

No. 679,193.

Patented July 23, 1901.

J. L. SULLIVAN.
COMBINED PRINTING AND ADDRESSING MACHINE.

(Application filed Aug. 13, 1900.)

(No Model.)

3 Sheets—Sheet 1.

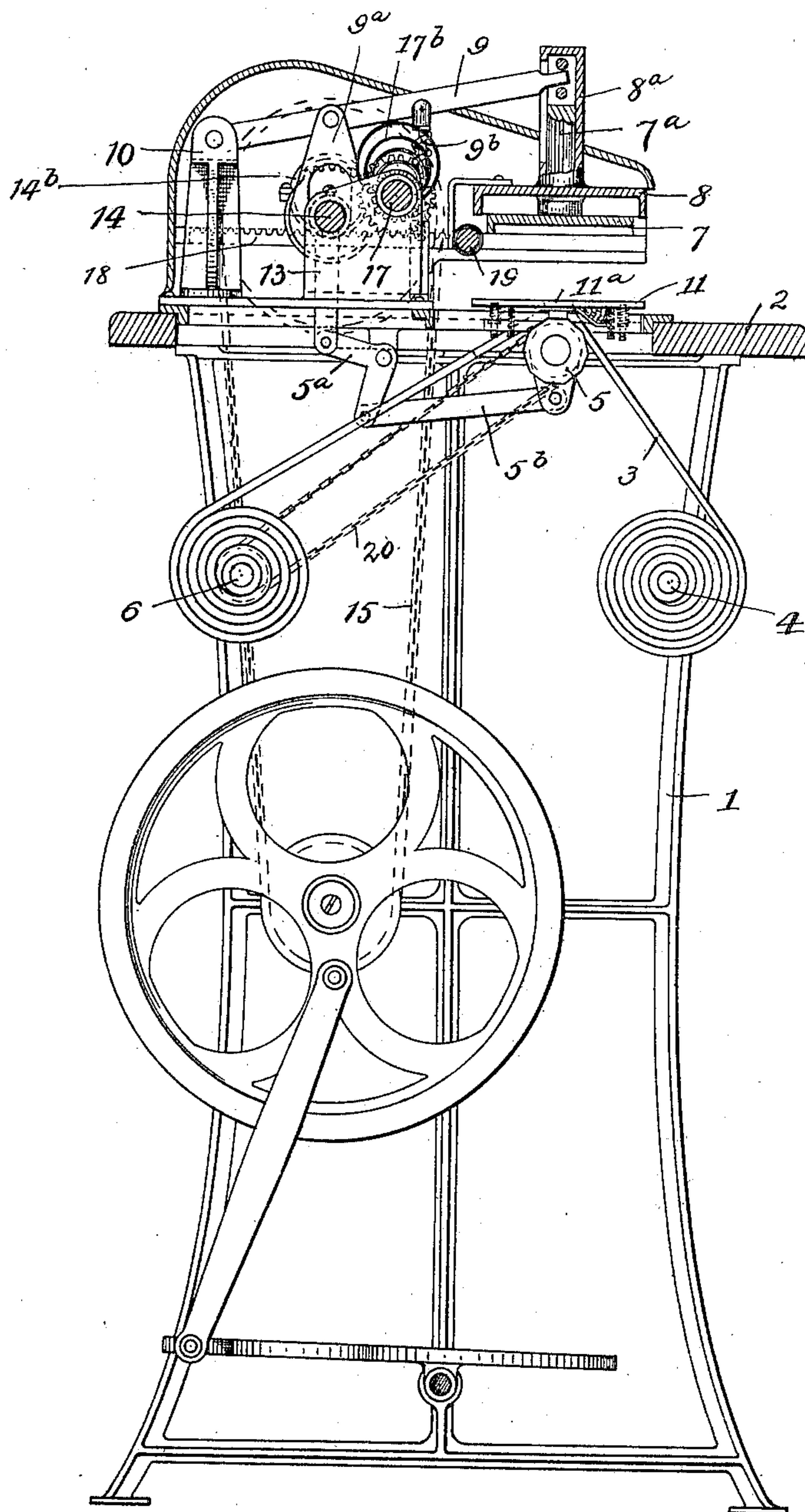


Fig. 1.

