

(No Model.)

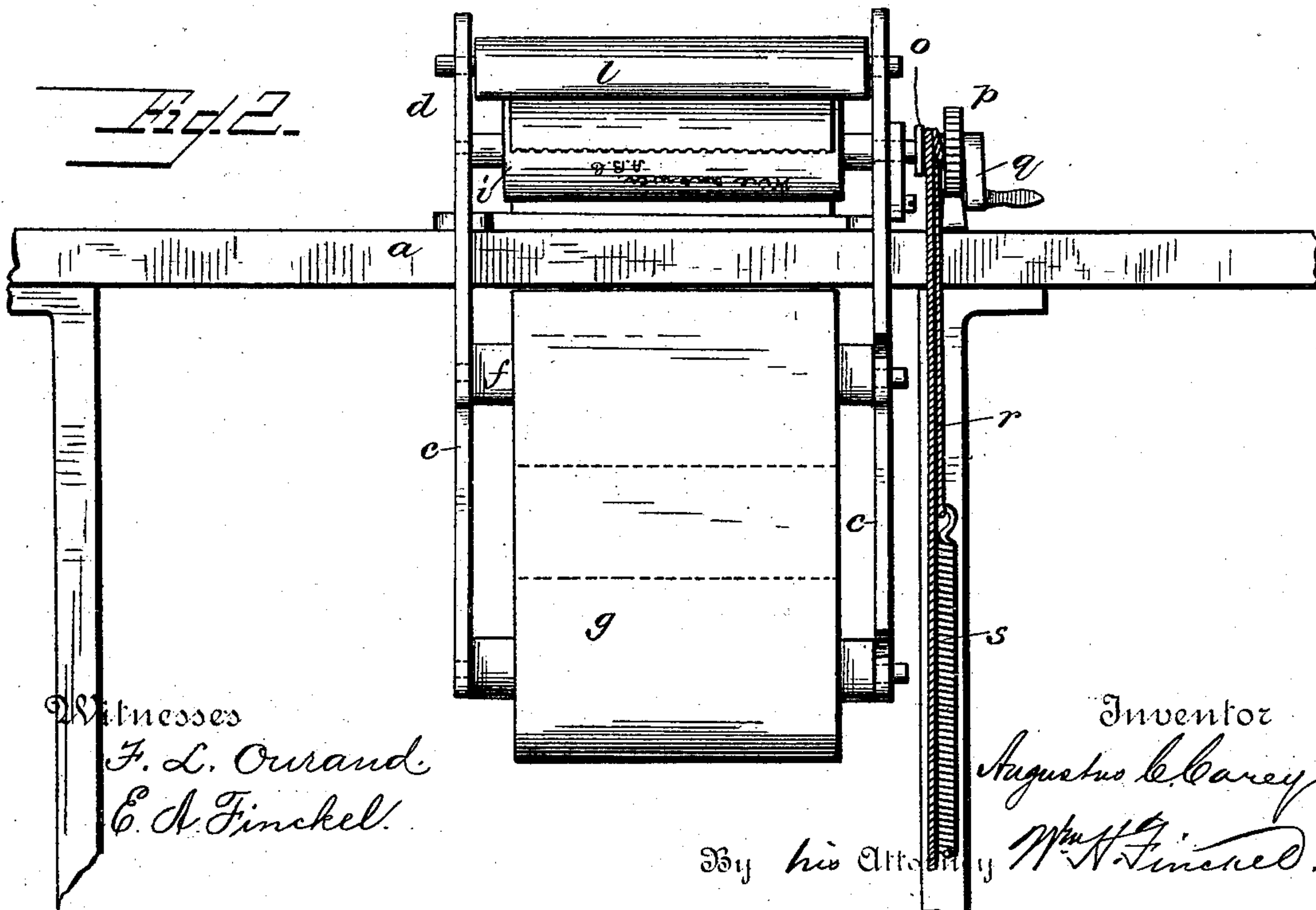
