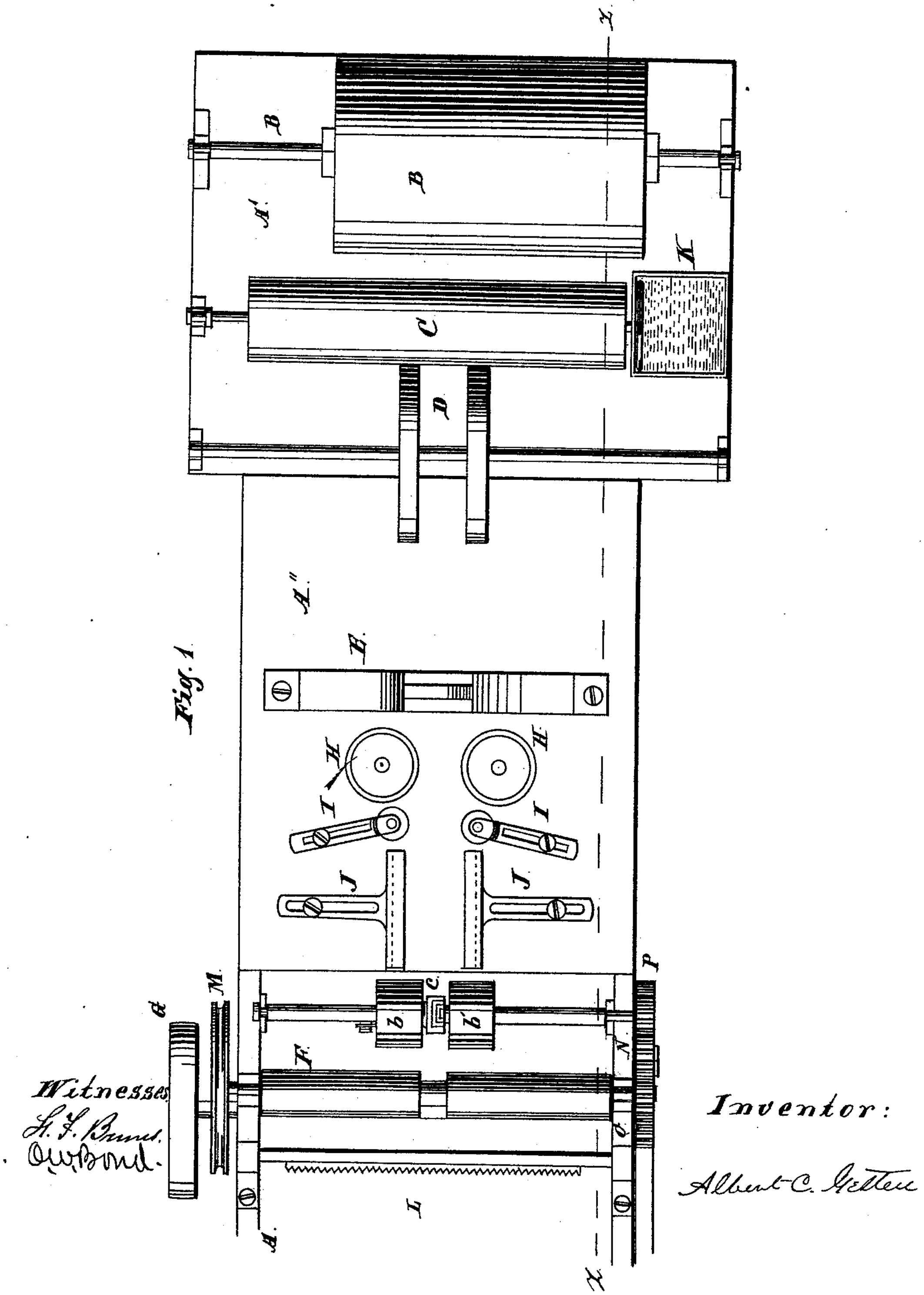
4 Sheets—Sheet 1.

A. C. GETTEN.

Machines for Printing Paper-Bags.

No. 221,546. Patented Nov. 11, 1879.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