Witnesses
F. Ernest Wright
A. J. Finckel.

Inventor
Josiah L. Sullivan
by Finckel & Finckel
his Attorneys

No. 679,193.

Patented July 23, 1901.

J. L. SULLIVAN.
COMBINED PRINTING AND ADDRESSING MACHINE.

(Application filed Aug. 13, 1900.)

(No Model.)

3 Sheets—Sheet 2.

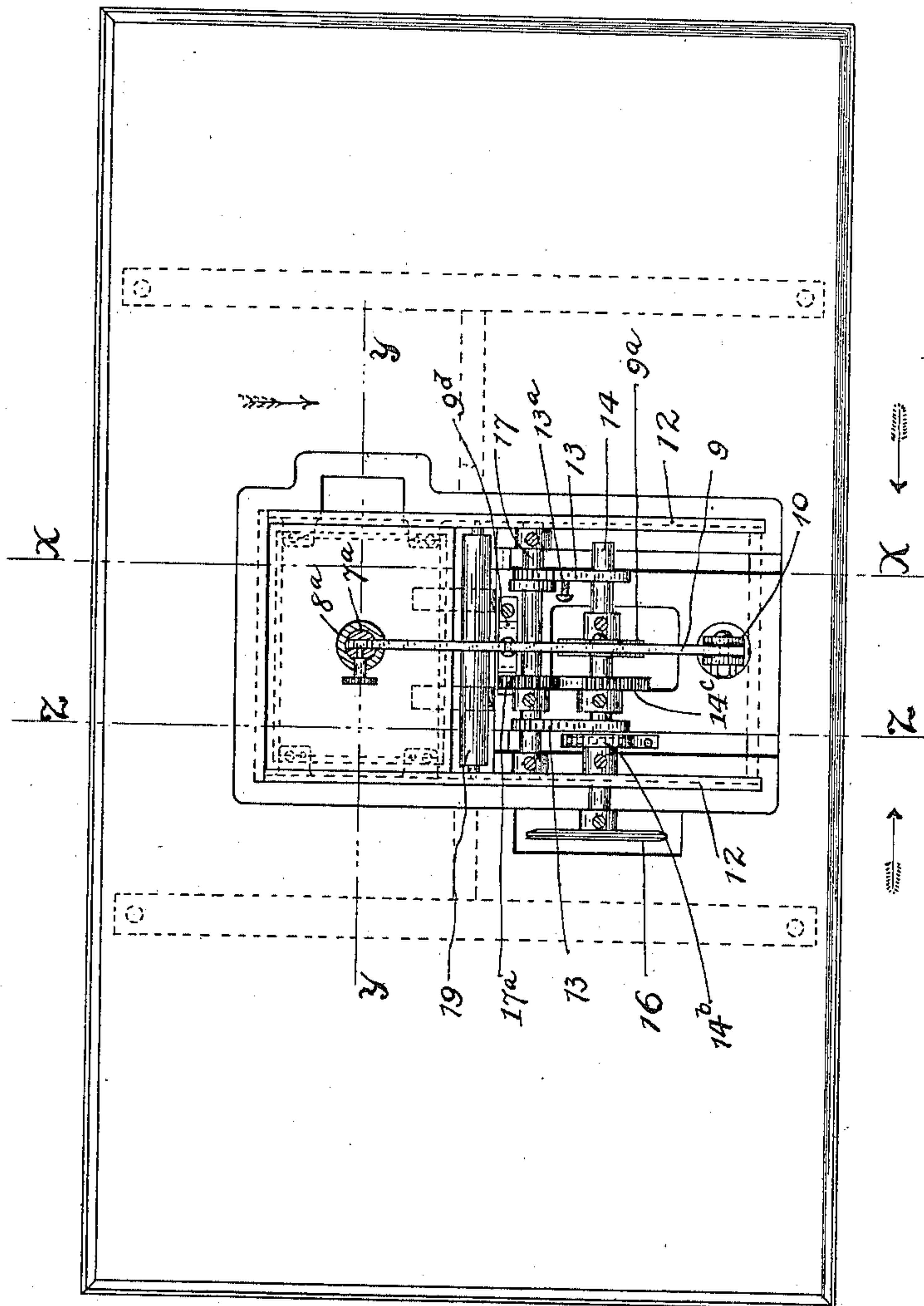


Fig. 2.

