No. 840,592. PATENTED JAN. 8, 1907.

J. N. STACY.

MACHINE FOR SUBDIVIDING SHEETS OF STAMPS.

APPLICATION FILED JUNE 1, 1903. RENEWED FEB. 17, 1906.

3 SHEETS—SHEET 1.

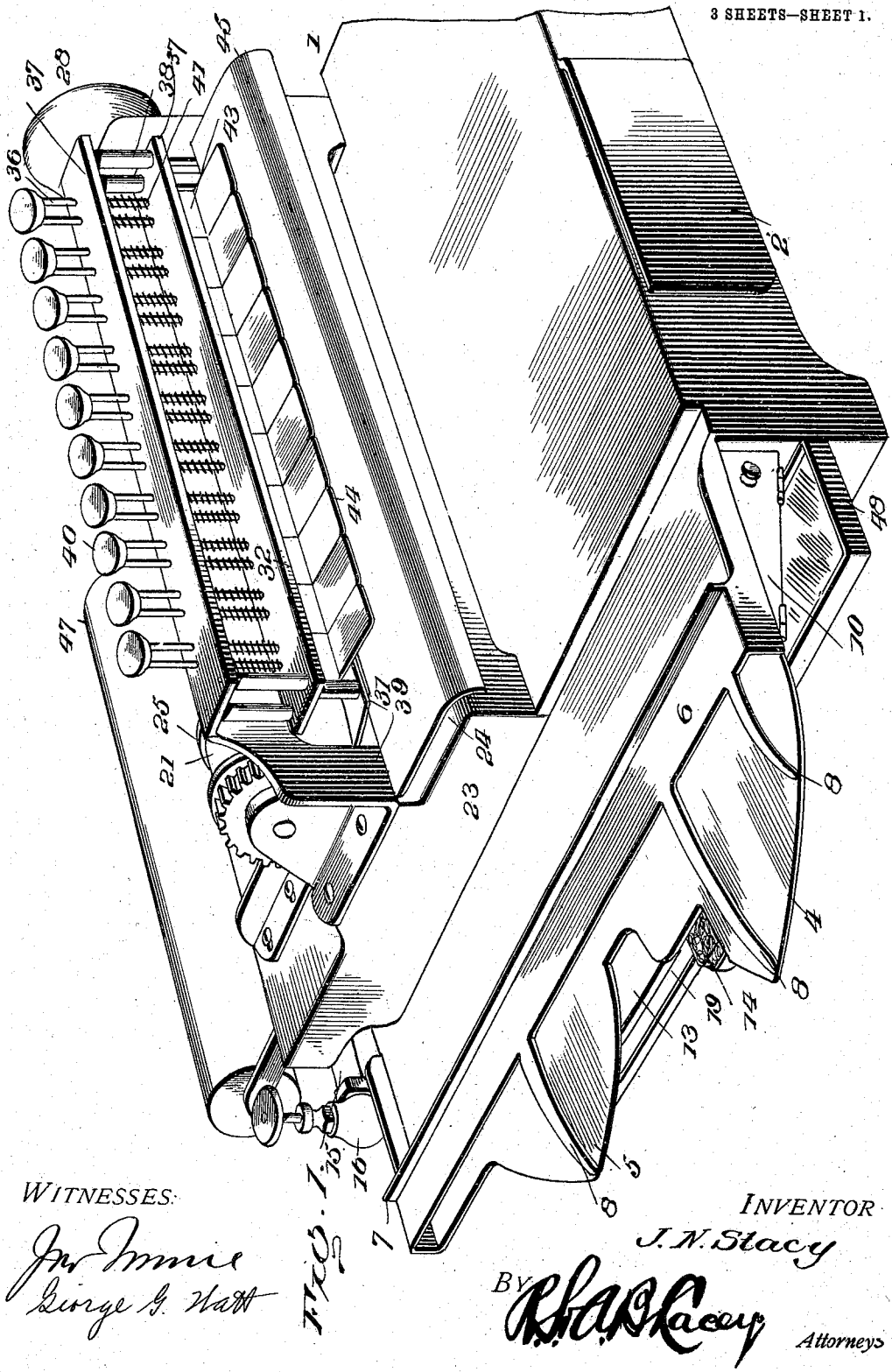


FIG. 1.

