E. N. Moore. Sheet 1 2 Sheets.

Hand Stamp.

No. 6036 Patented Jan. 16. 1849.

Fig. 4.

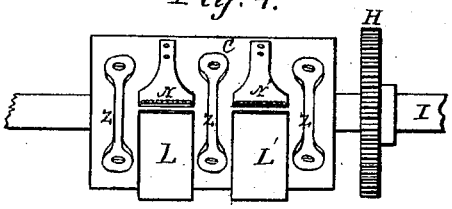


Fig. 5.

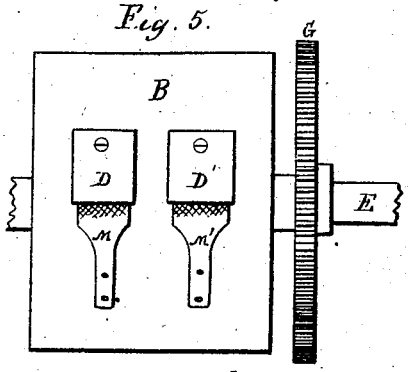


Fig. 1.

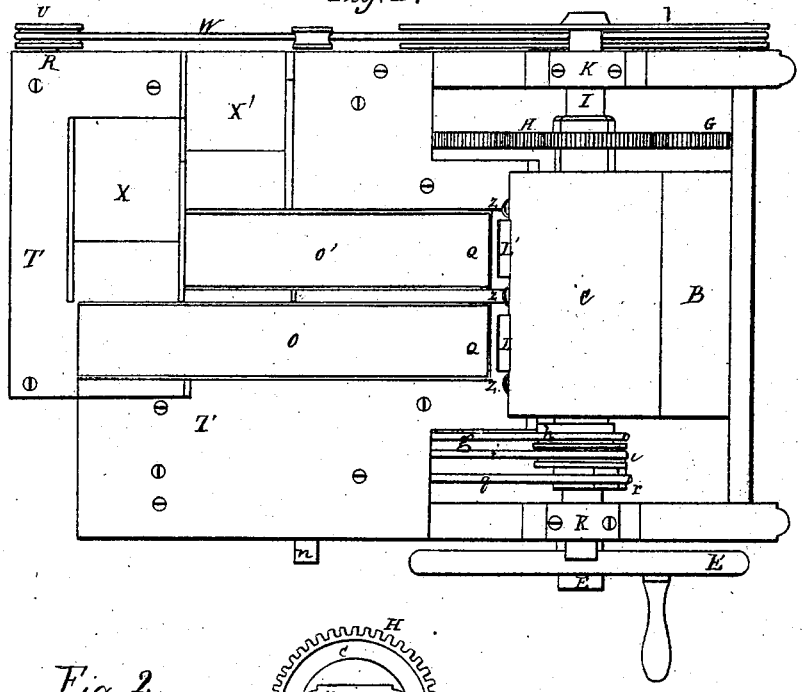
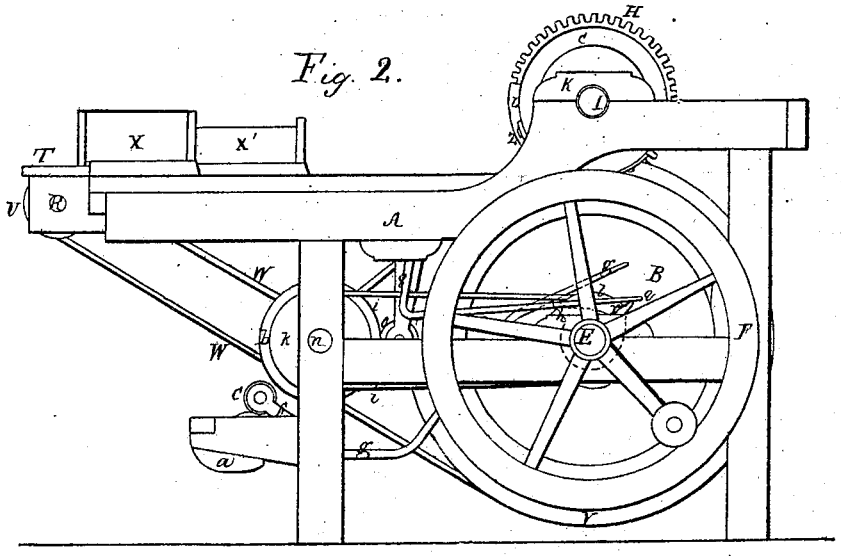


Fig. 2.