Witnesses
H. Ernest Wright
A. J. Finckel.

Inventor
Josiah L. Sullivan
by Finckel & Finckel
his Attorneys

No. 679,193.

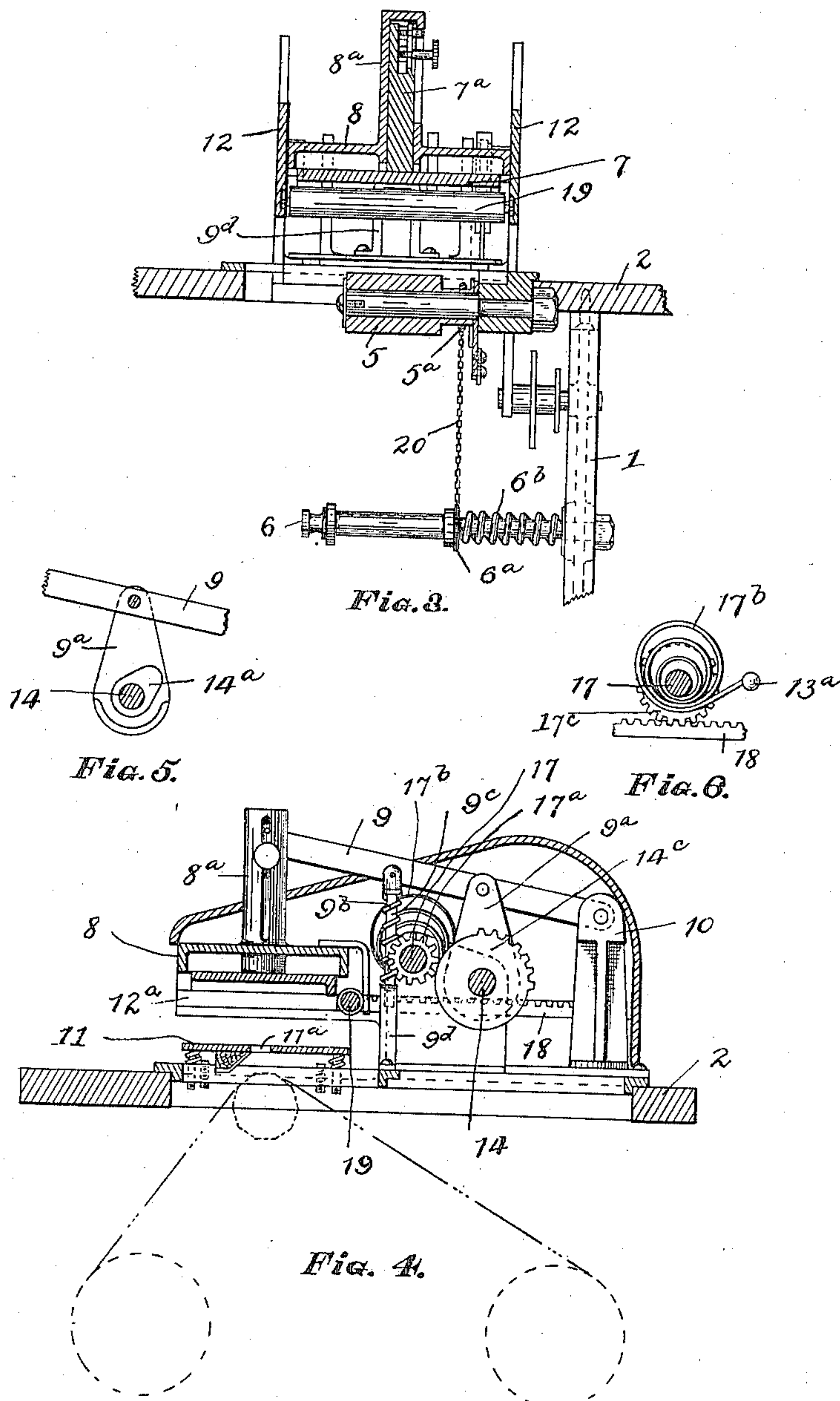
Patented July 23, 1901.

