(No Model.)

M. A. HAWLEY.

COPY HOLDER.

No. 418,022. Patented Dec. 24, 1889.

Fig. 1.

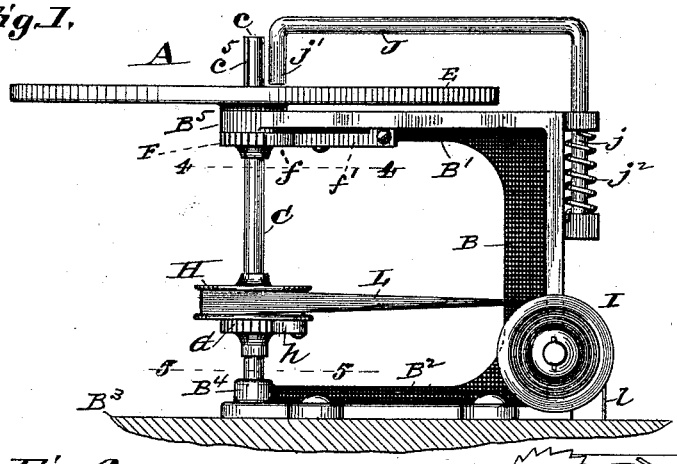


Fig. 4.

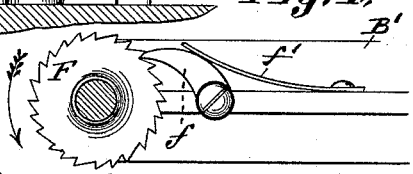


Fig. 2.

Fig. 3.

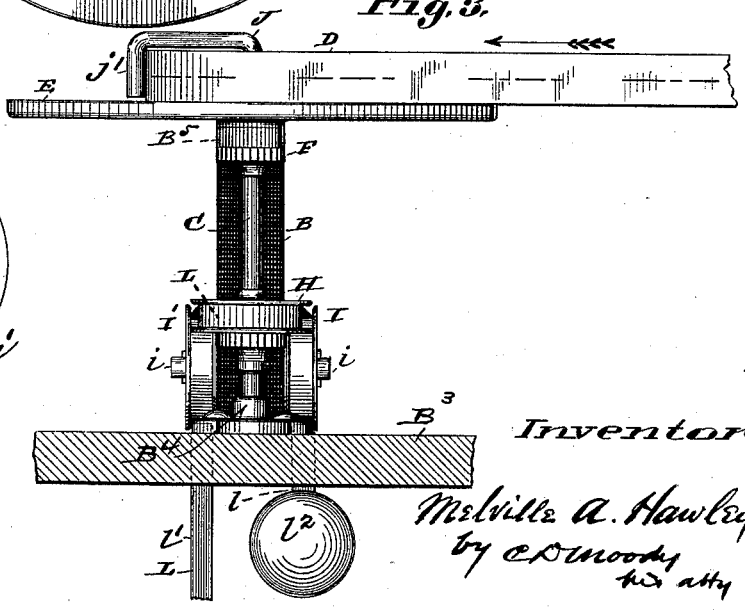
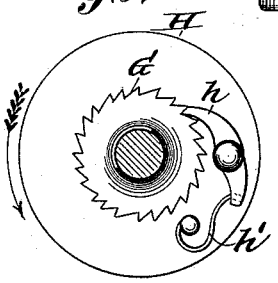


Fig. 5.



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UNITED STATES PATENT OFFICE.

MELVILLE A. HAWLEY, OF ST. LOUIS, MISSOURI.

COPY-HOLDER.

SPECIFICATION forming part of Letters Patent No. 418,022, dated December 24, 1889.

Application filed May 20, 1889. Serial No. 311,454. (No model.)

To all whom it may concern:

Be it known that I, MELVILLE A. HAWLEY, of St. Louis, Missouri, have made a new and useful Improvement in Copy-Holders for Wheatstone-Morse Telegraphic Tape and other Copy, of which the following is a full, clear, and exact description.

By means of the present device copy of the kind under consideration can be conveniently and advantageously held and managed while being transcribed from, and also be wound into compact rolls suitable for storage or other disposal, and at the same time the hands of the copyist are free to operate a type-writing machine or other means of copying or transcribing.

The improvement consists substantially as is hereinafter described and claimed, aided by the annexed drawings, forming part of this specification and exhibiting the most desirable mode of carrying out the improvement, and of which—

Figure 1 is a side elevation of the machine under consideration. Fig. 2 is a top view of the machine. The view includes a lot of the tape as in use. Fig. 3, an end elevation of the machine as it appears when viewed from the left hand of Figs. 1 and 2; Fig. 4, a horizontal section on the line 4 4, Fig. 1, looking upward, of a portion of the machine; and Fig. 5, a horizontal section on the line 5 5, Fig. 1, looking upward, of a portion of the machine.

