2 Sheets--Sheet 1.

T. C. HARGRAVE.

Improvement in Post Office Letter Stamping Apparatus.

No. 121,099. Patented Nov. 21, 1871.

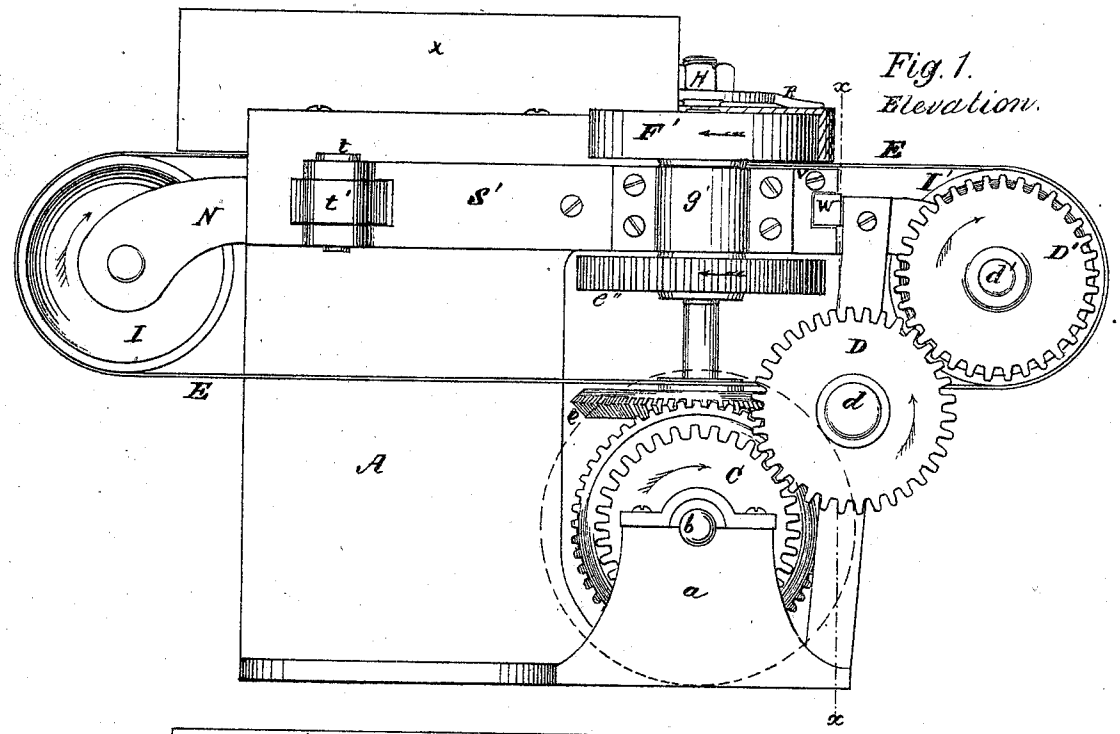

Fig. 1.
Elevation.

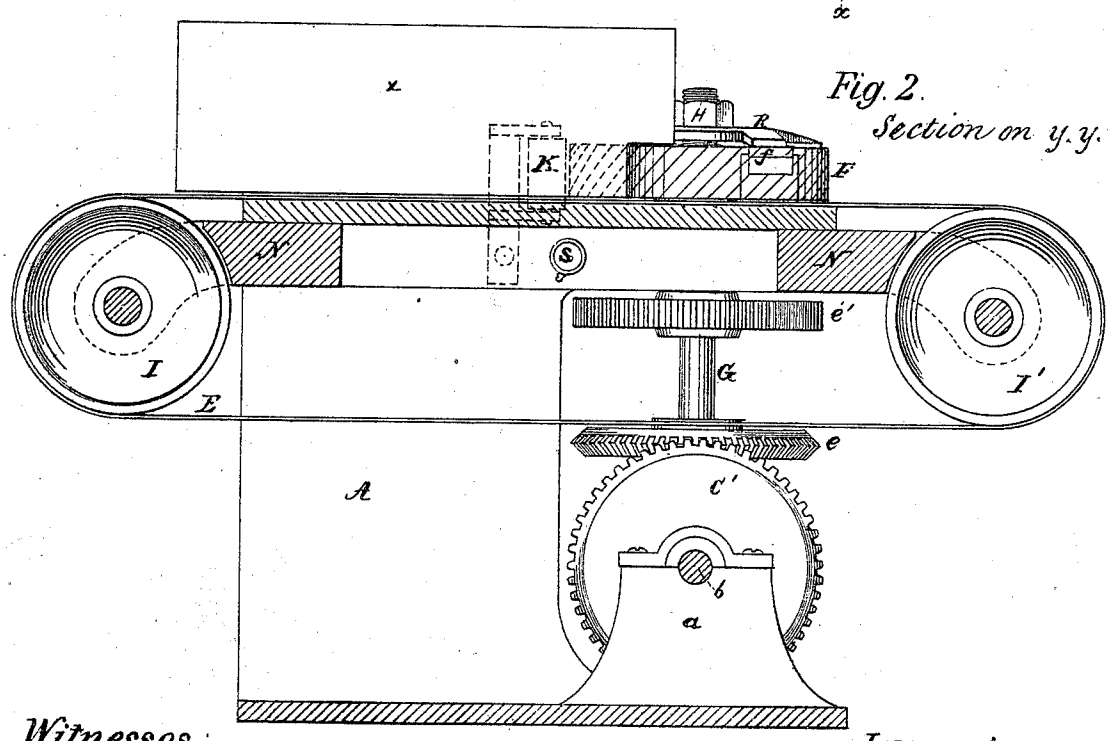

Fig. 2.
Section on y. y.