E. N. Moore. Sheet 2. 2 Sheets

Hand Stamp

No. 6036 Patented Jan. 16. 1849.

Fig. 7.

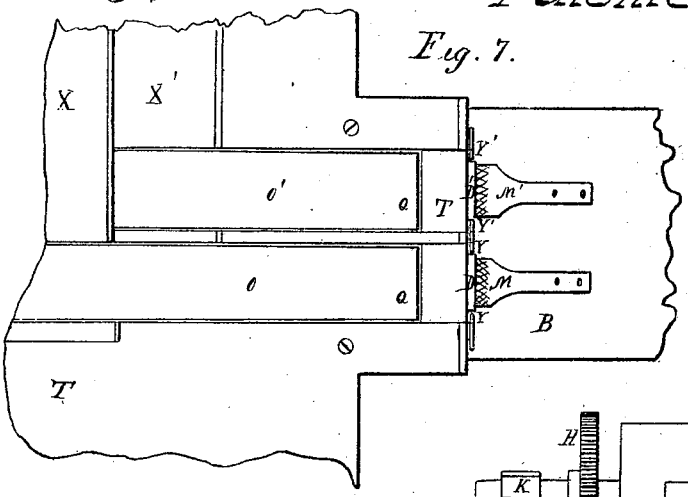


Fig. 6.

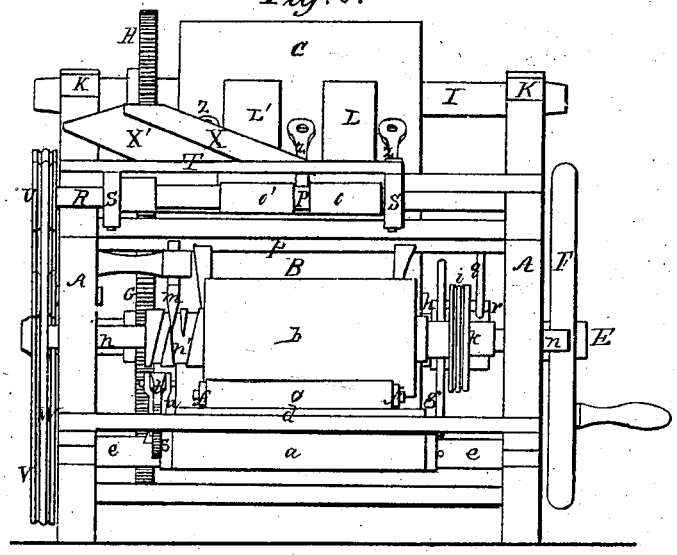
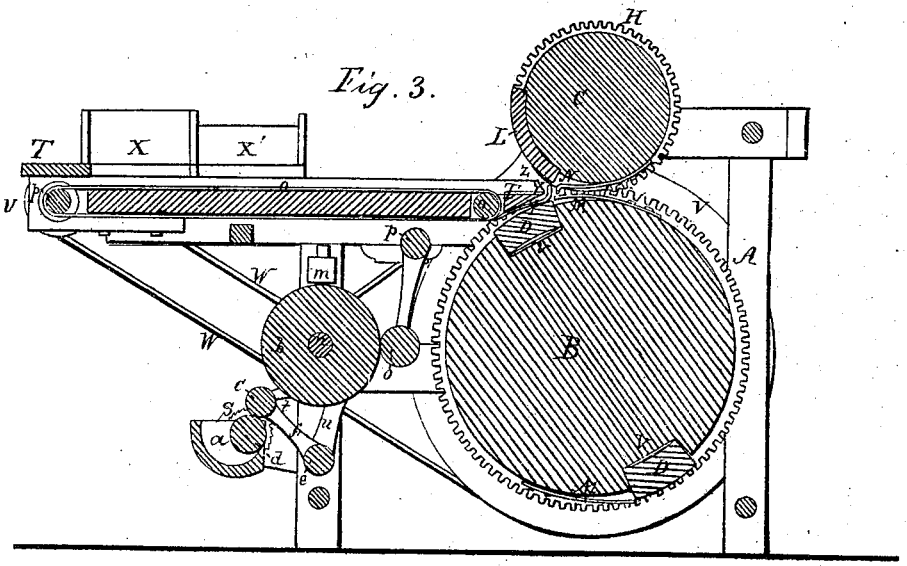


Fig. 3.