The same reference-letters denote the same parts.

A represents the improved machine. Its frame is conveniently made to consist in the upright part B, the arm B′, and the foot B^2, by which the machine is fastened to a table or other support B^3.

C is an upright revolving shaft stepped in a bearing B^4 in the foot B^2, and extending thence upward through a bearing B^5 in the arm B′. The upper end *c*, Figs. 1 and 2, of the shaft C serves as a spindle upon which to wind the tape D, Figs. 2 and 3, on which is inscribed the inscription to be read or transcribed.

Attached to the shaft C are the table E, for supporting the tape as it is wound, and the ratchet-wheels F and G.

H represents a horizontal pulley loose on the shaft C and adapted to be rotated thereon. A pawl *f*, Figs. 1 and 4, is pivoted to the arm B′, and its point, by means of the spring *f*′, is held in position to engage with the ratchet-wheel F, substantially as shown. To the loose pulley H is pivoted the pawl *h*, whose point, by means of the spring *h*′, is held in position to engage with the ratchet-wheel G.

I and I′ are upright pulleys loose on bearings *i i*′ upon the upright B.

J represents a tension-bar, whose end *j* is journaled in the upright B, and whose end *j*′, by the action of the spring j^2, presses against the coil of wound tape and prevents it from unwinding.

L is a reciprocating belt doubled around the reciprocating loose pulley H, and whose ends *l* and *l*′ are thence led, respectively, over the loose pulleys I and I′, and attached, respectively, one to the weight l^2 and the other to a treadle or stirrup, (not shown,) and which is operated preferably by the foot of the copyist.

The machine is operated as follows: The end of the tape on which the characters to be read are inscribed is led in front of the copyist, and by inserting the end of the tape in the slit c^5 in the shaft end the tape is attached to the shaft end above the table. By depressing the treadle referred to the end *l*′ of the belt L is drawn downward. The loose pulley H is thereby caused to revolve and the weighted end *l* of the belt to be drawn upward. When the pulley H is revolved as described, the pawl attached thereto engages with the ratchet which is fastened to the shaft, and thereby causes the shaft and the parts connected therewith to revolve with said pulley. This rotation of the shaft effects the winding upon the end thereof of the tape, which, as it is wound, moves in the direction indicated by the arrows in Fig. 2. The reading of the inscription thereon is performed as the tape is being wound, or at intervals of cessation of the winding, the operator regulating the speed of the winding to suit him. While the treadle is being depressed the weight l^2 is consequently raised correspondingly, and as soon as the treadle is released the weight, by force of gravity, descends and draws the belt with it, whereby the treadle is raised again. This last-described movement of the belt pro-

duces a corresponding revolution of the pulley H in a reverse direction from that produced by the depression of the treadle; but the shaft does not partake of this revolution of the pulley in the said reverse direction, because by said motion the pawl attached to said pulley is disengaged from the ratchet-wheel, and at the same time the pawl *f* engages with the ratchet-wheel F, which prevents any revolution of the shaft in said reverse direction. In this manner at every depression of the treadle the shaft revolves and winds thereon a portion of the tape, and at every release of the treadle the weight descends and replaces the treadle and belt in position to take hold anew and repeat the tape-winding movement whenever the treadle is again depressed. This reciprocating movement of the treadle and connected parts may be repeated indefinitely and more or less of the tape be drawn past the copyist and ultimately be wound into a roll. The table E need not necessarily be attached to the shaft C and revolve therewith. It may be attached to the arm B′ of the frame and remain stationary.

I claim—

1. The herein-described copy-holder, combining in its construction the frame, the table, the shaft C, having the end *c* and the fixed ratchet-wheels, the pulley H, carrying the pawl *h*, the pawl *f*, the loose pulleys I I′, and the weighted belt L, substantially as described.

2. The herein-described copy-holder, combining in its construction the frame, the shaft C, having the end *c* and the fixed ratchet-wheels, the pulley H, carrying the pawl *h*, the pawl *f*, the loose pulleys I I′, and the weighted belt L, substantially as described.

3. The combination of the supporting-frame, the revolving shaft C, having attached thereto the ratchet-wheels F and G, the reciprocating loose pulley H, having the pawl *h*, the pawl *f*, and the reciprocating belt, substantially as described.

4. The combination of the supporting-frame, the shaft C, having the end *c* and the fixed ratchet-wheels F and G, the pulley H, carrying the pawl *h*, and the pawl *f*, substantially as described.

5. The combination of the supporting-frame, the shaft C, the fixed ratchet-wheels F and G, the pulley H, the pawls *h* and *f*, and the tension-bar J, substantially as described.

Witness my hand this 15th May, 1889.

MELVILLE A. HAWLEY.

Witnesses:

C. D. MOODY,

M. C. HAWLEY.