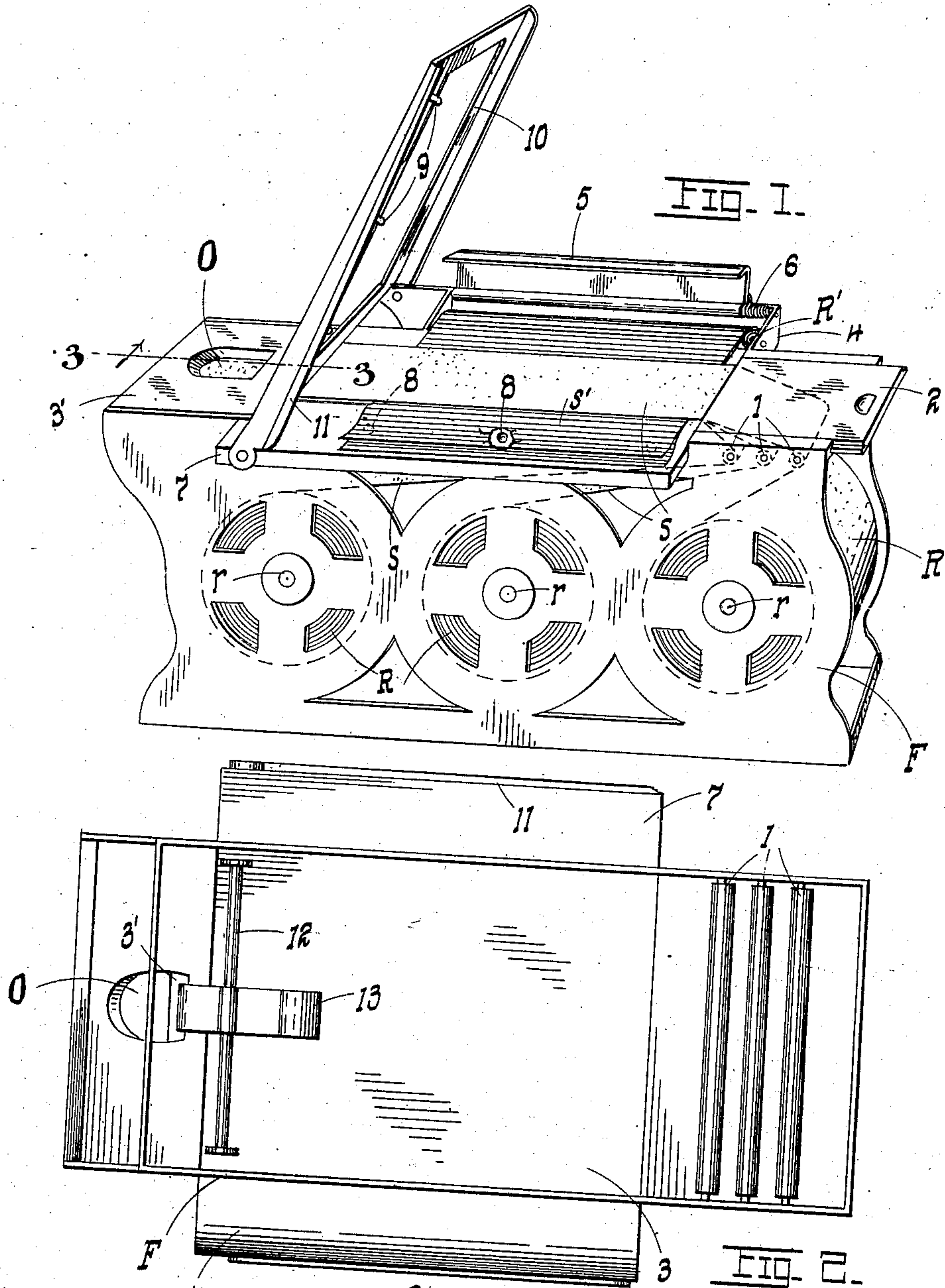


No. 891,387.

PATENTED JUNE 23, 1908.

J. T. SULLIVAN.
REGISTER OR MANIFOLDING MACHINE.
APPLICATION FILED FEB. 21, 1907.



WITNESSES:

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FIG. 3.

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REGISTER OR MANIFOLDING MACHINE.

No. 891,387.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed February 21, 1907. Serial No. 358,743.

To all whom it may concern:

Be it known that I, JOHN T. SULLIVAN, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Register or Manifolded Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in autographic registering or manifolded machines; and it consists in the novel construction and arrangement of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a perspective of the machine, with lid-frame swung open, and the lid for the roll carrying the carbon sheets, likewise shown open; Fig. 2 is a bottom plan of the machine; and Fig. 3 is a sectional detail on the line 3—3 of Fig. 1.

The invention relates to a class of machines in which are employed a series of sheets of paper between which are interposed a complementary series of sheets of carbon, whereby any matter written or impressed on the outer or exposed sheet is duplicated on each of the succeeding sheets through the impressions left by the coating of the carbon sheets.

The particular objects of the invention are to provide improved means for adjusting the lengths of the carbon sheets, for tearing off the writing sheets, for maintaining a constant and uniform relation between the sheets, for withdrawing the writing sheets, and in general to provide a machine which will be simple, and particularly adapted for use in making out bills of lading, shipping receipts, sale tickets, drayage tickets and the like.

