

No. 877,179.

PATENTED JAN. 21, 1908.

R. DUCHESNE.
STENOGRAPHING MACHINE.

APPLICATION FILED MAR. 16, 1907.

2 SHEETS—SHEET 1.

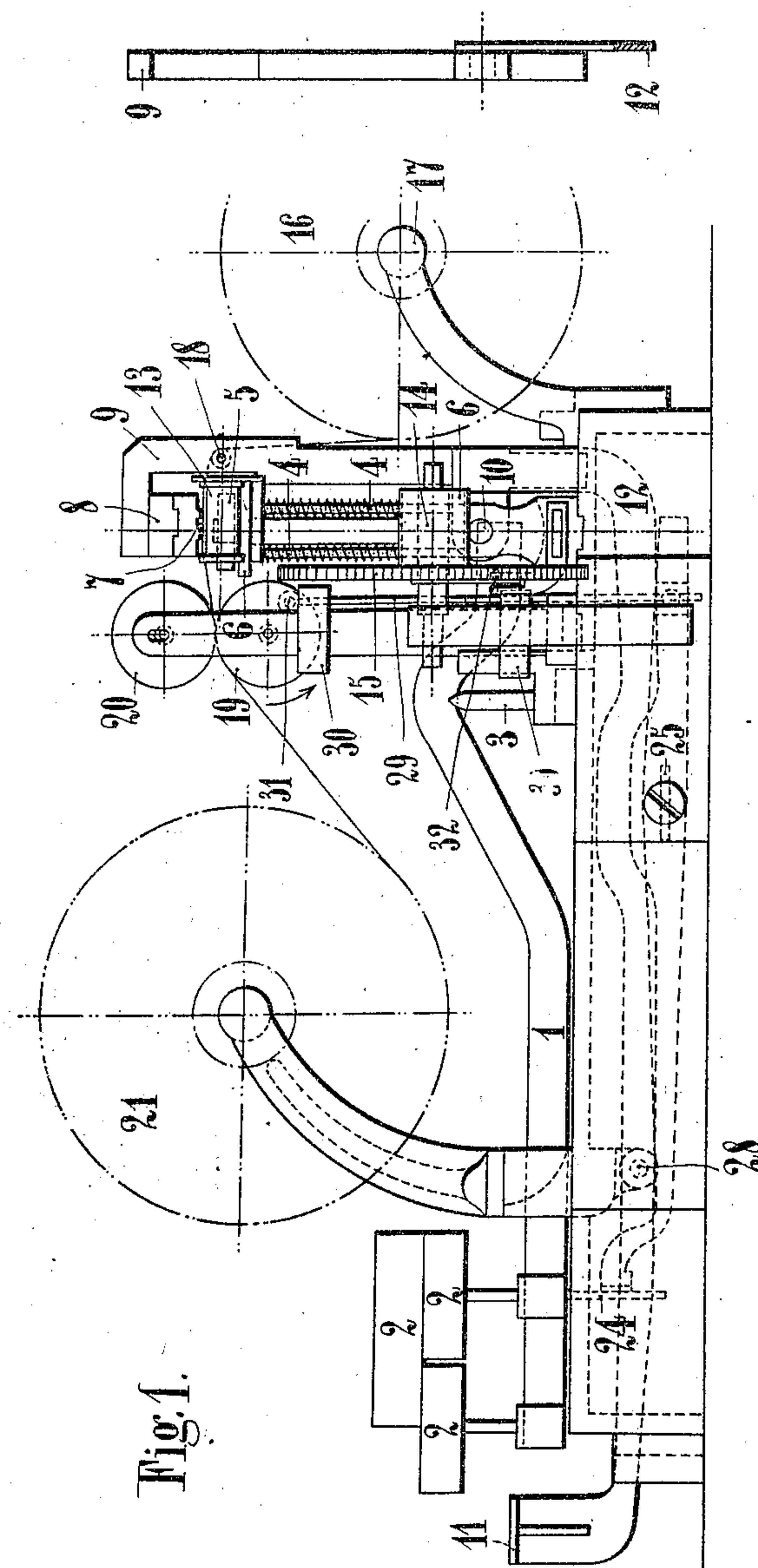


Fig. 1.

WITNESSES:

Fannie Figg
Henry J. Lohrbier

INVENTOR

Robert Duchesne

BY

Guiseppi Goepel

ATTORNEYS.