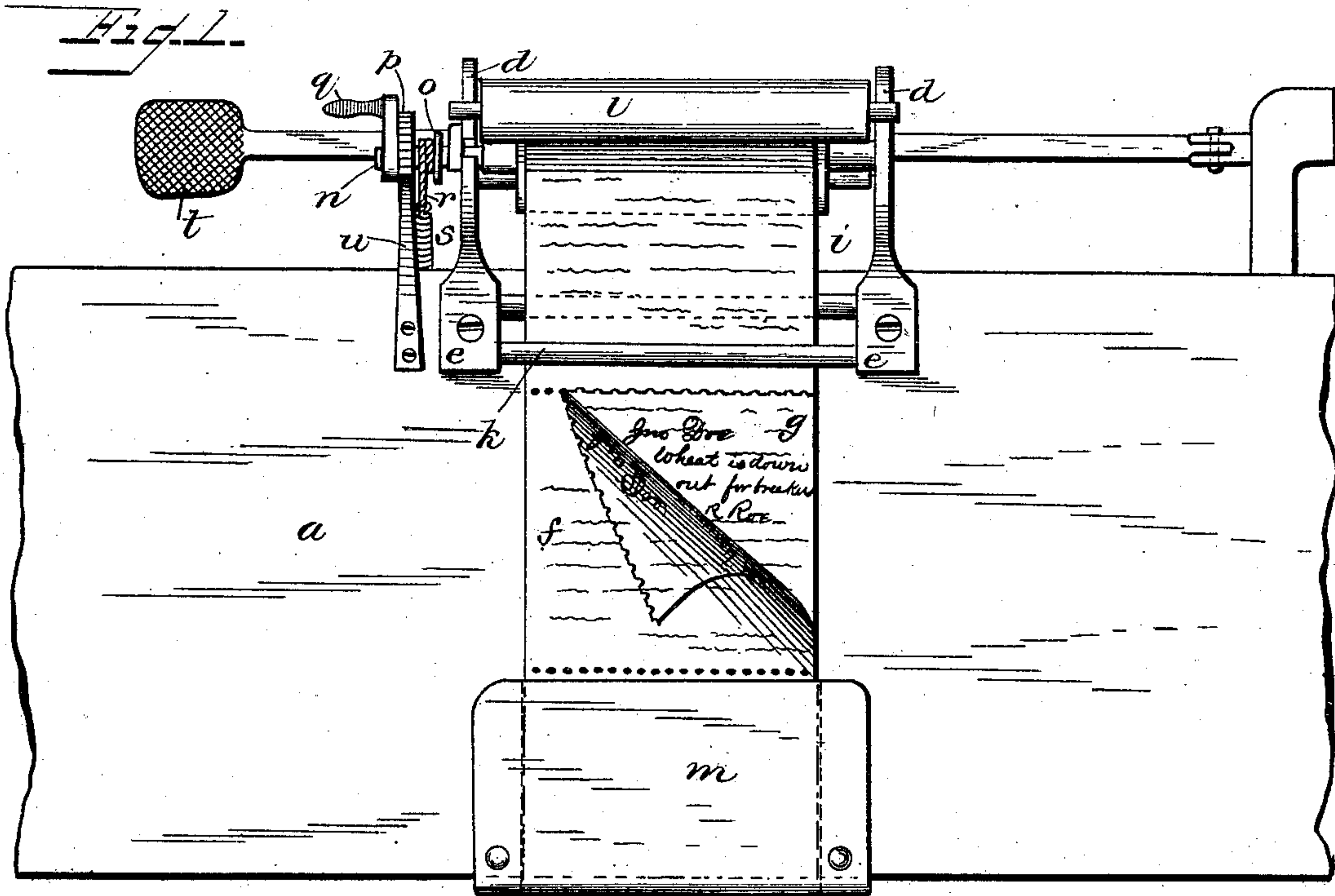
2 Sheets—Sheet 1.