UNITED STATES PATENT OFFICE.

EMERY N. MOORE, OF BOSTON, MASSACHUSETTS.

MACHINERY FOR POSTMARKING LETTERS, &c.

Specification of Letters Patent No. 6,036, dated January 16, 1849.

To all whom it may concern:

Be it known that I, EMERY N. MOORE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Machine for Stamping Letters or Packages with Post-Office Marks; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a top view or plan of my said machine. Fig. 2 is a side elevation thereof. Fig. 3 is a vertical and longitudinal section of the same taken through the middle of one of the endless aprons. Fig. 4 is a side view of the upper or bed cylinder, and shows the beds, depressing cams, and upper set of fingers or grips applied to the external surface of the said cylinder. Fig. 5 is a side view of the lower or type holding cylinder and shows not only the recesses for receiving and holding the types, but the lower sets of grips or fingers, which act in concert with the upper sets of grips or fingers as will be hereinafter described.

The peculiar object of my machine is to imprint on letters or parcels or mailable matter usually deposited in post offices, for the purpose of being transported or sent in the mails, the usual post marks, such as the name of the place, date of reception of the letter and price to be paid for transmitting it, together with the word "paid," or any other word, letter or letters, figure or figures, device or devices, that it may be deemed advisable to stamp thereon. All this has heretofore been effected by stamps used in the hand of some officer of the post office, and where much business is done in an office, this duty consumes much valuable time, and in consequence thereof, creates a consequent expense. By the use of my machine, many thousand letters may be stamped in a very short period of time, in comparison to what would be consumed were the usual process of accomplishing the same resorted to.

In the said drawings A, denotes the frame work of the machine which should be constructed in a manner suitable to sustain the operative parts directly applied to it. B, and C are two cylinders, the former or the larger or lower of which is what may be termed the type holding cylinder because its main purpose is to hold and revolve the types or printing block or blocks, used to produce the required impressions or post marks upon the letters. The said blocks or types are shown at D, D. The cylinder B, is mounted on a shaft E, which is properly sustained in bearings which admit of its being revolved so as to revolve the cylinder. On one end of the said shaft there is a fly wheel F. The shaft also has a gear wheel G, fixed upon it, which engages with another gear wheel H, fixed upon another shaft I, which is supported by and turns in boxes K, K. The upper or bed cylinder C, is placed on the shaft I, and is revolved with it. The said cylinder supports two or any other suitable number of beds L, L, which are portions of the curved surface of a cylinder and serve to sustain the letter when it is made to pass between them and the inking or printing surfaces of the types or printing blocks. The lower or type cylinder, may be made of a diameter equal to, or any number of times greater than that of the other cylinder, according to the number of printing blocks it may be desirable to place in one range around its periphery. In the drawings it is exhibited having a diameter double or about double that of the upper cylinder, and as having two ranges of printing blocks D, D, and D′, D′.

Each printing block of each range on the lower cylinder has a spring grip M or M′, applied to the cylinder and with respect to the block as seen in the drawings. There is another and somewhat similar spring grip N, or N′ applied to the upper cylinder adjacent to each bed L, L′, as seen in the drawings. The spring grip N, or N′, operates in connection with one of the two spring grips immediately below it on the lower cylinder and in such manner as to seize each letter when it is sufficiently advanced or presented to be printed, and hold it firmly in place on one of the beds, while it is carried between the two cylinders in order to be printed, and receive an impression from one of the printing blocks or forms of type.

Having thus described that part of the apparatus which produces impressions of types on a letter, or on several letters in succession it next becomes my province to explain that by which the letters are successively presented to the spring grips of the cylinders in order to be printed. For this purpose I make use of an endless apron for each range of printing blocks around the lower cylinder. In the drawings, two of

said aprons O, O′, are seen; each being supported upon two rollers P, Q, and arranged as seen in the figures. The roller P, of each apron is fixed upon a horizontal shaft R (see Fig. 6, which represents a rear end elevation of the machine) which revolves in bearings S, S, secured to the under side of the table T, within which the endless aprons are arranged. On the outer end of the shaft R, is a pulley V, about which and a large grooved wheel or pulley V, fixed on the shaft of the lower cylinder, a band W, passes so as to communicate motion to both the endless aprons when the lower cylinder is put in revolution. Each endless apron has an inclined spout X or X′, disposed at right angles to it, and over the table T, as represented in the drawings. The letters to be printed are laid in the spouts, and by the attendant are successively pressed down upon the endless aprons, as fast as it may be necessary to supply them to the printing machinery.