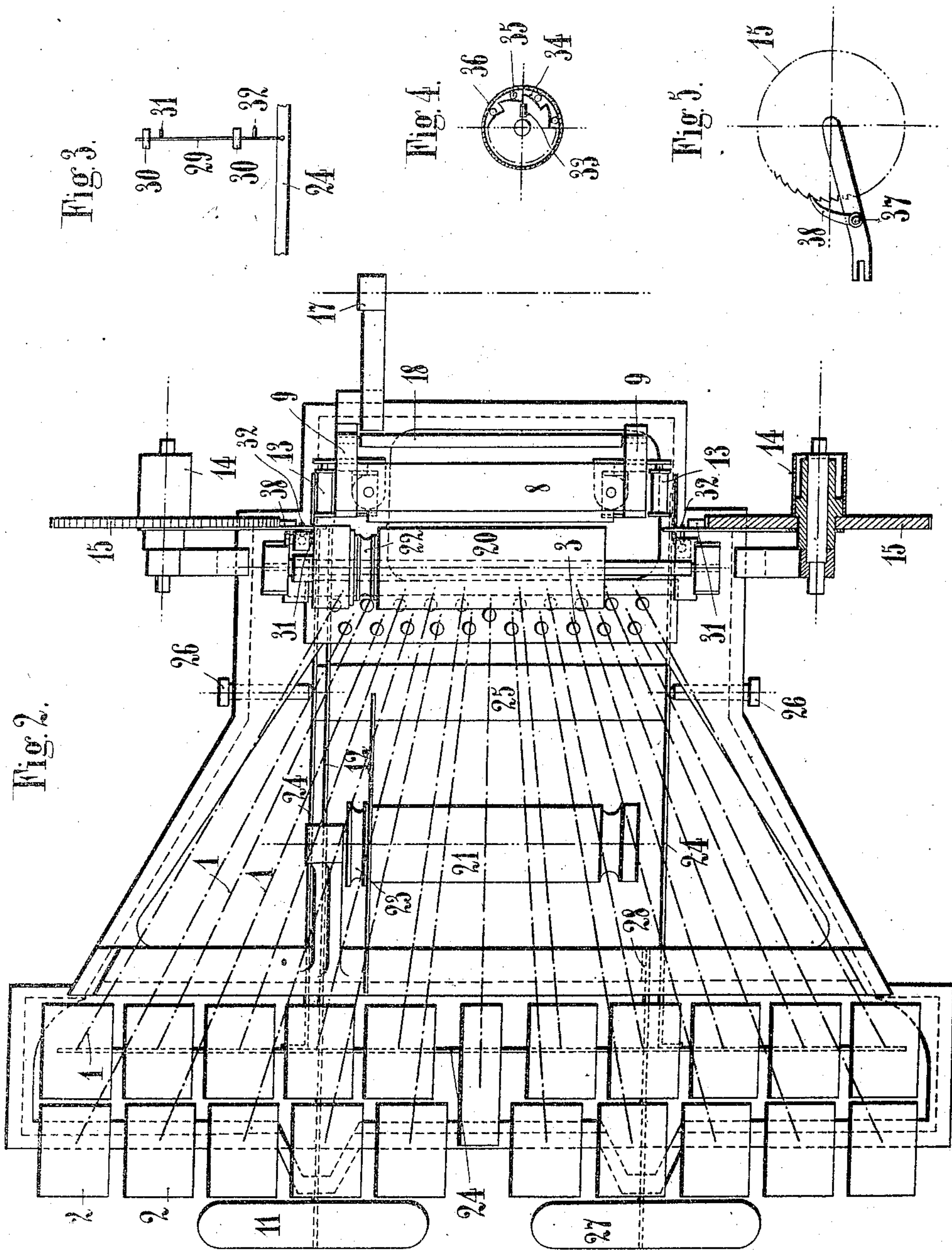
No. 877,179.

PATENTED JAN. 21, 1908.

R. DUCHESNE.
STENOGRAPHING MACHINE.

APPLICATION FILED MAR. 16, 1907.

2 SHEETS—SHEET 2.



WITNESSES:

Fernand Fick
Henry Dubreuil

INVENTOR

Robert Duchesne

BY

Guillaume Loyer
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBERT DUCHESNE, OF PARIS, FRANCE, ASSIGNOR TO LA SOCIÉTÉ "LA STÉNOPHILE BIVORT," OF PARIS, FRANCE.

STENOGRAPHING-MACHINE.

No. 877,179.

Specification of Letters Patent.

Patented Jan. 21, 1908.

Application filed March 16, 1907. Serial No. 362,740.

To all whom it may concern:

Be it known that I, ROBERT DUCHESNE, a citizen of the Republic of France, and resident of Paris, France, have invented a new and useful Improvement in Stenographing-Machines, which improvement is fully set forth in the following specification.

The present invention has for its object a stenographing machine permitting of printing letters or combinations of letters on a strip of paper while it is unwinding, the same stroke of the finger producing simultaneously by means of a single universal bar and connections, the impression, the unwinding of the paper and the unwinding of the inking ribbon.