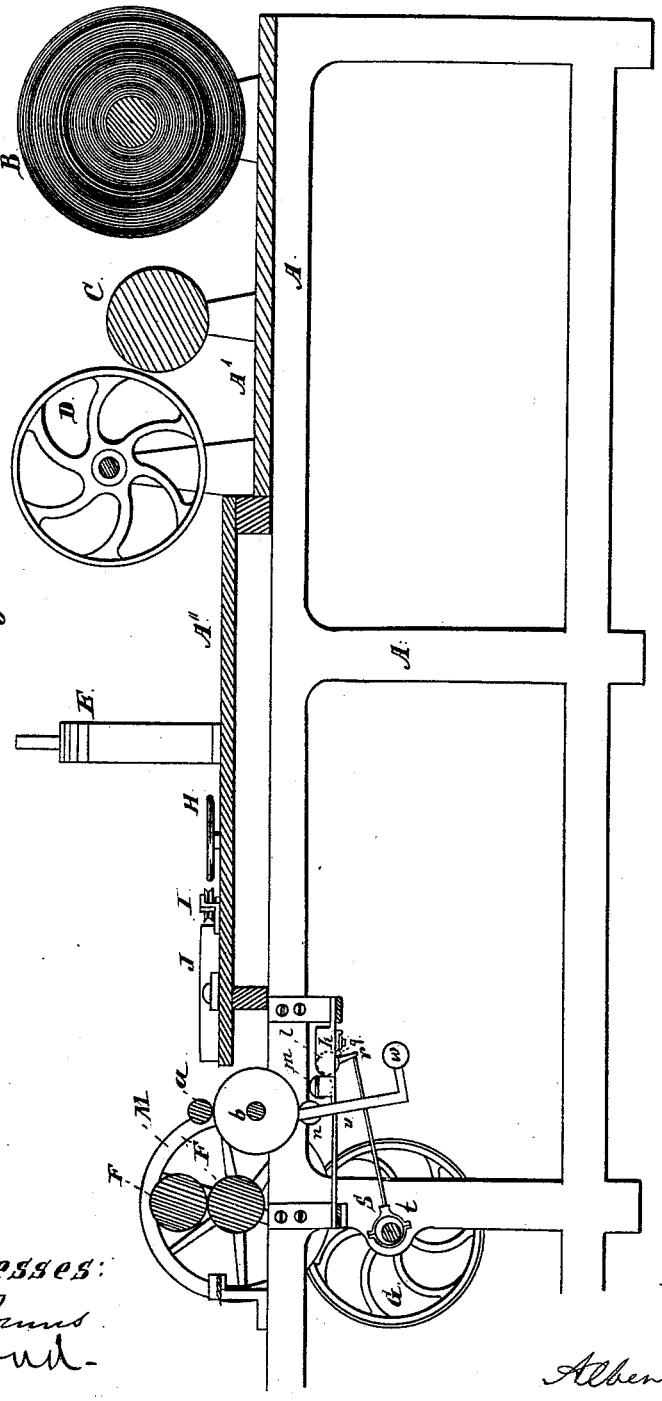
4 Sheets—Sheet 2.

A. C. GETTEN.

Machines for Printing Paper-Bags.

No. 221,546. Patented Nov. 11, 1879.

Fig. 2.



Witnesses:
F. L. Byrnes
C. W. Bond.

Inventor:
Albert C. Getten

A. C. GETTEN.

Machines for Printing Paper-Bags.

No. 221,546. Patented Nov. 11, 1879.

Fig. 3.

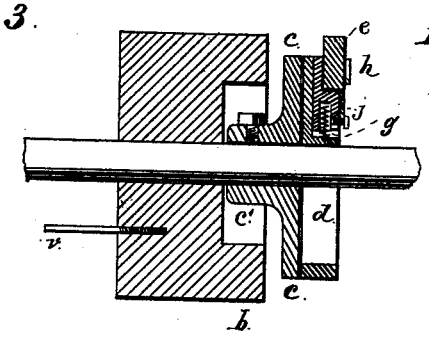


Fig. 4.

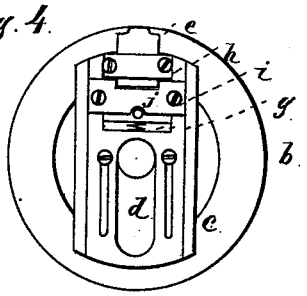


Fig. 5.

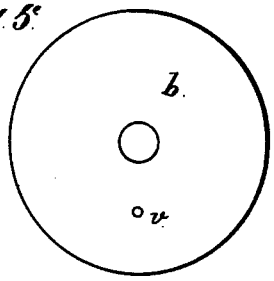


Fig. 6.

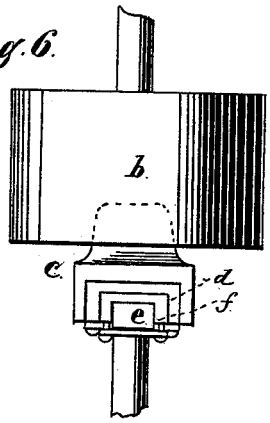


Fig. 8.

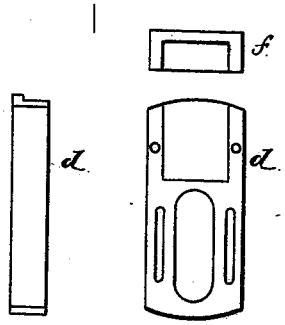


Fig. 7.

