W. E. SAWYER.

COPYING TELEGRAPH MESSAGE PROCESS.

No. 195,238. Patented Sept. 18, 1877.

Fig 1.

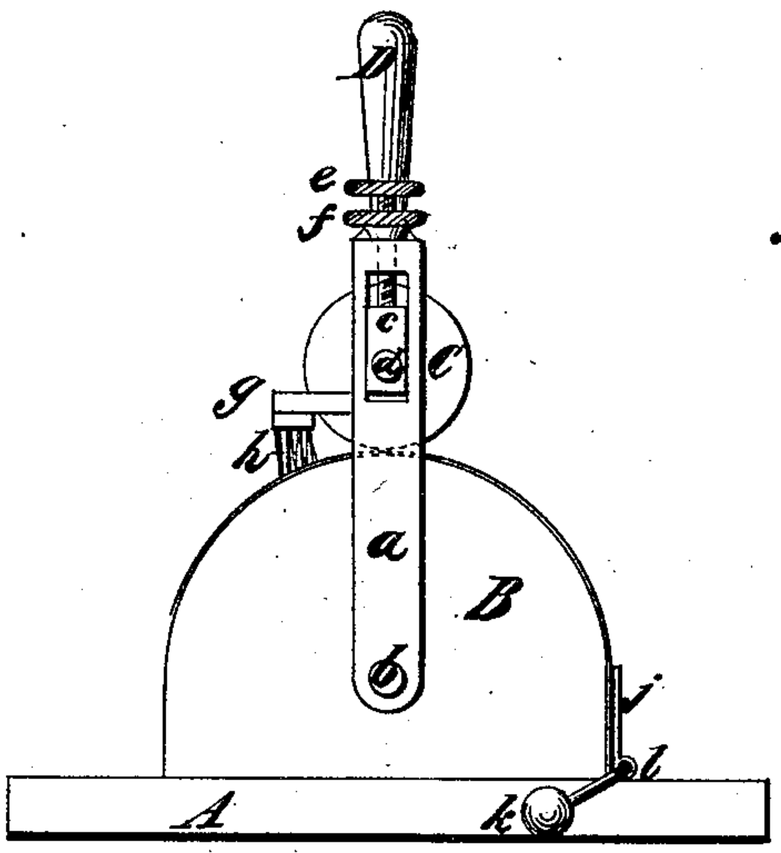