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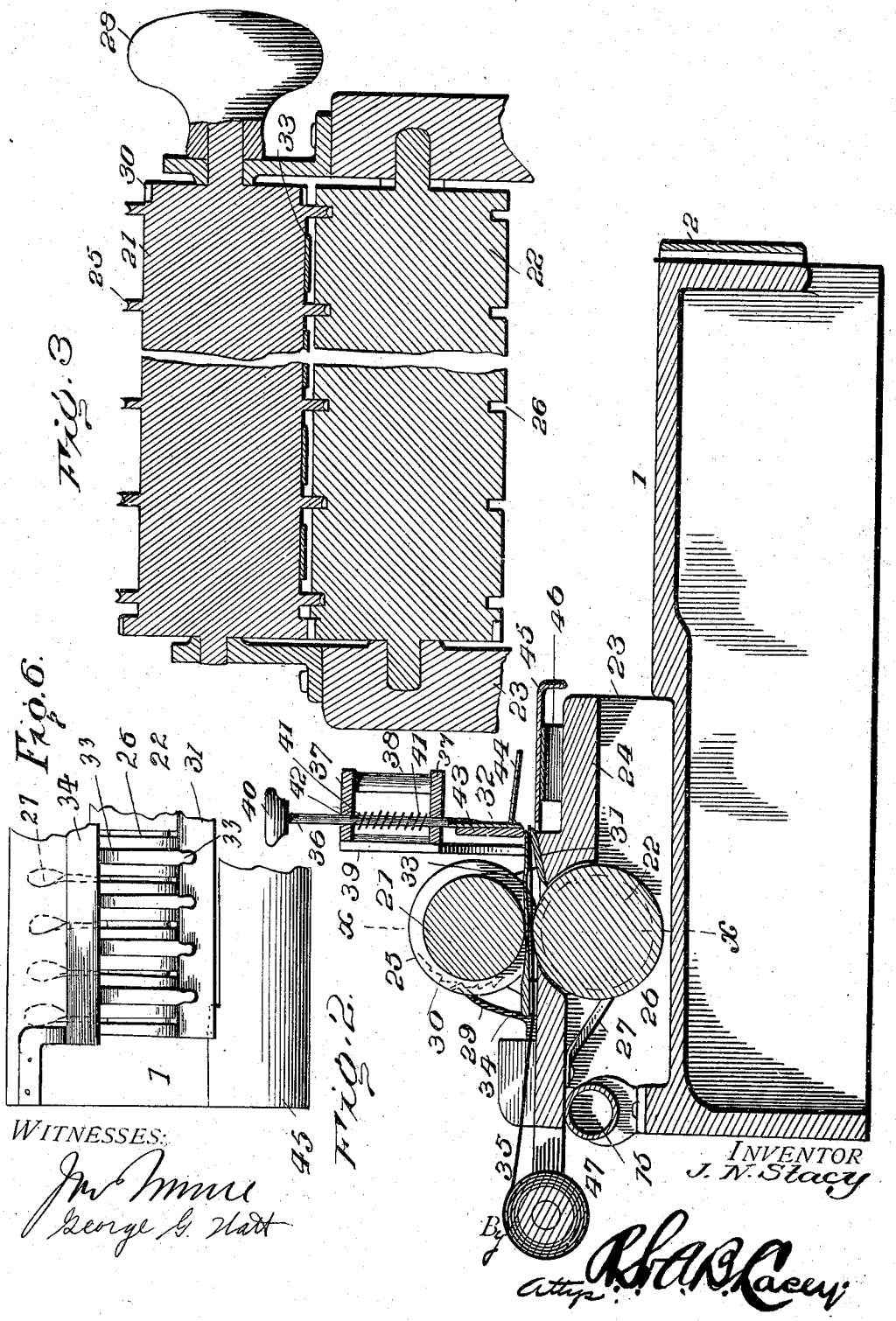
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