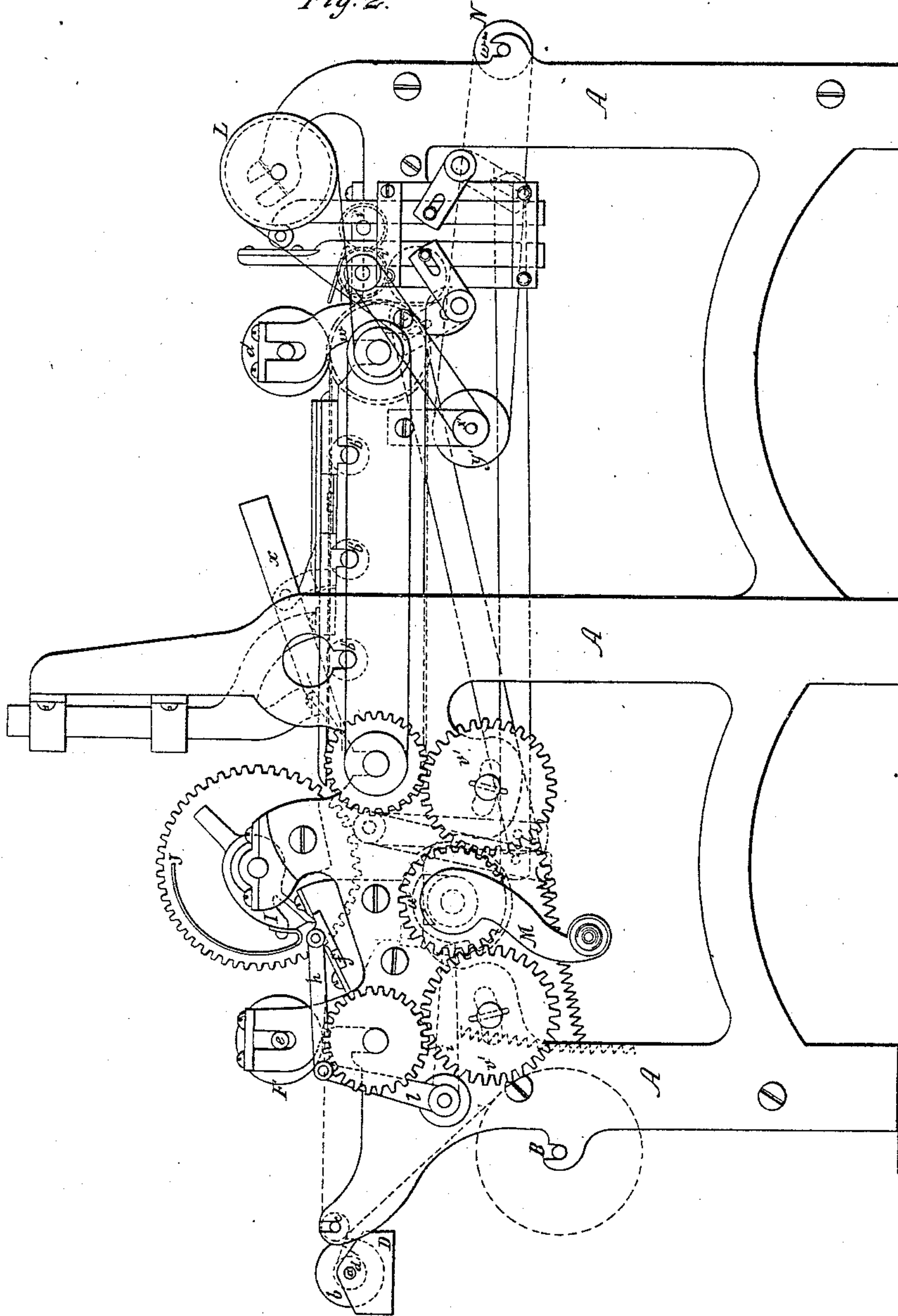
Inventor.  
C. Amazeen.  
per Alexander H. Mason  
Atty.

