June 10, 1930. G. TAUSCHEK 1,762,749

PAPER FEEDING MECHANISM

Filed May 21, 1928

Fig. 1.

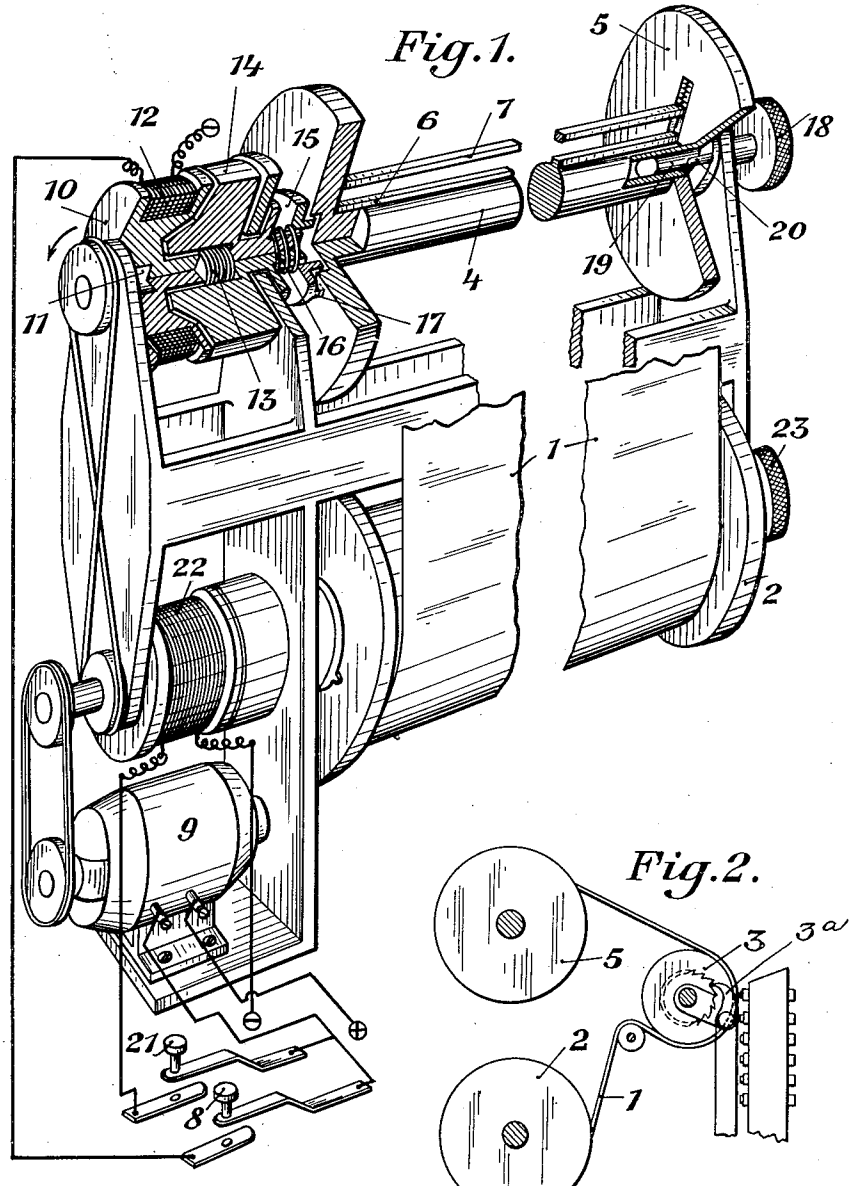


Fig. 2.

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Patented June 10, 1930

1,762,749

UNITED STATES PATENT OFFICE

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PAPER-FEEDING MECHANISM

Application filed May 21, 1928, Serial No. 279,543, and in Austria May 27, 1927.

My invention relates to paper feeding mechanisms for type-writers, calculating machines, tabulating machines and the like. More particularly the invention relates to a paper feeding mechanism by means of which the text, numbers and the like to be written may quickly be distributed over any desired portions of a long paper band.

All office appliances provided with means for type-writing, except the book-type-writers, involve the introduction of the so-called loose leaves, if they are to be used for bookkeeping and similar purposes. That is to say, a particular leaf is used for each account and the whole collection of uniform leaves takes the place of bound books. The disadvantage of such an arrangement is first that loose leaves may easily be misplaced, become lost and the like and second that a great amount of time is lost in introducing the single leaves into the machine.

The object of the present invention is to provide a device which secures the advantages inherent in a bound book as well as those which result from the use of loose leaves. To obtain this, the loose leaves are replaced by a single long paper band or web, the ends of which are connected to and wound upon rollers which may be rotated by hand or by a motor in such a manner that the paper is wound upon the one and unwound from the other roller or vice versa.