Fig 2

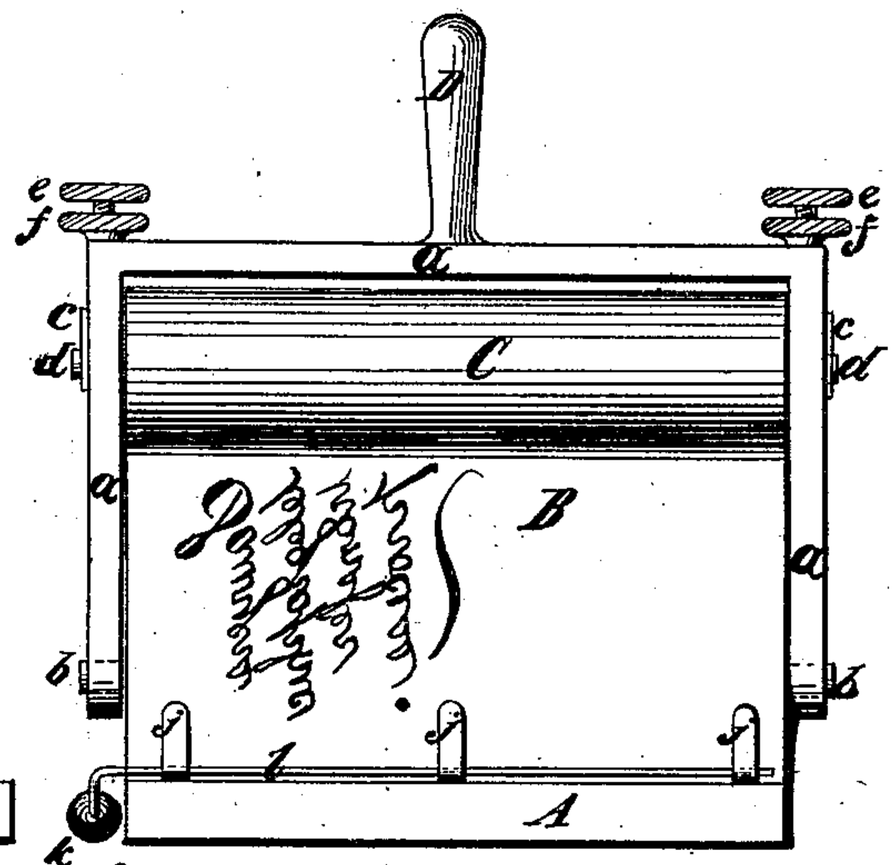


Fig 3

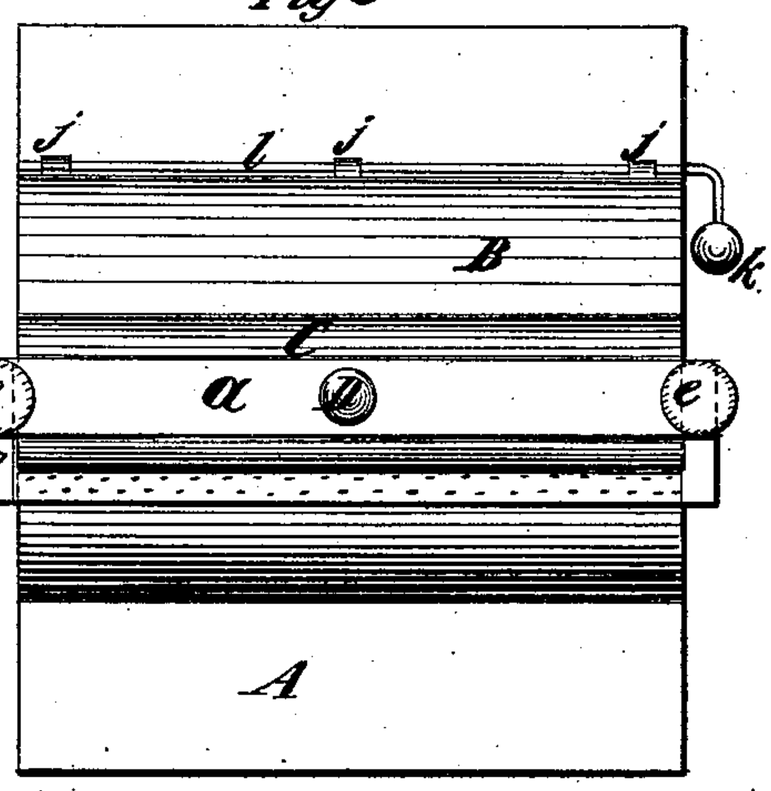
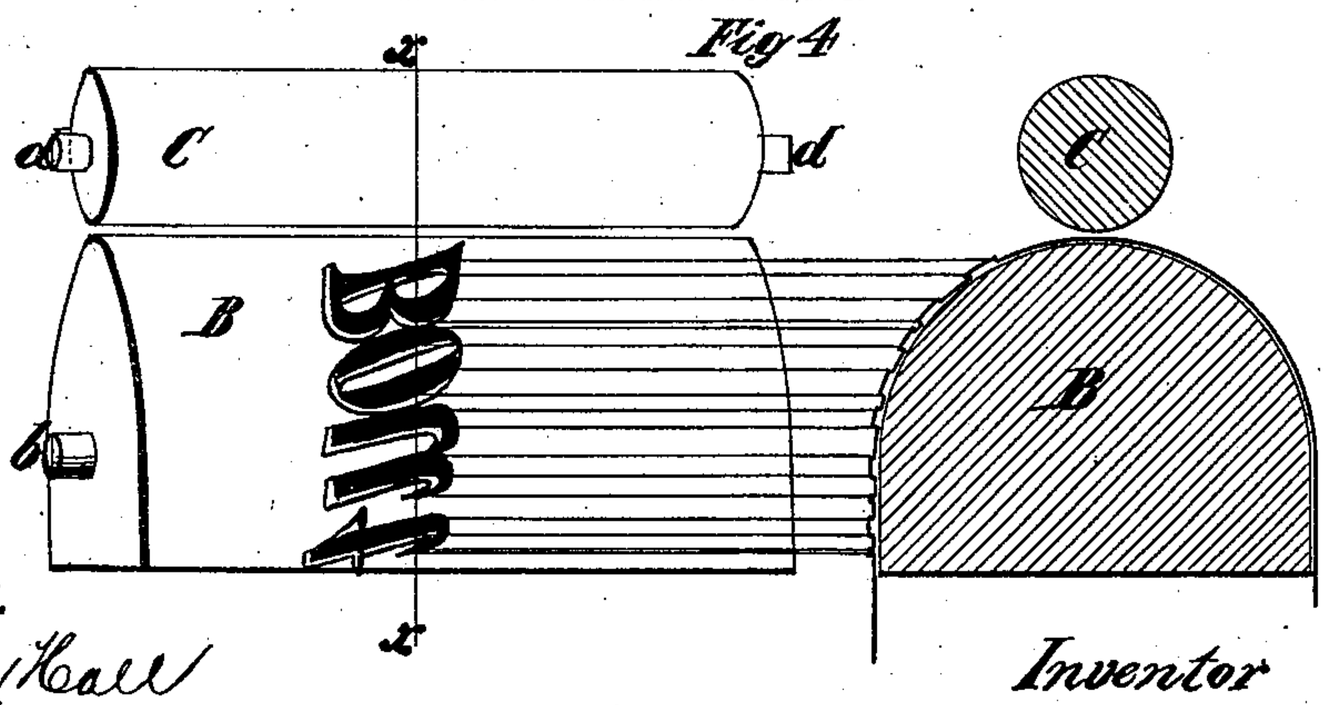