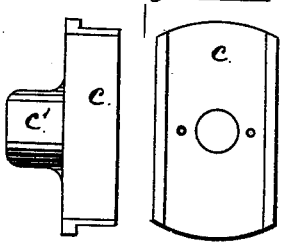
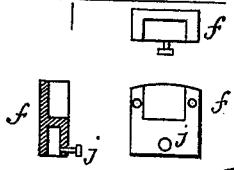


Fig. 9.



Witnesses:

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A. W. Bond.

Inventor:

Albert C. Getten

4 Sheets—Sheet 4.

A. C. GETTEN.

Machines for Printing Paper-Bags.

No. 221,546. Patented Nov. 11, 1879.

Fig. 10.

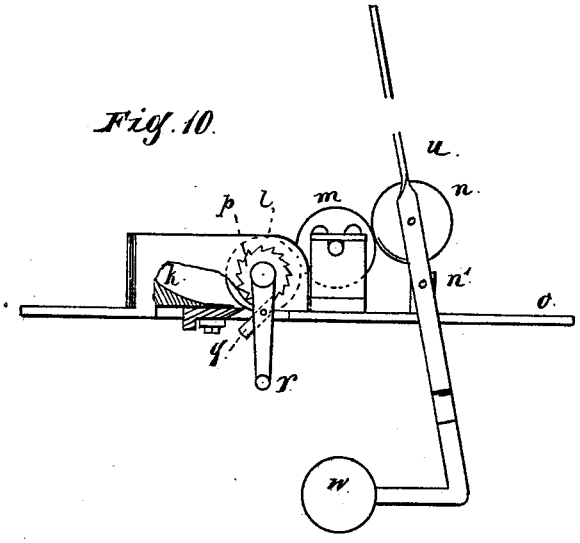


Fig. 11.

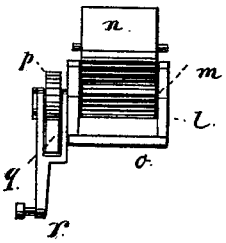


Fig. 12.

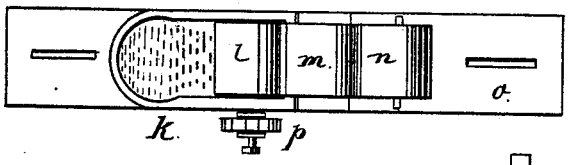
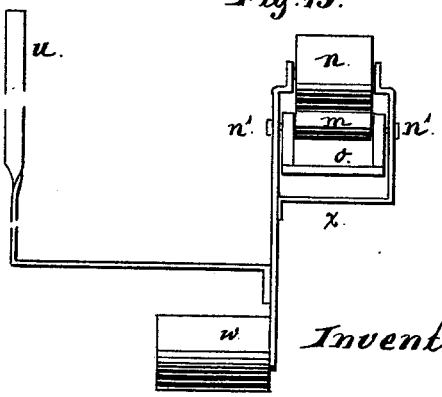


Fig. 13.



Witnesses:

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A. W. Bond.

Inventor:

Albert C. Getten

UNITED STATES PATENT OFFICE.

ALBERT C. GETTEN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MACHINES FOR PRINTING PAPER BAGS.

Specification forming part of Letters Patent No. **221,546**, dated November 11, 1879; application filed June 21, 1879.

To all whom it may concern:

Be it known that I, ALBERT C. GETTEN, of Chicago, Cook county, and State of Illinois, have invented certain new and useful Improvements in Machines for Printing Paper Bags, of which the following is a full description, reference being had to the accompanying drawings.

My invention relates to the manufacture of that class of paper bags in which a continuous strip or sheet of paper is fed forward without stoppage, folded, pasted, and severed into complete bags, the object of my invention being to produce merchantable bags with any desired printed matter thereon as readily as ordinary unprinted bags.

In the drawings forming part of this specification, Figure 1 is a top-plan view of the machine, the upper roller being removed; Fig. 2, a longitudinal section on line *z z*, Fig. 1; Fig. 3, a longitudinal section of one of the lower carrying-rollers; Figs. 4, 5, and 6, end and plan views of said carrying-rollers; Fig. 7, front and side elevations of the printing frame or roller; Fig. 8, front, side, and end views of the adjusting-plate; Fig. 9, front, section, and end views of the type-holder; Figs. 10, 11, and 12, side and plan views, respectively, of the inking apparatus; Fig. 13, an end view of the inking apparatus, showing the method of hanging the upper roller.

The figures on Sheets 3 and 4 are drawn on an enlarged scale.