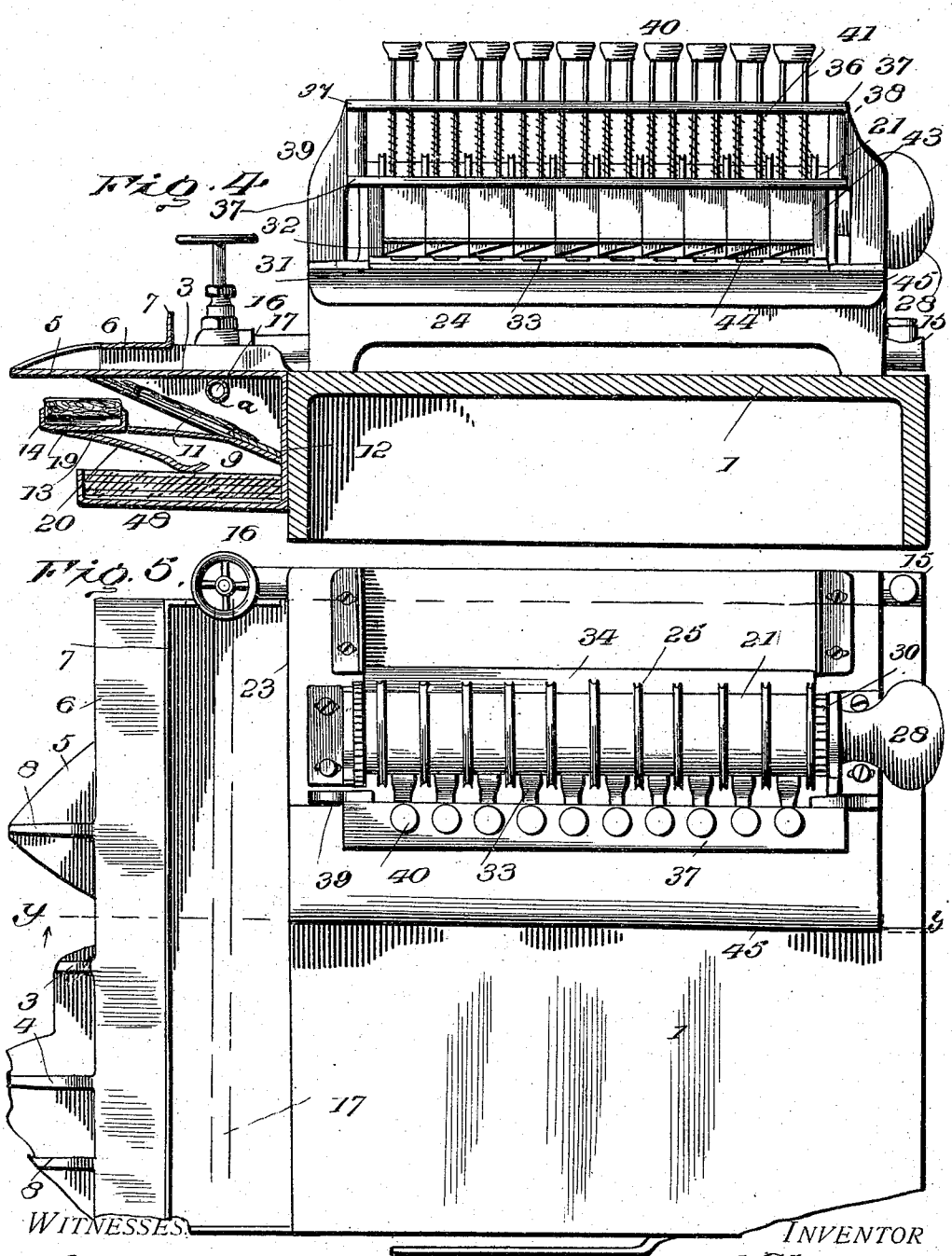
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3 SHEETS—SHEET 3.



