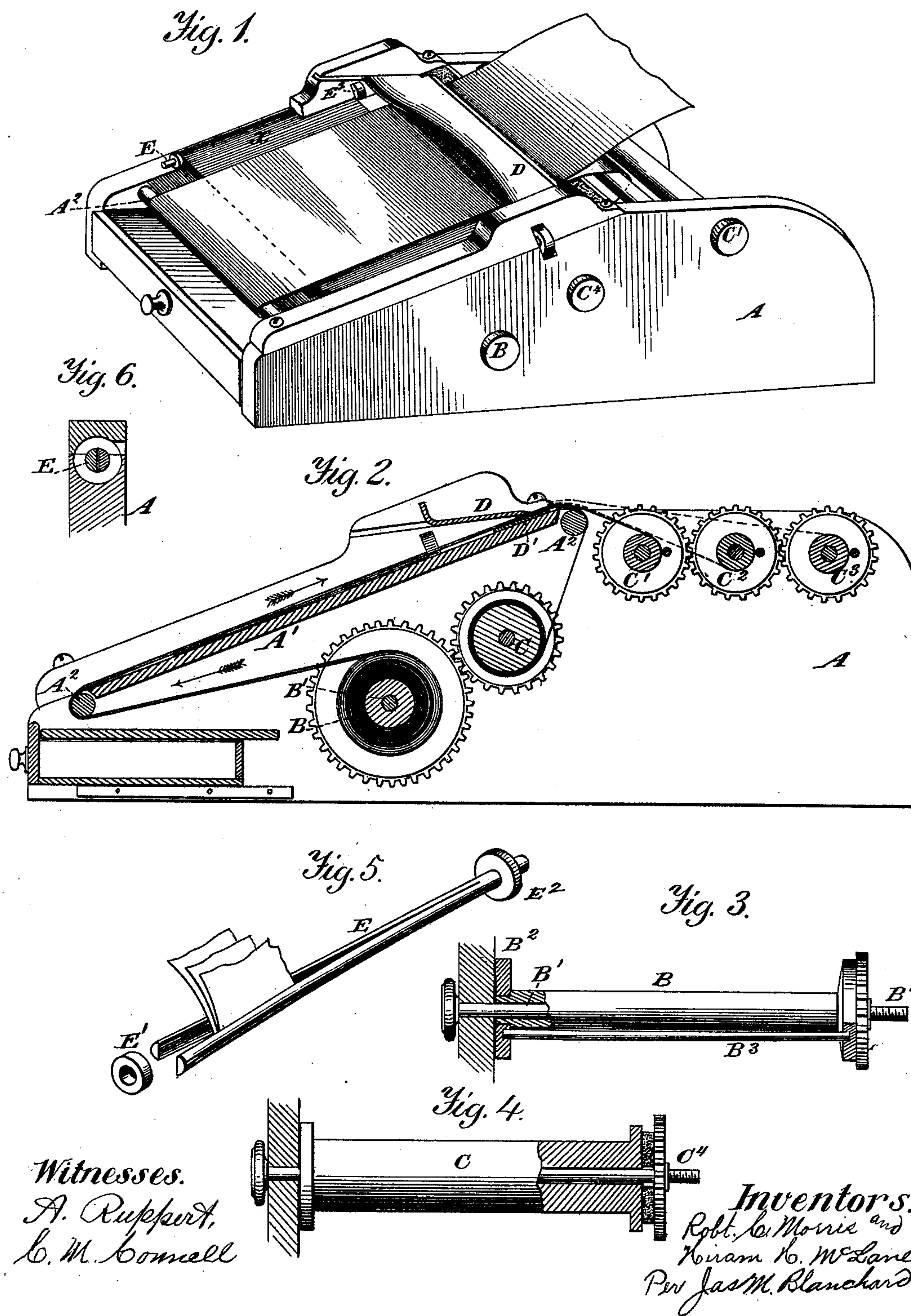


R. C. MORRIS & H. H. McLANE.
Manifold-Writing Tablet.

No. 213,771.

Patented April 1, 1879.