Fig 4



Witnesses.
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IMPROVEMENT IN COPYING-TELEGRAPH-MESSAGE PROCESSES.

Specification forming part of Letters Patent No. **195,238**, dated September 18, 1877; application filed July 9, 1877.

To all whom it may concern:

Be it known that I, WILLIAM EDWARD SAWYER, of the city, county, and State of New York, have invented certain new and useful Improvements in Copying-Telegraph-Message Processes, of which the following is a full, clear, and exact description.

The ordinary requirement of copying or autographic telegraphs is, that the message offered for transmission shall be written in an insulating-ink upon a metallic conducting surface.

By means of improvements fully set forth in Letters Patent of the United States heretofore granted to me, the message is written upon ordinary paper, and thence transferred to the metallic surface, a special writing-ink being required.

The object of my present invention is to dispense with the use of a special ink, and to allow of the message being written with an ordinary pencil.

To accomplish this object, a sheet of blotting-paper is placed under the blank to be used, which blank may be of any ordinary paper. The writer of the message, writing with ordinary firmness, will thus indent the blank so as to leave the lines of writing in relief upon its back or reverse side. In this shape the message reaches the telegraph-office.

To put it into shape for transferring to a metallic sheet, I pass the message between a roller and a rounding surface accurately constructed, set in very close proximity to each other, and so adjusted that the roller will not touch the surface of the blank, but will touch the raised points of the writing as it passes over them. The roller is kept coated with any greasy ink or compound, so that as it passes over the message all the raised edges are coated with this ink or compound, when the message is sprinkled with finely-powdered gum-shellac, which adheres to the parts that are inked, and thereupon transferred to the transmitting metallic sheet by pressing the inked side of the message against such sheet while the latter is in a heated state.

In this manner the message, written with an ordinary pencil in lines that are practically non-conductors of electricity upon a paper that is also a non-conductor, is, in an insignificant space of time, made to assume the form of so perfectly non-conducting lines as gum-shellac upon so perfect a conductor as a sheet of metal.

In the drawings accompanying and forming a part of this specification, I have shown the apparatus for carrying out my process, Figures 1, 2, and 3 being, respectively, end, side, and top views, and Fig. 4 an illustration of the function of the raised edges of the message-blank.

A is any suitable base. B is a metallic semicircular piece, having plane extensions for a short distance below the terminal points of the half-circle. Upon one of these plane extensions is a clip, *j j j*, on rod *l*, which is held to a bearing against the piece B by weighted lever *k*. Under this clip is placed the edge of the message, with the reverse side uppermost.

C is the inking-roller, (which may be supplied with the fluid used by any of the well-known devices for such purpose,) revolving in frame *a a a*, which is pivoted at *b b*, and has a handle, D, to swing it over the piece B.

The bearings *d d* of roller C are in sliding pieces *c*, which are adjusted up or down by screws *e e*, provided with check-nuts *f f*. By means of these screws the requisite separation is maintained between B and C.

Fixed to frame *a* is a piece, *g*, provided with bristles *h*, which, as the frame *a* is swung from right to left, Fig. 1, press the message-blank to an even bearing upon the rounding surface of B without flattening the raised lines of writing.

In Fig. 4, the lines drawn from the point *x x* of the letters "B o u t" of the message-blank at the left, to the surface of B at the right, indicate the manner in which the inking is effected.

The spaces of blank between the lines of writing will not touch roller C, while the lines themselves will come in contact with it, and thereby receive the charge.

Having thus described my invention, what

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

In autographic telegraphy, the method of treating a message or messages written so as to indent the paper upon which it or they are written, consisting in coating the lines of writing left in relief upon the reverse side or sides with an ink or other liquid or compound, as set forth.

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Witnesses:
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