J. L. SULLIVAN.
COMBINED PRINTING AND ADDRESSING MACHINE.

(Application filed Aug. 13, 1900.)

(No Model.)

3 Sheets—Sheet 3.



WITNESSES:

H. Ernest Wright
A. J. Finckel

INVENTOR

Josiah L. Sullivan

BY

Finckel & Finckel
his ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSIAH L. SULLIVAN, OF COLUMBUS, OHIO.

COMBINED PRINTING AND ADDRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 679,193, dated July 23, 1901.

Application filed August 13, 1900. Serial No. 26,768. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH L. SULLIVAN, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in a Combined Printing and Addressing Machine; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to the kind of machine shown in United States Letters Patent No. 622,541, dated April 4, 1899, granted jointly to C. M. Runyan and myself. In the machine shown in said patent the holder of the type-form for printing upon the back of a card was given a tumbling movement to effect the inking of the type, and while the inking could be satisfactorily effected in this way it involved the employment of somewhat-complicated mechanism. The chief object of the present invention, therefore, is to provide a simple inking mechanism. In the aforesaid patent there is also shown a spring for winding up the addressing-chain. This, it has been found, is not so satisfactory, because the spring is not uniform in its action, it becoming weaker and weaker as the winding proceeds. I have therefore also provided means whereby the winding operation shall be uniform.

The invention resides in the construction hereinafter described and claimed.

In the accompanying drawings, illustrating an embodiment of my improvements, Figure 1 is a vertical sectional view taken on a plane indicated by the line *x x*, Fig. 2, and looking in the direction of the arrow adjacent said line. Fig. 2 is a plan view, the cover being removed and the shank of the main type-holder and its socket being in section. Fig. 3 is a vertical section on a plane indicated by the line *y y*, Fig. 2, looking in the direction of the arrow near said line. Fig. 4 is a sectional view on a vertical plane indicated by the line *z z*, Fig. 2, looking in the direction of the arrow near said line. Fig. 5 is a detail showing the cam for operating the upper or main type-holder. Fig. 6 is a detail view of the spring for retracting the inking-roller.

In the views, 1 designates the legs of the frame, upon which is a table 2, supporting the principal parts of the machine.

3 designates the address belt or chain, that can be formed as described in said patent. This belt is wound from a shaft 4 over a feed and supporting drum or roller 5 onto a shaft 6 with a step-by-step motion.

7 designates the holder of the main printing-form. This has a stem 7^a, that works vertically in a socket 8^a of a cross-piece 8. The stem 7^a is engaged by the forward end of a lever 9, that is pivoted at its rear end to a standard or post 10.

11 designates a spring-supported platen, substantially like that shown in the aforesaid patent, upon which the card to be printed and addressed is placed. The platen is made with a narrow opening 11^a, through which the type of an addressing-link extends when the platen is pressed down by the main type-holder to imprint the address on the under side of the card.

The frame above the table includes parallelly-arranged side pieces or walls 12. Journaled in suitable standards 13 in the space between the side pieces 12 is the main operating-shaft 14, that is driven by a chain belt 15 passing over a pulley 16 on the outer end of said shaft. The shaft 14 has secured to it two cams or eccentrics, one (designated 14^a) for operating a yoke 9^a, depending from the lever 9, and another (designated 14^b) for operating the address-chain-supporting drum or roller 5 through a bell-crank lever 5^a and link 5^b. Journaled in the standards 13 is a second shaft 17, lying parallel to the shaft 14, that has secured to it a pinion 17^a, engaged intermittently by a segmental gear 14^c on the shaft 14. There is also attached to the shaft 17 one end of a volute spring 17^b, the other end of said spring being attached to a pin 13^a on the adjacent standard 13. The outer ends of the shaft 17 are provided with gear-wheels 17^c, that engage rack-bars 18 18, sliding in grooves 12^a in the inner sides of the walls 12. The forward ends of the rack-bars 18 carry between them an inking-roller 19. The lever 9 and with it, of course, the main type-holder are held normally up—that is, when not depressed by the cam 14^a—by means of a spring 9^b on a rod 9^c passing through a

fixed yoke 9^a in the frame, the spring being compressed between the yoke and the lever.