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MACHINE FOR SUBDIVIDING SHEETS OF STAMPS.

No. 840,592. Specification of Letters Patent. Patented Jan. 8, 1907.

Application filed June 1, 1903. Renewed February 17, 1906. Serial No. 301,632.

To all whom it may concern:

Be it known that I, JAMES N. STACY, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Machines for Subdividing Sheets of Stamps, of which the following is a specification.

This invention relates to a novel form of mechanism designed chiefly for cutting up sheets of postage-stamps into strips for greater convenience in affixing them to mailable matter.

In the drawings, Figure 1 is a perspective view of a machine constructed in accordance with and demonstrating the practical application of the invention. Fig. 2 is a longitudinal section thereof, the envelop opener and moistener being omitted. Fig. 3 is a vertical longitudinal section of the companion cutter-rolls on the line X X of Fig. 2. Fig. 4 is a transverse section of the machine about on the line Y Y of Fig. 5 looking in the direction of the arrows. Fig. 5 is a top plan view of the machine. Fig. 6 is a detail view of the lower cutter-roll, the clearers coöperating therewith, and the spring-holders for keeping the stamps down upon the ledger-plate.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The operating parts are attached to a base 1, which may be of any suitable construction and finish according to the capacity and cost of the machine.

The mechanism for subdividing the sheet of stamps longitudinally consists of companion cutter-rolls 21 and 22, located the one above the other and journaled at their ends in bearings applied to pillow-blocks 23, secured to the base 1. The cutter-rolls are geared together at one end for simultaneous rotation. A plate 24 connects the pillow-blocks 23, and its top side is about in the plane of the space formed between the companion cutter-rolls 21 and 22 and forms a support for the sheet of stamps when moved forward into proper position. One of the cutter-rolls, preferably the upper one, is provided with a series of annular cutting-ribs 25, which constitute the cutters proper. The other roll, as 22, is provided with a corresponding series of annular grooves 26, snugly matching the annular cutters 25 and coöperating therewith to subdivide the sheet of stamps in the manner stated. The cutting-ribs 25 have depressions in their outer edges, preferably of half-round form, whereby each rib is formed with a pair of cutting edges formed by the intersection of the half-round groove in the edge with the sides of the rib. The annular cutters enter the annular grooves 26 and in the operation of the machine cut narrow strips from the sheet of stamps corresponding in width to the thickness of the annular cutters 25, said strips being pressed into the annular grooves 26. To prevent filling and choking of said annular grooves 26, strippers 27 are provided and are attached at one end to plate 24 and incline downward and forward, the free ends being tapered and snugly fitted into the respective annular grooves 26, so as to remove the strips cut from the sheet of stamps in the operation of the machine. The cutter-rolls are turned by means of a knob or handle 28, secured to an extended journal of one thereof. Suitable means are provided to prevent backward movement of the cutter-rolls, and, as shown, a detent-pawl 29 is secured to plate 24 and coöperates with ratchet-teeth 30 of one of said cutter-rolls, as 21.