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IMPROVEMENT IN MANIFOLD-WRITING TABLETS.

Specification forming part of Letters Patent No. **213,771**, dated April 1, 1879; application filed August 7, 1878.

To all whom it may concern:

Be it known that we, ROBERT C. MORRIS, of Olney, in the county of Richland and State of Illinois, and HIRAM H. McLANE, of San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Writing-Tablets; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification—

Figure 1 being a perspective view of our improved tablet, showing the carbon-paper and the paper upon which the writing is done, the frame of the device, the slide for holding the paper in position, a portion of one of the rollers upon which the carbon-paper is rolled, and a drawer for holding the writing-instrument and other articles. Fig. 2 is a sectional elevation, showing the frame, the roller upon which the paper to be written on is to be placed, gear-wheels for connecting said roller to another upon which a sheet having upon it a copy of the writing may be rolled for preservation, the direction in which the paper is moved in practice, rollers for the reception of additional copies of the writing, small rollers for guiding the paper to be written upon to and from the tablet, and the slide for holding the paper in position. Fig. 3 is an elevation, partly in section, showing one of the rollers upon which one of the copies is rolled and the rod which secures the paper thereto. Fig. 4 is an elevation of the roller upon which a copy of the writing to be preserved is wound, the wheel by which the same is moved, and an elastic friction-disk for holding the roller in position; and Fig. 5 is a perspective view of one of the rollers upon which the carbon-paper is placed, showing its construction and sheets of paper in position. Fig. 6 is a sectional elevation, showing the roller into which the ends of the sheets of carbon-paper are inserted and a portion of the frame in which it is placed.

Corresponding letters denote like parts in all of the figures.

This invention relates to a tablet upon which manifold copies of letters, bills, receipts, contracts, and various other documents may be made by once writing them; and it consists in providing an implement for such purpose having a roller upon which a roll of paper consisting of any number of sheets to be written upon may be placed, together with rollers to receive the different copies after they have been made, an elastic friction-disk for holding the rollers in position, a sliding holder for the paper to be written upon, which may also be used as a cutter, and rollers for holding a series of sheets of carbon-paper in position.

The importance of being able to make a plurality of copies of any document at one writing is acknowledged, and its desirability as a means of enabling reporters for different papers, lawyers, merchants, and other business men to make and preserve copies of their papers is felt by all such men; and the object of our invention is to provide a convenient, cheap, and effective implement for such purposes.

In constructing implements for the purpose to which this is to be applied, we use two side pieces, A A, of wood, metal, or other suitable material, which are to be of the form shown, or of any other that will enable them to receive and hold the other parts in position. Extending from one to the other of the side pieces there is a board or platform, A¹, which is to be of such a length as to cause it to present a convenient surface upon which to write, and at each end of said platform there is placed a roller, A², by which the paper to be written upon is guided to and from the same, and is made to pass the ends thereof without friction or the liability of being torn. For holding said paper there is provided a roller, B, which is supported upon a shaft, B¹, which passes through one of the sides A, as shown in Fig. 3, and has upon its opposite end a screw-thread, which screws into the opposite side piece, or into a nut secured therein. Upon this roller one or more sheets of paper, according to the number of copies which it is desirable to make at one writing, are rolled. These sheets of paper pass from the roller B to and around roller A², at the lower end of

the platform A^1 , and then over the upper surface thereof, and between sheets of carbon-paper placed thereon, in a manner soon to be described, to roller A^2 , at the upper end of platform A^1 , from which they are conducted to some one of a series of receiving-rollers, C , C^1 , C^2 , or C^3 .

It will be seen that the roller B is geared to the one lettered C , and that the one lettered B is the one which contains the paper to be written upon, the object of thus gearing the two together being to cause C , when rotated, to move B for the purpose of unwinding the paper therefrom.

It will also be seen that the rollers C^1 , C^2 , and C^3 are geared to each other, the purpose of which is to cause them all to move at the same time and with the same velocity, in order that an equal amount of strain may be put upon the paper leading to each, they being designed to receive extra copies of any writing which may be made, motion being imparted to them by the operator placing his thumb or finger upon the upper portion of the wheel upon one of the rollers C^1 , C^2 , or C^3 , the upper surfaces of which are made to project above the side piece A for that purpose.