The parts are so timed or arranged with respect to each other that when the cam 14^a 5 is not acting on the yoke 9^a the segmental gear 14^c shall turn the pinion 17^a and move the inking-roller 19 forward under the type-form in the holder 7; but when the segmental gear 14^c turns the pinion 17^a it also winds up 10 the spring 9^b, and when the toothed portion of the segmental gear in the course of its rotation becomes disengaged from the pinion 17^a the spring 9^b retracts the roller to such position as to permit the downward or print- 15 ing movement of the holder 7 under the action of the cam 14^a.

The address-chain is fed by substantially the same means as described in the aforesaid patent; but after it passes off the supporting 20 drum or roller 5 it is wound up on the shaft 6 by means of a sprocket-chain 20 engaging sprockets 5^a on the drum and a sprocket 6^a on the shaft or spindle 6, said sprocket being held frictionally, by means of a spring 6^b, 25 against an appropriate spool on said shaft 6, so as to allow for the increasing size of the roll of links. The address-belt-supporting drum 5, as before stated, is fed in substantially the same way as in the aforesaid pat- 30 ent—that is, by a ratchet and pawl—and it is unnecessary to detail herein such devices; but it is proper to state that the eccentric 14^b on the shaft 14 herein is placed so that the feeding movement of the drum 5 is effected 35 about simultaneously with the forward movement of the inking-roller of the upper or main type-holder.

What I claim, and desire to secure by Letters Patent, is—

40 1. In a combined printing and addressing machine, the combination with a type-holder, an inking-roller therefor, rack-bars carrying said roller, a shaft having toothed wheels en-

gaging said rack-bars, a pinion, and a spring on said shaft, a second shaft, a segmental 45 gear thereon to engage said pinion, an address-chain support, and means for operating the same together with the inking devices conjointly, substantially as described.

2. In a combined printing and addressing 50 machine, a main type-holder or printing device, an address-printing chain and a support therefor, a platen between the chain and main printing device, a shaft having a cam for intermittently reciprocating the main type- 55 holder, a cam for operating intermittently the address-chain support, and a segmental gear, combined with an inking-roller for the main type-holder, rack-bars carrying said roller, a second shaft having gears engaging 60 such rack-bars to move the inking-roller in one direction over the type in the main holder, a pinion on said shaft to be engaged by the segmental gear on the first-named shaft, and a spring to move the inking-roller in the op- 65 posite direction, substantially as described.

3. In a combined printing and addressing machine, an address-printing chain, a sup- 70 port therefor, means for intermittently feeding said chain-support, a spool for winding up said chain after it leaves the drum, a shaft or spindle for said spool, a driving-wheel on said shaft to move said spool, and a belt con- 75 necting the address-chain support and said driving-wheel, combined with a main printing and inking mechanism, and means for operating said address-chain support and the printing and inking mechanism conjointly, substantially as described.

In testimony whereof I affix my signature 80 in presence of two witnesses.

JOSIAH L. SULLIVAN.

Witnesses:

GEO. W. ALFRED,
GEORGE M. FINCKEL.

It is hereby certified that Letters Patent No. 679,193, granted July 23, 1901, upon the application of Josiah L. Sullivan, of Columbus, Ohio, for an improvement in "a Combined Printing and Addressing Machine," was erroneously issued to said Sullivan as owner of the entire interest in said invention; whereas said Letters Patent should have been issued to *Clay M. Runyon, of Columbus, Ohio*, said Runyon being the assignee of the entire interest in said patent, as shown by the record of assignments in this Office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 4th day of March, A. D., 1902.

[SEAL.]

F. L. CAMPBELL,
Assistant Secretary of the Interior.

Countersigned:

F. I. ALLEN,
Commissioner of Patents.