A ledger-plate 31 is located in advance of the cutter-rolls and about opposite the space formed therebetween and acts, in conjunction with vertically-movable cutters or knives 32, to sever the stamps from the longitudinally-divided portions of the sheet of stamps. A series of spring-holders 33 are connected at their rear ends to a longitudinal bar 34 and pass between the cutter-rolls and press lightly upon the ledger-plate 31. The bar 34 is spaced a short distance above plate 24 to admit of the sheet of stamps 35 passing beneath it and under the spring-holders 33 and over the ledger-plate 31. The spring-holders 33 prevent the longitudinally-divided portions of sheet 35 from passing around with cutter-rolls 21, the ledger-plate 31 performing the same office for the cutter-rolls 22. The series of cutters 32 are attached to companion rods 36, which operate vertically through openings formed in parallel plates 37, vertically spaced by pins or posts 38 and secured to brackets or uprights 39, attached at their lower ends to pillow-blocks 23 or plate 24, as found most convenient. Keys 40 are applied to the upper ends of rods 36 and are adapted to be pressed upon when operating the cutters. Springs 41 are mounted upon the rods 36 and are confined

between the lowermost plate 37 and pins 42 passed through openings of the rods 36. The springs 41 serve to normally hold the keys and cutters elevated. The cutters 32 operate against a vertically-disposed plate 43, the lower edge of which is spaced a short distance from the cutting edge of the ledger-plate 31. A pressure-plate 44 is applied to each cutter 32 and extends outward therefrom and is adapted to yield so as to adapt itself to the bulk of the matter upon which it presses the stamp. The number of cutters 32 will depend upon the number of rows of stamps in the sheet 35. Inasmuch as the sheet of stamps as at present furnished by the Government contains ten rows of stamps, the machine will be provided with ten cutters. This is not necessary, as the sheets may be subdivided into strips containing any number of rows of stamps, the machine being provided with a corresponding number of cutters according to the number of rows of stamps in the width of the strip.

A table 45 is arranged in front of the cutting mechanism and is mounted for vertical movement and is supported upon a spring 46, which presses the same upward. By having the table 45 mounted so as to yield vertically the letter or other mailable matter to be stamped may be properly positioned to bring its upper side about in the plane of the upper side of the ledger-plate 31, so as to insure its coming beneath the stamp to be affixed thereto.

The sheet of stamps is wound upon a roll 47 at the rear of the machine, and the loose end of said sheet is passed beneath bar 34 and between cutters 21 and 22, the same being operated to subdivide the sheet longitudinally and feed it forward to bring the stamps beneath the pressure-plates 44 and in position to be properly cut when depressing the keys 40. The envelops to be filled, sealed, and stamped have their sealing-flaps extended and are slipped upon the opener in the manner stated and are filled as described. Upward pressure upon plate 13 brings the sealing-flap in contact with pad 11 and the stamp-space of the envelop in contact with the pad 14, and after plate 13 is released and the envelop withdrawn from the opener the sealing-flap is closed or folded during the interval of transferring the envelop from the opener to the table 45, when the stamp is cut from the strip and pressed upon the envelop by moving the proper key 40 downward. The keys 40 are operated successively, so as to insure using all the stamps in a transverse row of the sheet. After the stamps of a transverse row have been used the cutter-rolls are turned a distance to bring another row of stamps in proper position. It is to be noted that the cutter-rolls 21 and 22 besides serving to sever the sheet longitudinally also feed the same forward. To prevent any surplus water from dropping upon the stand, table, or other support of the machine, a drip-pan 48 is provided and located below the moistening-pad.

Having thus described the invention, what is claimed as new is—

In a machine of the character described, the combination of companion cutter-rolls, pillow-blocks provided with bearings for said cutter-rolls, a plate connecting the pillow-blocks and arranged about in a plane corresponding with the space formed between the cutter-rolls, one of said cutter-rolls having annular grooves and the other matching annular ribs, a ledger-plate secured to the plate connecting the pillow-blocks and arranged in front of the cutter-rolls, a bar located in the rear of the cutter-rolls and supported by the aforesaid plate, spring-holders attached at one end to said bar and passed between the cutter-rolls and supported at their front ends by means of the ledger-plate, and strippers attached to the under side of the aforementioned plate and inclined forward and downward, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES N. STACY. [L. S.]

Witnesses:

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GEORGE WATT.