For facilitating the attachment of the paper to these rollers there is placed upon one end thereof a loose collar, B^2 , which passes upon a reduced portion of said rollers, and holds in position a rod, B^3 , one end of which passes into a fixed collar upon the roller, its opposite end resting in a recess formed in the loose collar. These rollers turn upon shafts passing through them which are supported in the side pieces $A A$, and hence, as will be seen, they are easily removed when it becomes desirable to remove the copies therefrom or to attach the sheets of paper thereto.

Owing to the fact that as the paper is unwound from the roller B the diameter of the coil is reduced, and owing to the further fact that this roller is geared to the roller C , which is designed to receive the copy to be retained by the writer, the diameter of which changes as more or less paper is wound upon it, it becomes necessary that provision should be made for allowing said roller to turn slower than it would if it were secured rigidly to its shaft; and for the accomplishment of this purpose the roller is allowed to rotate on its shaft, and has placed between one of its ends and the wheel which moves it a disk of rubber or some other elastic substance, so that by turning the shaft C^4 , which passes through it, more or less friction is caused between the roller and the wheel which drives it, and thus the difference in momentum between the two is provided for, said shaft being provided with a screw-thread for drawing the sides $A A$ toward each other for that purpose.

The rollers B and C^1 are readily taken out of their positions by removing their shafts in the same manner as are the rollers C^1 , C^2 , and C^3 .

The method of moving the paper to be written upon over the face of the platform has already been described. For holding it in its adjusted position thereon there is placed in grooves formed in the sides $A A$ a slide, D , which is set at such an angle to the platform that by withdrawing it a short distance the paper is released from its control and may be readily moved in the manner previously described, and again held in position and be prevented from moving by returning the slide to its former position. The retention of the paper may be further insured by placing under the slide, at its forward edge, and upon the platform, a strip, D' , of rubber or some other elastic material.

It will be understood that the writing is to be done upon that portion of the paper which rests upon the inclined platform A^1 with some pointed instrument, and that in order that several copies may be made at the same time it is necessary that provision should be made for holding sheets of carbon or other paper or material which will cause the words written to be impressed or shown upon the sheets of writing-paper. To accomplish this, there is placed in recesses formed in the upper edges of the sides $A A$, or in some other convenient locality, rollers $E E$, which, by preference, are constructed as shown in Fig. 5, in order that the sheets of carbon-paper may be inserted therein and held in place by slipping the collar E^1 upon the slitted shaft. One of these shafts is placed upon each side of the device, and each is provided with a disk or other means for rotating it, as shown at E^2 .

In arranging the paper upon this instrument for use, two or more sheets, as above stated, are placed upon the roller B , the outer ends of which are carried over roller A^2 at the lower end of the platform and between sheets of carbon-paper or other similar material, and thence to the various rollers when many sheets of writing-paper are used, or to one of the rollers C^1 , C^2 , or C^3 , and to the roller C when only one copy for preservation and one for distribution are made.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In combination with the frame of a writing-tablet, the paper-roller C , consisting of a revolving spool for receiving paper after it has been written upon, a gear-wheel for turning said spool, and an elastic disk placed between said gear-wheel and one end of the spool, and a fixed shaft passing through the roller and the sides of the frame, one end of which is provided with a screw-thread, whereby it is made to press said frame against the gear-wheel, and thus regulate the friction between the end of the spool of the roller and the rubber disk, as and for the purpose set forth.

2. The combination of the rollers B and C with the gear-wheels which drive them, and the rollers C^1 , C^2 , and C^3 with their gear-wheels,

arranged substantially as shown, whereby the movement given to either of them in adjusting the paper to be written upon is imparted to the others, as and for the purpose set forth.

3. The combination of the rollers B and C with their driving-wheels, the platform A¹, and the rollers C¹, C², and C³ with their driving-wheels, all substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

ROBERT C. MORRIS.
HIRAM H. McLANE.

Witnesses:

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J. M. BLANCHARD.