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Fig. 2.



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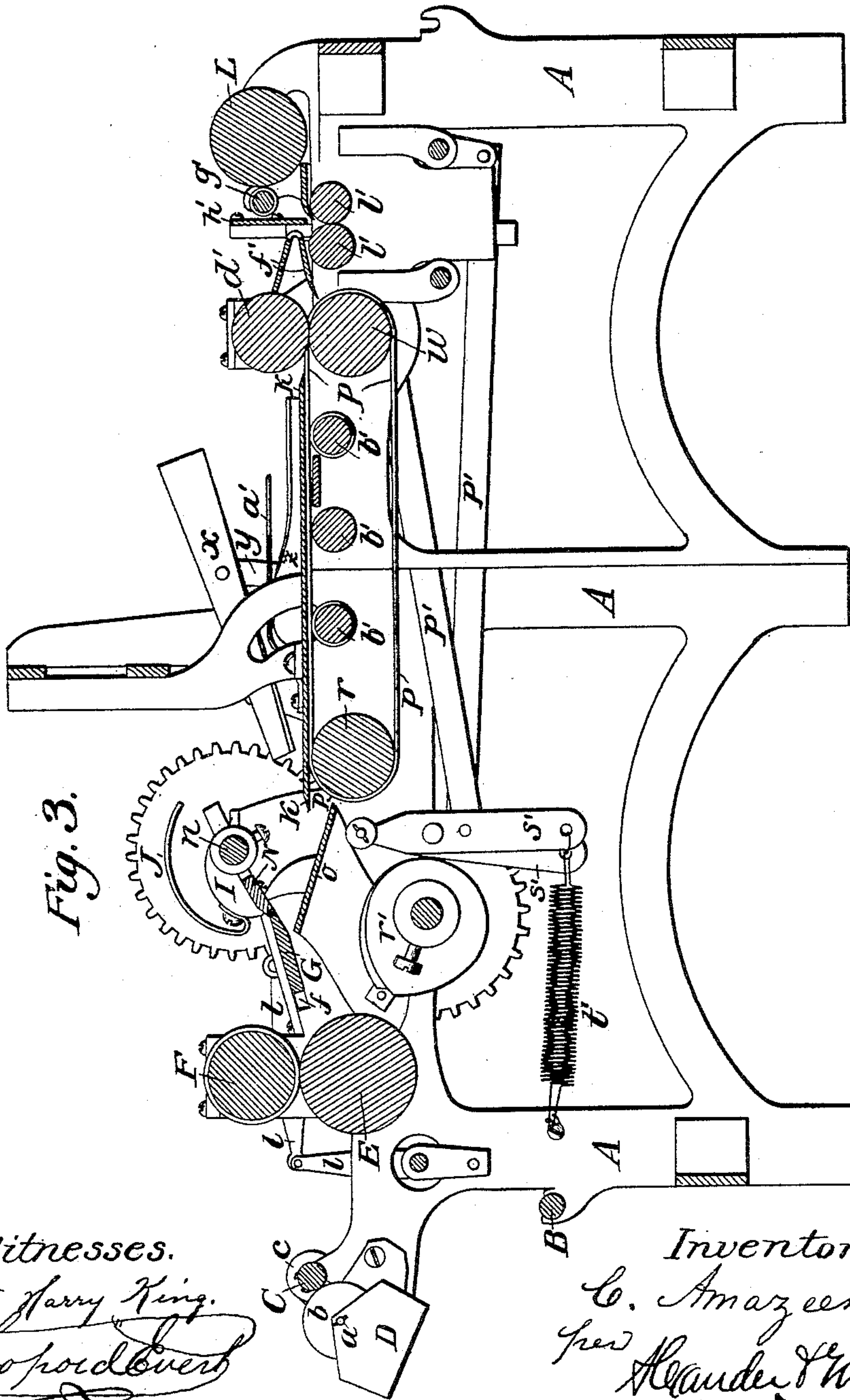


Fig. 3.