Witnesses:
Fred. Artos.
S. M. Pool

Inventor:
T. C. Hargrave
by his attys
A. H. & R. K. Evans

T. C. HARGRAVE. 2 Sheets--Sheet 2.

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Fig. 3.

Section on x, x,

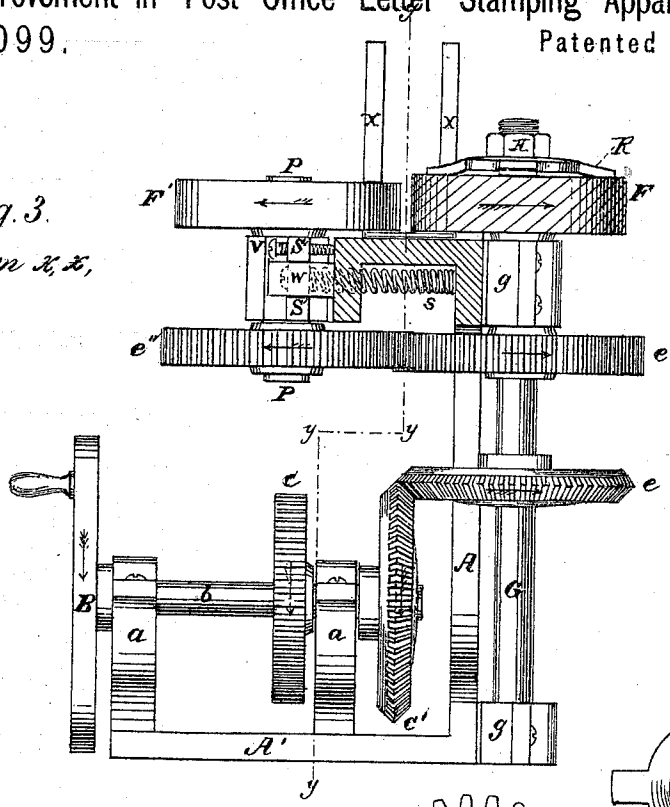


Fig. 6.

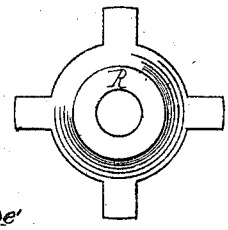
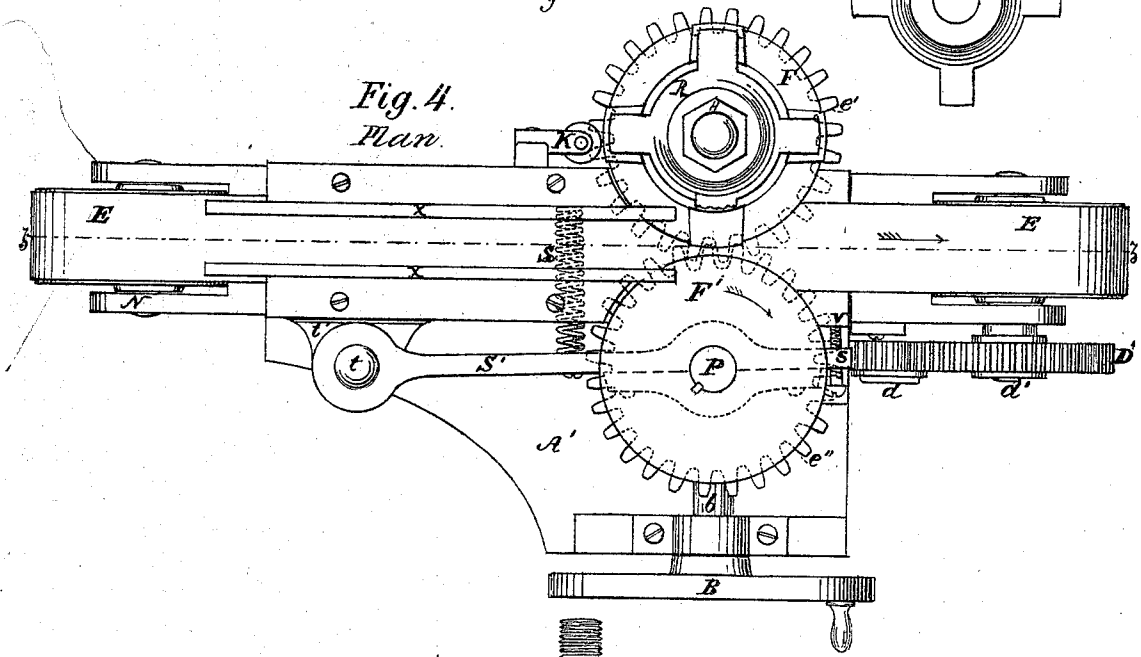


Fig. 4.