If, for instance, such a device is to be used for keeping the balance account and if there are about 100 accounts, the account headings would be marked upon a paper band or web of about 50 m. length and of a width corresponding to the width of the platen of the machine in question in such a manner that a space of about 50 cm. remains between each two consecutive account headings. Each of these sections of a length of 50 cm. corresponds to an account leaf of a loose leave book or to a page of the balance account book.

In the accompanying drawing a machine according to the invention is shown by way of example.

Fig. 1 is a perspective view and Fig. 2 shows a diagrammatic side view.

The web or band 1 of paper which is wound upon the roller 2 is passed over and in surface engagement with the roller 3, which may represent the platen of a type-writing machine (Fig. 2) and then around the spindle 4 (Fig. 1) of the roller 5 where it is clamped by means of a resilient rail 7 against a longitudinal notch 6 of the spindle 4. To now move the strip or band 1 to the desired section (account or the like), the key 8 is depressed, whereby a circuit across the driving motor 9 and a magnet-clutch 10 is closed. The clutch 10, arranged upon the driven axle-arm 11 in a manner to be displaceable thereon in a longitudinal direction but secured against relative rotation, is moved, against the tension of a spring 13, towards the counter piece 14 as soon as the circuit across the winding 12 is closed. As the counter piece 14 is connected to a flange 15 which is secured against relative rotation, and is pressed, by means of a spring 16, against the paper roller 5 and engages this roller by a pin 17, the roller 5 now starts to rotate with the speed of the drive. As soon as the desired portion of the strip or band 1 visibly appears, the movement of the rollers is interrupted by relieving the pressure upon the key 8. The final adjustment to the desired line is then effected by manually rotating a turn-button 18 connected to a pin 19 which extends into the paper roller and is secured against relative rotation by means of a pin 20.

If the strip or band 1 is to be moved in the opposite direction, the key 21 is depressed. This causes closing of a circuit across the clutch 22 of the roller 2 which acts in exactly the same manner as the clutch 10. The roller 2 also is provided with a turn-button 23 to manually effect the fine adjustment.

To exchange and to replace the paper rollers, both are simultaneously pressed against the flanges 15, whereby the springs 16 are compressed and the rollers may be lifted from the pins 19.

The force of the clutch magnets 10 and 22 is so chosen, that at first the clutches slip a little on the counter pieces 14 so that a sudden coupling is prevented which would

cause breaking of the paper strip 1. The springs 16 on the other hand are so tensioned, that the unwinding roller is braked in such a manner as to always keep the paper strip 1 perfectly tightened.

In practice it is ofttimes necessary, in passing from one account to another, to shift the web of paper 1 for a distance of 10 or 20 m. by unwinding it from one roller and winding it upon the other. For the purpose of easily and quickly bringing about these relatively large operations of the paper web 1, the aforesaid driving or operating means for the paper rollers 2 and 5 are provided. Besides such driving means for rapidly operating the rollers, a conventional line spacing mechanism 3^a is provided. This line spacing mechanism 3^a is independent of the roller operating means, and rotates the platen 3 in successive steps to shift the paper web 1 from line to line during the printing operation when a number of entries are to be made in the same account. Any slack in the web 3 occurring between the platen 3 and the roller 4 as a result of such line spacing operations may be taken up by rotating the roller 4 either manually or by power to the required extent.

What I claim is:

1. In a device as set forth, the combination of a writing machine, platen printing mechanism, means for feeding said platen in successive steps, two rollers carrying a strip of paper which passes from one roller to the platen and from thence to the other roller to be written upon power driven means for rotating the two rollers selectively and independently of the feeding mechanism of the machine, and means for manually operating said rollers independently of the feeding mechanism and power driven means.

2. In a device as set forth, the combination of a writing machine platen, printing mechanism, means for feeding said platen in successive steps, two rollers carrying a strip of paper which passes from one roller to the platen and from thence to the other roller to be written upon, two electromagnetically acting clutches cooperating with said rollers to drive said rollers, and a common source of power which is alternatively connected with the rollers by means of the said clutches coordinated to the rollers.

3. In a device as set forth, the combination of a writing machine platen, printing mechanism, means for feeding said platen in successive steps, two rollers carrying a strip of paper which passes from one roller to the platen and from thence to the other roller to be written upon, two electro-magnetic clutches cooperating with said rollers, an electric motor for driving the two rollers, a driving connection between the motor and the clutches and means for selectively switching the said motor in circuit with one or the other of the two electro-magnetic clutches to drive the roller of the clutch which is energized.

In testimony whereof I have affixed my signature.

GUSTAV TAUSCHEK.