A. C. CAREY.

APPARATUS FOR USE IN COPYING TELEGRAPH MESSAGES AND THE LIKE.

No. 370,683.

Patented Sept. 27, 1887.



Witnesses

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By his Attorney

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(No Model.)

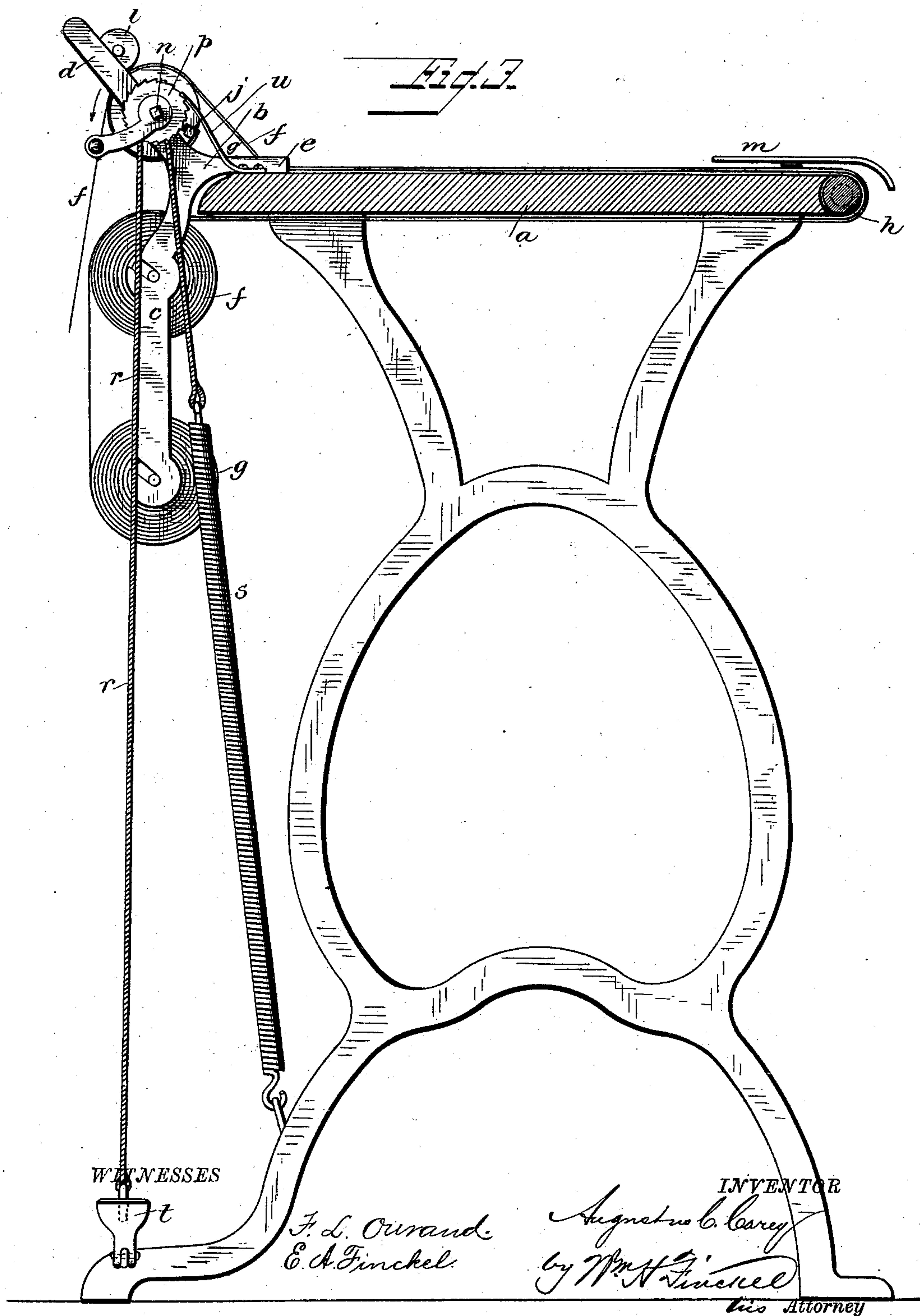
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UNITED STATES PATENT OFFICE.

AUGUSTUS C. CAREY, OF BOSTON, MASSACHUSETTS.

APPARATUS FOR USE IN COPYING TELEGRAPH-MESSAGES AND THE LIKE.

SPECIFICATION forming part of Letters Patent No. 370,683, dated September 27, 1887.

Application filed March 3, 1887. Serial No. 229,661. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS C. CAREY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Apparatus for Use in Copying Telegraph-Messages and the Like, of which the following is a full, clear, and exact description.

10 The object of this invention is to facilitate the copying or duplicating or manifolding of written instruments or documents simultaneously with the production of the original.

For the sake of simplifying this description, I will proceed to set forth my invention as applied to writing the original and copy or copies of telegraphic messages at the receiving-station; but in doing so I wish it distinctly understood that I do not thereby limit my invention to this single application thereof, and here expressly state that the invention is useful in general business for obtaining original and fac-simile copies simultaneously, or obtaining any number of copies along with the original. The practical utility of the invention in this particular is obviously very great in manifolding way-bills or manifests and documents of like character used by express companies, or freight-forwarders, and others.

30 For the sake of clearness I will hereinafter designate that one of the written instruments as the "original," which first receives the writing implement, and all others as "copies."