In the drawings, A A′ A″ indicate the frame and bed-plates and tables; B, the paper-roller or roll of paper; C, the guide-roller, having at its end a paste-wheel; D, the break-rolls, determining the width of the paper tube; E, the bridge or frame for suspending and adjusting the outer end of the former; H I, forming-wheels; J, forming-guides; K, the paste-pot; L, the serrated severing plate or blade; N, O, and P, gear-wheels. The wheels O and P are so geared with the wheel N as to give the parts driven by them the same movement. All of these parts are well known in paper-bag machines, and do not, therefore, require any special description.

I do not limit myself to this particular form of paper-bag machines, as, with slight modifications, my invention can be applied to any of the machines in use for making paper bags from a continuous moving sheet.

Of the parts added by me, *a* indicates the upper roller for holding the paper or bag in place while the impression is being made; *b* *b′*, the lower supporting-rollers; *c*, the printing roller or frame; *d*, the adjusting plate or fork; *e*, the elastic type or stamp; *f*, the type or stamp holder; *g*, a spring for holding up the type-holder; *h*, a stamp plate or bar for holding the type or stamp in place; *i*, a cross-plate for keeping the holder in place; *j*, a pin or projection to prevent the type-holder from rising too far or from being thrown out; *k*, an ink-reservoir; *l*, *m*, and *n*, ink-rollers; *o*, supporting-base of the inking apparatus; *p q*, ratchet and pawl; *r*, reciprocating arm, to which the pawl *q* is pivoted; *s t*, Fig. 2, pitman and eccentric for operating the arm or lever *r*, and *v* pin for oscillating the ink-roller; *w*, weight or spring for returning the lever *u;* and *x*, the frame, pivoted at *n′*, in which the roller is supported.

The printing apparatus is most conveniently located between the end of the table A″ and the rollers F, as shown; but it may be located at any other available point, and the ink-rollers are actuated by the reciprocation of the arm *r*.

The under supporting-roller, which may be of wood, is made of two parts, *b* *b′*, adjustable upon a thin shaft, so that the space between them may be widened or narrowed. The part *b* is hollowed out, as shown at Fig. 3, so as to pass partly over the hub *c′* of the metallic type frame or roller *c*.

The face of the type-frame is flanged, as shown at Fig. 7, for the reception of the plate or fork *d*, which fork is made adjustable by means of slots and set-screws, as shown at Fig. 4, for adjusting the diameter of the circle in which the type or stamp is to travel. When the device is small the slots and set-screws may be dispensed with, and the fork *d* may be adjusted and held by a clamp-plate extending across it, similar to the plate for the type. The end of the fork *d* is grooved for the reception of the type-holder *f*, which holder is constructed as shown at Fig. 9, and rests in the groove upon

a spring, *g*, and is held in place by the plate *i*. The spring is adjusted to give the required pressure to the type or stamp, and it also permits a yielding of type or stamp when necessary.

The type or stamp *e* is made of rubber or other suitable material, with the figures, letters, or words formed thereon, and its movements are so timed that each bag will receive its imprint at the same point along the length of the bag. Any other suitable form of holder and mode of affording an elastic bearing for the type may be adopted.

The lever *u* is operated by the pin *r* of the roller *b*, and the operation is to leave the roller *n* in contact with the roller *m*, except at the time the roller *n* is imparting ink to the type, at which time the pin *r* strikes and moves the lever *u* and swings the roller *n* out of contact with the roller *m*, leaving said roller *n* free to rotate upon its own axis and revolve in unison with the type or stamp, which has a much more rapid movement than the inking apparatus. By this arrangement the type receives the ink properly and evenly, and the roller and type are uninjured, as the roller *n* at this time revolves freely and independently of the other rollers in the inking-train.

The paper passes between the rollers *a b b'*, which bear with their plain faces upon and gripe and feed the sheet, and is marked at the lower side by the contact therewith, at regular intervals, of the type *e* as the type-holder rotates with the rollers. The paper is held taut between the rollers *a b b'* and rollers F F', and, after passing the latter, is severed into bags or blanks from which bags are to be made.

As the paper is held taut by the feeding-rollers, and as the face of the type is level with the rollers *b b'*, and as the type travels at the same speed as the latter and with the paper, and as the type is not depended on to feed the paper, a distinct impression is insured.

By arranging the type upon one of the feed-roller shafts situated between the cutter and the paper-roll B, the type is carried with the paper, and if the speed of the latter varies its movements correspond, so that a clear impression is made, whatever be the speed of the paper. It is impossible, as when loose bags are printed, for the impression to be made at improper points, while the operation of the machine is not in the least interfered with.

I do not claim, broadly, the combination of a paper-bag machine and printing apparatus; but

I claim—

The combination of the roll *a b b'* and a type-holder carried by the shaft of the rolls *b b'*, and arranged and operating substantially as set forth.

ALBERT C. GETTEN.

Witnesses:
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H. F. BRUNS.