In detail the invention may be described as follows:

Referring to the drawings, F, represents a conventional frame open at the bottom for receiving a series (three shown here) of rolls R of writing paper, the sheets s unwrapped from the rolls being passed over a series of guide rods or rollers 1, 1, 1, disposed immediately above the last roll. The sheets leaving the rollers 1 pass under a removable sliding plate 2 which protects the rollers aforesaid, after which the sheets are drawn over the sheet-supporting plate or top 3. The roll-spindles are represented by r which may be secured to the shafts of the rolls in any well known mechanical manner, such

details being in no wise concerned with the present invention. Disposed on one side of the frame adjacent to the upper edge thereof is a receptacle 4 which receives the roll R' of carbon paper, two sheets s' being herein wound on the roll, and passed transversely through the spaces between adjacent sheets s of writing paper. Mounted along the outer edge of the receptacle 4 is an angular lid 5 which closes over the roll R', the closing being automatically effected by a spring 6 coiled about the hinge rod on which the lid is mounted, one end of the spring bearing against the lid and normally tending to close it. This detail too, is well understood and is a common construction for spring closing doors. The side of the frame F opposite the receptacle 4 is provided with a ledge 7 over which the carbon or impression sheets s are drawn off, said ledge being provided with a series of depressions or sockets 8 which receive corresponding pins or teeth 9 of the longitudinally swinging lid-frame 10 hinged at the front of the frame F, the teeth entering the sockets upon the closing of the lid and thus clamping the carbon sheets against displacement. The side of the lid-frame carrying the pins 9 is provided with a blade 11 along which sections of the carbon paper that are no longer serviceable can be cut off.

Secured to the frame F in any mechanical manner, a suitable distance above the forward end of the plate 3, and forming a throat therewith for the passage of the free ends of the sheets s, is a plate 3' both plates (3, 3') having suitable sections excised therefrom, leaving an opening O whose outer boundary is contiguous to the outer edges of the plates (3, 3') constituting the throat, the metal around the opening being beveled toward an edge so that the thumb and fingers holding the sheets s by pressure from the opposite faces exposed through said opening, may slip readily along the plates, whereupon after slipping off the edges of the plates, the thumb and fingers may readily regrasp the edges of the sheets drawn through the throat by a draft on said sheets while the fingers were being drawn across the opening (Fig. 3). The plates 3, 3' are properly spaced to form a terminal slit through which the sheets s may be collectively drawn, and then jointly severed by drawing them by an upstroke against the sharp edge of the plate 3', or by a downstroke against the edge of the plate 3 (Fig. 3).

Mounted on a transverse rod 12 carried by the frame F below the plate 3, a suitable distance rearward of the opening O is a weighted brake or lever 13, the short arm being forced, under the weight of the long arm, into frictional engagement with the plate 3' along a small section exposed through the open portion O of the plate 3, thereby acting as a brake for the sheets passing through the throat, and preventing the sheets from accidental displacement laterally or against accidental rewinding on the rolls R (Fig. 3).

The clerk, after writing on the upper sheet s of the series, obviously secures carbon copies on the second and third sheets. These are then pulled out through the throat and torn off as already indicated, the lever 13 serving as a friction brake against any possible displacement of the sheets. From time to time as the carbon sheets become worn they are pulled out transversely to the required extent (by first opening the lid-frame 10), whereupon by a closing of the lid-frame the withdrawn section of the carbon is cut off along the blade 11. To renew the carbon roll R', the lid 5 is first swung open to remove the spindle, a fresh roll is then inserted and the lid released, when the spring 6 automatically closes over it. Of course the free edge of the lid 5 leaves a sufficient space between it and the plate 3 to allow for the free passage of the sheets s' off the roll R'.

Having described my invention, what I claim is:

1. In a manifolding machine, a frame, a series of writing sheets mounted therein and placed in contiguous relation to one another, a complementary series of carbon or impression sheets disposed in the spaces between the writing sheets, a throat formed on the frame for receiving the ends of the writing sheets, the opposite walls of the throat having an open portion for permitting the seizure of the opposite faces of the several sheets, and a cutting edge formed at the end of the throat along which the sheets may be severed, substantially as set forth.

2. In a manifolding machine, a suitable frame, a series of writing sheets mounted therein and placed in contiguous relation to one another, a complementary series of carbon or impression sheets disposed transversely thereto in the spaces between the

writing sheets, a supporting surface for the sheets, a throat formed at the delivery end of the frame for the free passage of the sheets, the walls of the throat having open portions for accommodating the thumb and fingers, means for clamping the carbon sheets to the frame, a blade on said clamping means for severing the carbon sheets, and suitable knife edges formed at the mouth of the throat for cutting the writing sheets, substantially as set forth.

3. In a manifolding machine, a suitable frame, a series of writing sheets mounted therein and placed in contiguous relation to one another, a complementary series of carbon sheets disposed transversely thereto in the spaces between the writing sheets, a supporting plate for the sheets, a plate superposed over one end of the supporting plate and spaced therefrom and forming a throat therewith for the free reception of the writing sheets, the plates having open portions contiguous to the mouth of the throat, a brake located below the supporting plate and engaging the upper plate of the throat to prevent displacement of the writing sheets, a lid-frame hinged to the main frame and closing over the carbon sheets and securing the same against displacement, a cutting edge on the lid-frame for severing the carbon sheets in a direction transverse to the mouth of the throat, and cutting edges formed at the mouth of the throat for severing the writing sheets, substantially as set forth.

4. In a manifolding machine, a suitable frame adapted to support a traveling writing sheet or web, a plate over which said sheet passes, said plate having an opening at the delivery end of the machine through which the bottom of the sheet is accessible, the upper surface of the sheet being sufficiently exposed to permit seizure of the sheet from opposite sides by the thumb and finger respectively, the end of the plate serving as a cutting edge for the sheet, and means on the frame for mounting the sheet in position to be drawn over the plate and the opening thereof aforesaid, substantially as set forth.

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Witnesses:

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