The invention consists in an apparatus for simultaneously producing an original and any desired number of copies of instruments in writing, composed of a frame and a suitable support therefor, the frame having side pieces, which receive a roll of paper or other writing material upon which the original is to be inscribed, and which is arranged next to the frame-support, additional rolls of copying paper or material equal in number to the number of copies desired to be obtained also arranged in said side pieces beyond the first-named roll of writing material and unrolled over the said first-named roll, thence under the frame-support and over the opposite edge of said support, and thence back again over the top of the said support to the frame, a winding-drum

also arranged in said side pieces to receive the copying material, and a friction-roll arranged above the drum and gravitating thereupon to engage the material from the first-named roll and feed it, and a motor to impart a positive intermittent rotary motion to the winding-drum, which, as will be observed, is transmitted to the feed-roll, all combined and arranged to operate as hereinafter more particularly set forth and claimed.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a plan view with the original partly separated and turned up to expose the copy. Fig. 2 is a rear elevation, and Fig. 3 is a side elevation with the table in cross-section.

The drawings illustrate the invention for telegraphers' use.

a is an ordinary table, which may be occupied with the telegrapher's instruments. Secured to this table is a frame, *b*, composed of connected side pieces, *c d*, and brackets *e*, by means of which last the frame may be attached to the table. The side pieces, *c d*, and brackets *e* may be cast together or otherwise rigidly connected. The side pieces, *c d*, are adapted to receive rolls *f g* of paper. The upper roll, *f*, will contain the paper for the original, and the lower roll, *g*, will contain the paper for the copy.

The side pieces *c* may be elongated or otherwise adapted to receive any number of rolls, *g*, of copying-paper.

The web of paper is led from the copy-roll up over the original roll *f*, thence underneath the table and over its front edge up across the top of the table. In order to lessen the friction of the paper on the table, the front edge of the table may be provided with a roller, *h*. After the requisite number of copying-webs have been thus arranged upon the table, their ends are secured in any suitable manner to a winding roll or drum, *i*, which has bearings in the side pieces *d*. As one mode of so securing these webs to the said drum *i*, I have shown the said drum provided with a recess and a spline, *j*, about which the webs are passed and then forced into the recess in the drum, substantially as is sometimes done in se-

curing, for example, a curtain to its roller; but I do not restrict my invention to any mode of attaching the copying-webs to this winding-drum. After the copying-webs are thus secured to the winding-drum the original is passed from its roll beneath the copying-webs on the under side of the table, and then above said copying-webs on the top of the table, and thence extended up over the winding-drum, but unconnected therewith, so that the said original runs out at the rear of the machine free and hangs down from and above the winding-roll.

In order to keep the several webs down flat upon the table in position for being written upon, all of the said several webs are passed beneath a hold-down bar, *k*, extending from one to the other of the brackets *e*. In order to enable the winding-drum to feed the original, I provide a loose gravitating roller, *l*, above the said winding-drum and having its bearings against the front edges of the side pieces *d*.

If desired, a shield, *m*, may be provided at the front edge of the table in order to protect the paper from contact with the writer's person.

The shaft *n* of the winding-roll is extended beyond the side pieces *d*, and provided with a drum, *o*, and ratchet *p*, and a crank, *q*. This drum receives a winding-cord, *r*, one end of which is made fast to a spring, *s*, and the other end secured to a treadle, *t*. This spring *s* may be secured to the lower part of the table-frame, as indicated in Fig. 3. When the treadle *t* is depressed, the pressure thereupon acting against the tension of the spring *s* will cause the cord *r* to bind frictionally upon the drum and rotate said drum in the direction of the arrow, Fig. 3, to thus wind the copying-paper upon the winding-drum. A dog, *u*, engages the ratchet *p*, and hence when the pressure upon the treadle is released the spring resumes its normal position without reversing the winding-drum.

The throw of the treadle will be so adjusted as that one depression thereof will serve to feed the paper forward a message-blank length—that is to say, one motion of the treadle will be sufficient to remove the original written document, and at the same time wind up the copies thereof on the winding-roller and put in position for another document both the original web and corresponding copy-webs.

As a matter of convenience the original web of telegraph-message blanks may have its blanks separated by lines of perforations, as indicated in Figs. 1 and 2, so that after the message is written the messenger may conveniently tear off the message for delivery, the copy being wound up and preserved on the winding-roller.