Plan.



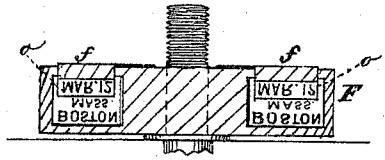


Fig. 5.

Witnesses:

Fred. Artos

S. M. Poore

Inventor:

Thos. C. Hargrave

by his atty,

A. H. & R. K. Evans

UNITED STATES PATENT OFFICE.

THOMAS C. HARGRAVE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN POST-OFFICE LETTER-STAMPING APPARATUS.

Specification forming part of Letters Patent No. 121,099, dated November 21, 1871.

To all whom it may concern:

Be it known that I, THOMAS C. HARGRAVE, of Boston, in the State of Massachusetts, have invented certain Improvements in Post-Marking and Stamp-Canceling Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of my machine with the crank-wheel in dotted lines. Fig. 2 represents a longitudinal vertical section on line *y y* of Fig. 3. Fig. 3 is a vertical cross-section through the line *x x* of Fig. 1. Fig. 4 is a top view of the machine. Fig. 5 is a view of the printing-wheel detached. Fig. 6 is a view of the washer detached.

In the said drawing A represents a frame, the main face of which is constructed at right angles with the base. The bearings *a a* support a driving-shaft, *b*, on which is the crank-wheel B. A main shaft, G, traverses the crank-shaft *b*, and has its bearings at *g g*. These shafts *b* and G are connected by the beveled cogged gear-wheels *e* and C′. To the main shaft G is attached the spurred gear-wheel *e′*, which works into a spurred gear-wheel, *e″*, connected to the end of the shaft P, which has its bearings in a vibrating arm, S′, hinged to the frame A at *t′* by the bolt *t*. To the other end of the shaft P is attached a plain impression-roller, F′. The forked end of the arm S′, which fits over the projection W of the frame A, serves to keep the arm in proper position, while the coiled spring S serves, by means of the vibrating arm S′, to automatically adjust the space between the impression-roller F′ and the printing-roller F, in order to accommodate packages of different thicknesses. An adjusting-screw, *v*, is inserted in the bar S′, and, bearing against the frame A, allows the regulation of the space between the rollers F and F′. To the upper end of the main shaft G is attached the printing cylinder F, made of any suitable material, its diameter being in proportion to the number of post-marks, and their distance apart, upon its periphery. Its thickness is determined by the depth of the cancellation required upon the letter or package designed to be postmarked.

The name of the place and State are engraved on the periphery of the cylinder F the desired number of times, equidistant. At each of these post-marks the cylinder F is recessed to admit of the introduction of movable type, showing the date required for the post-mark. These type, *o*, are held in position by means of the plates *f*, which lie over them, and which are pressed down by the washer R secured by the nut H to the end of the shaft G. The washer R is formed, as shown at Fig. 6, with four bearing points or arms, each point resting upon one of the plates *f*. This peculiar shape of the washer is for the purpose of obviating the removal of the nut H when it is desired to change the type. The nut being loosened, one-quarter turn of the washer relieves the plates *f* of all pressure, when they can be expeditiously removed and the type changed.

The entire surface of the periphery of the printing-cylinder F not occupied by the post-marks is permanently engraved with any suitable canceling lines, and is supplied with ink from a fountain by a distributing-roller, K, attached to the machine in any convenient manner.

The impression-cylinder F′ should be covered with cloth or rubber, as is usual in printing-machinery. Immediately beneath the cylinders F and F′ runs an endless band, E, passing over the rollers I and I′, having bearings in arms N N, attached to the ends of the frame A. The band receives its motion from the roller I′, which is actuated and turned by the shaft *b* through the cogged gearing C, D, and D′, and it serves as a carrier to pass the mail matter between the cylinders F and F′.

The guide-boards *x x*, attached to the upper part of the frame, assist the operator in passing the packages between the cylinders for post-marking and cancellation.

It is obvious that instead of the endless band E, which feeds forward the letters, an inclined plane could be used, down which the letters would pass by the force of gravity.

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

1. In a post-marking and canceling-machine, having cylinders F F′, the endless band E driven by gears C D D′ from shaft *b*, and guide-boards *x x*, substantially as described.

2. The recessed printing-cylinder F, in combination with the movable types *o*, plates *f*, and armed washer R, all constructed, arranged, and operated substantially as and for the purpose set forth.

T. C. HARGRAVE.

Witnesses:
SAML. VANU,
WM. B. S. GAY.

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