Witnesses.

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# UNITED STATES PATENT OFFICE.

CHRISTOPHER AMAZEEN, OF NEW YORK, N. Y.

## IMPROVEMENT IN PAPER-BAG MACHINES.

Specification forming part of Letters Patent No. 84,076, dated November 17, 1868.

*To all whom it may concern:*

Be it known that I, CHRISTOPHER AMAZEEN, of New York, in the county of New York, 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.

In the annexed drawings, forming part of this specification, Figure 1 is a plan view, and Fig. 2 is a side view. Fig. 3 represents a longitudinal vertical section taken through the center of the machine.

The nature of my invention consists in the general arrangement of the machine for the purpose of making paper bags with more ease and faster than by other machines.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents a frame, made of suitable material and of suitable dimensions, in the sides of which all the shafts and rollers have their bearings. B is the roller on which the paper to be made into bags is rolled. The paper is carried around the roller C, between it and the paste-box D, which box is fastened in the side of frame A. In this box is a shaft, *a*, with a pasting-wheel, *b*, fastened on it, which shaft is turned by a band around the pulleys *c* and *d*, on the ends of the shafts C and D, respectively, when the paper is carried forward, turning the shaft or roller C. The pasting-wheel *b* in this manner distributes the paste on the edge of the paper, and it may be moved to any point on the shaft *a*, according to the size of bags being made. The paper being thus carried around and over the roller C, and its edge pasted, is brought in between the roller E and the forwarding-roller F, which latter is fastened in the center of the shaft *e*. These rollers carry the paper forward over the knife G, which moves on a slightly-inclined plane in slots *f* in the sides of the frame, and is operated by a cam-wheel, *g*, on the main driving-shaft *h*, which wheel lifts the lever *i*, fastened to the rock-shaft *k*. The knife G is attached to this rock-shaft by means of the levers *l* *l*, so that when the lever *i* is lifted or raised by the cam-wheel *g*, the

knife will move backward in the slots *f*. The spiral spring *m*, fastened to and under the lever *i*, and in the side of the frame, slides the knife G forward again into its proper place. The teeth of this knife extend farther in the center than on the sides, according to the width of the bag which is being made, and fit exactly into correspondingly-cut teeth on the cutting-knife H, so that the paper is cut by the two knives coming into contact with each other. The cutting-knife H is fastened to collars I I on the shaft *n*, which is revolving. The spring-forwarders J J, which are fastened to the collars I I, press the paper, now cut for the size of bag required, against the sliding plate *o*, and carry it forward till the edge of the paper is carried under the forward end of the former K, and on two rubber carriers, *p* *p*, which run around the roller *r*, fastened onto the shaft *s*. On the end of this shaft *s* is a pulley, *t*, which, by means of a band around the same, drives or turns the pulley *u* on the shaft *v*, which latter shaft is provided with another roller, *w*, at the other end of the former K, and around which the rubber carriers, already mentioned, run, thus carrying the paper bag forward under the former.

When the paper first enters between the former K and the rubber bands on the roller *r*, its edges are turned up by the guides *x* *x*, which are properly bent and held in position by the arms *y* *y*; and as the paper is carried forward by the rubber carriers under the former K, the edges thus turned up will slip in under the folders *z* *z*, thus forming a tube while passing on around the former; but, to prevent the pasted edge of the paper from dropping down on the other edge before it is desired to have it do so, there is a holder, *a'*, fastened on the former K, which holds the pasted edge up until the bag is formed by the folders *z* *z*.