Should it be desired to preserve the copy as it is wound upon the winding-roller when made the said winding-roller may be made

detachable from its shaft and replaceable by an empty winding-roller; but, of course, the copy may be preserved in any other desired or convenient manner.

By this method it will be seen that all necessity for press-copy books and copying-presses, with their attendant inconveniences and uncertainties, is obviated, and not only so, but the user has a fac-simile copy of the telegraph-message made simultaneously with the making of the said message.

The copy may be made from the original by interposing carbon sheets between the original web and copying web or webs, and the message written with a stylus, pen, pencil, or other suitable or usual writing implement; but where a large number of copies is to be made I prefer to use the mechanical pen for which Letters Patent No. 304,613 were granted to me September 2, 1884, and to arrange such pen for operation in connection with the apparatus for which Letters Patent No. 304,614 were granted to me on the same date; and the frame and other appliances herein set forth may be applied to the table shown in said Patent No. 304,614.

I have already said that any number of copy-webs may be employed in accordance with the desired number of copies; but where various and different documents are to be written and a number of copies is desired over and above the number of copy-webs already in position the additional copies may be obtained by inserting beneath the original loose copy-sheets, and when the document is written these additional copy-sheets may be removed by hand.

For some work it will not be desired to roll up the copies on the winding-drum, and in that event only one of the copy-webs may be rolled up on the winding-drum, and the others may be passed freely over it with the original; or all of the copies may pass over the winding-drum with the original web. In this last case the feeding forward of the webs will be effected by friction only.

It will be understood from an inspection of my mechanical pen patent referred to that the original and all the copies are made by driving the ink or writing-fluid through all of the several sheets of paper, and that therefore all the copies are imperishable and incapable of obliteration or alteration without instant detection.

Without specifying the various purposes to which my invention may be applied in the way of obtaining written instruments in duplicate or multiple, I may say that the invention in this particular is of general application where this object is desirable.

The crank *q* may be used for operating the winding-drum by hand.

What I claim is—

1. A frame and support therefor, holding a series of rolls of paper, the webs from which are passed under and then over the frame-support, combined with an intermittently-rotated wind-

ing-drum on said support, and a frictional feed-roll superposed upon such winding-drum, substantially as described.

2. A frame and a support therefor, said frame having side pieces supporting a roll of writing material next to the frame-support, with additional rolls of copy paper or material equal in number to the number of copies desired arranged in said side pieces beyond the first-named roll of writing material and unrolled over the said first-named roll, thence under the frame-support, over the edge of said support opposite the frame, and thence back again over the top of the said support to the frame, a winding-drum arranged in said side pieces to receive the copying material, and a friction-roll to engage the material from the first-named roll and feed it, and mechanism, substantially as described, to impart a positive intermittent rotary motion to the winding-drum, which is transmitted to the feed-roll, combined substantially as set forth.

3. An apparatus for use in copying written instruments simultaneously with the production of the original, consisting of a table, a frame attached thereto and containing a number of rolls of paper equal in number to the original and desired number of copies, a winding-drum, and a feed-gravitating roll arranged upon said drum, and means, substantially as described, to intermittently rotate said winding-drum and thereby the feed-roll, the copying material being connected to the winding-drum and the material for the original being passed between said winding-drum and the feed-roll, combined and arranged substantially

as set forth, whereby the materials for the original and copies are drawn over the table in position to be written upon, and when so written upon may be removed, the copy or copies being arranged automatically for preservation, and the original put in position for delivery and new or fresh writing and copying surfaces presented for use, substantially as set forth.

4. The table provided with an anti-friction device—such as a roller—on its front edge, combined with the frame having rolls of paper supported in such frame with the paper passed underneath said table and around and over the anti-friction device, thence over and upon the top of the table, and a winding-drum and a gravitating feed-roller for such paper superposed upon said drum, substantially as described.

5. The table provided with an anti-friction device—such as a roller—on its front edge, combined with the frame having rolls of paper supported in such frame with the paper passed underneath said table and around and over the anti-friction device, thence over and upon the top of the table, a winding-drum and a gravitating feed-roller for such paper superposed upon said drum, and a shield arranged over the paper at the front edge of the table, substantially as described.

In testimony whereof I have hereunto set my hand this 2d day of March, A. D. 1887.

AUGUSTUS C. CAREY.

Witnesses:

J. S. TOMLINSON,
S. E. TOMLINSON.