By the revolutions of the endless apron on which the letters may be placed, they are successively moved forward against spring stops Y, Y′, which are seen at Y in Fig. 3, and also at Y, Y, Y′, Y′, in Fig. 7, which denotes a top view of the inner end of the table T or that part of it which projects under the upper cylinder, and is not seen in Fig. 1. Each of the said spring stops is nothing more than a small bent spring so applied to the front end of the table as to project above the same and arrest the forward movement of a letter when it is moved in contact with them by one of the endless belts. At a proper time and just before two of the spring grips of the cylinders are brought around and together so as to seize the letter, the said spring stops Y, Y, of each endless apron, are depressed by cams Z, Z, Z, suitably placed upon the surface of the upper cylinder; as soon as the depression of the stops is effected, the endless apron upon which the letter should still rest a short distance, will immediately cause the letter to advance and far enough so as to be seized between and by the two spring grips which may be in the act of approaching toward one another for the purpose of receiving or seizing the letter.

The next portion of the machine is that by which the types or printing surfaces are inked. It does not differ materially from such as is in common use, on cylinder printing machines. In such of the drawings as the same are shown *a* denotes an ink fountain, and *b* a large distributing cylinder, *c*, is a small conveyer or roller for conveying ink from the surface of the fountain roller *d*, to that of the distributing drum or cylinder. It is applied to arms *f*, *f*, extending from a rocker shaft *e*, which has a long bent arm *g* projecting forward from it, and over a cam or wiper *h*, fixed on the shaft E, the said cam being so made and arranged as to cause by its action on the said arm, the conveyer to move toward and against either the fountain roller or the distributing cylinder as occasion may require. The distributing cylinder is revolved by an endless band *i*, which operates around two grooved pullies *k*, *l*, one of which is placed on the shaft E and the other on the shaft *n*, of the distributing cylinder. A reciprocating lateral motion is given to the distributing cylinder, by means of a vibratory fork *m* made to operate in crossed helical grooves formed in a cylinder *n′* fixed on the shaft *n*. Or instead of such a contrivance to obtain a lateral movement of the said cylinder any other well known and proper contrivance may be substituted.

From the distributing cylinder the ink is transferred to the types or imprinting surfaces, by a roller *o*, which is suspended by arms, from a rocker shaft, *p*, the said shaft having an arm *q*, extending from it, and resting upon a cam or wiper *r*, fixed on the shaft E, and made to revolve with said shaft and to so operate the transferring roller *o*, by means of the arm *q*, as to cause said transferring roller at the proper time or times to move away from contact with the distributing cylinder, and come into or rest in contact with the inking types blocks or surfaces, which produce the post marks.

On one end of the shaft of the ink fountain roller is a ratchet wheel *s*, which has an impelling pawl *t*, resting upon its teeth, the said pawl being jointed to an arm *u*, projecting from the shaft *e*. The movements of the said shaft cause the pawl to so act on the teeth of the ratchet wheel as to produce a gradual rotation of it and the fountain roller, in order to always present to the conveyer *c*, a fresh surface of ink.

The machine above described in many respects resembles various machines in use for cylinder printing. I have however produced a combination of elements different from any such and adapted to a peculiar purpose, viz that of post marking letters and packages. As such letters or packages vary in thickness, either the beds which support the said letters during the operation of post marking them, or the types or printing blocks should be sustained upon springs, which will admit of their recession a little so as to allow of the passage of a letter of any ordinary thickness between either of the said beds and its printing block or types. In Fig. 3 the printing block is shown as resting upon a spring *v*, which is so disposed as to allow of the proper recession of the block, as occasion may require.

What I claim in my invention for post marking letters is—

1. The spring grips as applied in combi-

nation with the cylinders B and C, and letter conveyer and to each printing block and bed substantially as described.

2. I claim spring stops Y, and apparatus for working them; as applied in connection with each endless belt or apron and the spring grips and made to operate substantially as specified.

3. And lastly I claim to make the beds or printing surfaces or blocks, so as to be capable of receding and adapting themselves to letters or parcels of various thicknesses as specified.

In testimony whereof I have hereto set my signature this eleventh day of February A. D. 1848.

EMERY N. MOORE.

Witnesses:

R. H. EDDY,

CALEB EDDY.