*b'* *b'* represent one, two, or more rollers, which serve to hold up the rubber carriers against the bottom of the former K when carrying the bag forward, and have rings *c'* *c'* at proper distances apart around them to hold the rubber carriers at any distance from each other that may be required, so that when the bag arrives at the roller *w* there will be a space between them to allow the roller *d'*, fastened onto the shaft *e'*, to press the pasted edge



down. The bag, thus formed and pasted together, has one side of its bottom—the lower—longer than the other, as the paper was cut uneven by the arrangement of the teeth in the knives G and H, and when the bag has passed between the rollers *w* and *d'* this lower end of the bag will extend on and through the plate *f'*, which plate is bent over, and has a slot cut through the bend. Through this slot the bag passes, and its lower or bottom end is pasted by the pasting-roller *g'*, and the folder *h'* turns the edge thus pasted down, which brings the bottom of the bag down between the cylinders or rollers *i' i'*, and, passing between these, drops down underneath the machine. These rollers *i' i'* are turned by cogged wheels on them and on the shaft *v*, inside of the frame. The pasting-roller *g'* is supplied with paste from a larger roller, L, which runs in a paste-box, and which is turned by the pulley *k'* on its shaft *l'*, by means of a band around it and around the pulley *m'* on the shaft *v*. The pasting-roller *g'* and the folder *h'* work perpendicularly in grooves on the sides of the frame by means of the bell-cranks *n' n'* on the rock-shafts *o' o'*, and the arms or rods *p' p'*, which are attached to levers *s'*, near the main driving-shaft *h*, so that when this latter is turned a cam-wheel, *r'*, will press the levers *s'* forward with the rods or arms *p' p'*, which then turns the bell-cranks *n' n'*, so that the folder and pasting-roller are moved downward, and the spiral springs *t' t'*, attached to levers *s'*, will bring them back, and the folder and pasting-roller will move up again. The machine is operated by means of a crank, M, on the main or driving shaft *h*, which turns the cogged wheel *u'*, and, by means of gear-wheels *v' v'*, turns the roller E and the shaft *s*, with its roller *r*. At the other end of the main shaft *h* is a cogged wheel, which drives or turns the shaft *n*, on which the collars I I, cutting-knife H, and spring-forwarders J J are fastened.

Instead of having the bags, when completed and having passed between the rollers *i' i'*, drop down underneath, they may be made to come out at the end of the machine by means of bands passing around a roller, N, on the shaft *w'*, and beneath the rollers *i' i'*, to and around another shaft, *x'*, with a similar roller, O, under or beneath the forward end of the former K, and this shaft *x'* may be operated

upon by a pulley, *y'*, on the same, and a pulley, *z'*, on the extended shaft of one of the rollers *i'*.

To make different sizes of bags the wheel *u'* on the main shaft can be changed to either a larger or smaller wheel, and the gear-wheels *v' v'* brought closer or farther apart, as they are fastened in slots on the side of the frame. For the same purpose the knives G and H must also be changed. The folders *z z* can be moved either out or in, to suit the former K, which must be changed according to the width of the bag required.

I can also employ a movable guard on the revolving knife H to press the paper down beneath the circle of its motion, in order that the knife may pass without interfering with the paper in its passage.

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

1. The arrangement of the knives G and H with the collars I I and the spring-forwarders J J, substantially as and for the purposes herein set forth.

2. The arrangement of the cog-wheel *u'*, on the main shaft *h*, and gear-wheels *v' v'*, secured in slots to the frame A, so that the former may be changed and the latter are movable, for the purpose of adapting the machine to making bags of different sizes, substantially as herein set forth.

3. The bag-former K, constructed as described, in combination with the pressing-roller *d'*, for the purpose of forming the bag and pressing down the pasted side of the same, substantially as herein set forth.

4. The arrangement of the rollers *r* and *w*, one placed under the rear end of the bag-former K, and the other under the pressing-roller *d'*, the rubber carriers *p p*, and the rollers *b' b'*, which latter are provided with rings to hold the carriers in proper position, all constructed as described, and operating substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of May, 1868.

CHRISTOPHER AMAZEEN.

Witnesses:

I. S. L'AMOREAUX,  
FRED. GORTON.