In order that the invention may be readily and clearly understood, the accompanying drawings show by way of example the stenographing machine which forms the object of the invention.

Figure 1 is a side elevation. Fig. 2 is a plan view. Figs. 3, 4 and 5, relate to details of the means for operating the paper feed roller and for unwinding the inking ribbon.

This machine comprises a series of levers 1 of steel or other appropriate metal, each supporting at one end a key 2 carrying the indication of a letter or of a combination of letters. These levers pass over knives 3 and terminate beneath strikers 4 constituted by rods of steel or other appropriate metal, and held against the levers 1 by means of spiral springs; these strikers, which are guided in plates 6 preventing their deviation, carrying hammers 5 at their upper extremity.

The letters or types or combination of letters or types used are formed in relief in one and the same plate 7 fixed beneath a cross piece 8 which is itself attached to a rocking beam 9 pivoted at 10 and connected by a lever 12 to a special key 11, termed the "pedal."

When the keys 2 are depressed, the strikers 4 rise and the hammers 5 apply the paper against the letters 7. The impression is effected in the manner hereinafter explained.

When the key 11 is depressed, the part 9 in rocking around its pivot 10 brings one or other of the rows of letters engraved on the part 7 above the hammer. Below the letter on the part 7 there is arranged an inking ribbon which passes over a guide roller 13 and is wound upon a spool 14 forming one with a ratchet wheel 15. The band of paper passes

beneath the ribbon and a piece of india rubber interposed between the hammers 5 and the paper softens the pressure produced by the levers 1. The spooled paper is placed on a roller 16 rotating around a shaft held in a bracket 17. The paper passes over a guide roller 18. Thence it passes beneath the letters, in passing beneath the inking ribbon; it then passes between the rollers 19 and 20 and proceeds to the winding up drum 21. When the roller 19 rotates in the direction indicated by the arrow in Fig. 1, it carries the paper between itself and the roller 20. At the same time, a pulley 22 fixed on the shaft of the roller 19 drives the pulley 23 by means of a belt preferably formed by a piece of india rubber or by a spiral spring, the extremities of which are united.

When one of the keys 2 is depressed, or several of these keys are depressed simultaneously, they depress a universal bar 24 mounted upon a cross piece 25 which is capable of rocking between the trunnions 26. The rocking movement of the universal bar 24 causes the roller 19 to act by means of a ball box as will be hereinafter described. A special key 27 termed the "pedal" pivoted at 28 enables the cross piece 24 to be acted upon without depressing the levers of the letters. By using the pedal 27, the roller 19 may be rotated, and consequently the roller 21 also, so that the paper may be fed forward without producing an impression.

Operation of the feed roller.—When the keys 2 for the letters are depressed, or the pedal 27, this pressure is transmitted by the universal bar 24 to a rod 29, Fig. 3, held vertical by bearings 30. This rod carries two studs 31 and 32. The stud 31 produces the oscillation, by means of a slot 33, Fig. 4, into which it enters, of the disk 34 loose upon the shaft of the roller 19. The disk 34 carries ratchet teeth in which balls or cylinders 35 are lodged. This disk 34 enters a cup 36 fixed to the shaft of the roller 19, and carrying the pulley 22. It will be seen that the rocking movement of the rod 29 moves the cup 36 in one direction and with it the shaft of the roller 19, and does not displace it in the other direction owing to the locking or unlocking of the cylinders or balls 35. The same reciprocating movement of the rod 29 displaces a connecting rod 37 (Fig. 5) by means of the disk 34; this rod carries a pawl 38 resting on the toothed wheel 15. From

this it will be seen that the movement which produces the paper feed causes the inking ribbon to be wound up or to unwind.

Having thus described my invention, I claim:

1. In a stenographing machine, the combination, with the key-levers, of vertically-guided strikers abutting against the levers at the lower ends of the former, hammers carried at the upper ends of said strikers, a rocking beam pivoted below said hammers and having a cross-piece overhanging the latter, a type carrying plate mounted on said cross-piece, an inking ribbon, and means whereby said beam may be rocked by a finger-stroke.
2. In a stenographing machine, the combination, with the key-levers, and the print-

ing mechanism, of a universal bar actuated by the key-levers, a feed-roller for the paper, a cup fixed on said feed-roller at one end, a disk within said cup having a slot and ratchet-teeth, a rod actuated by said universal bar and having a stud entering the slot in said disk, and balls in said cup cooperating with said ratchet-teeth to cause the feed of said roller in only one direction.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ROBERT DUCHESNE.

Witnesses:

EMILE LOBUT,
DEAN B. MASON.