

(No Model.)

A. HEIL.
WRITING RECEIVER.

No. 503,371.

Patented Aug. 15, 1893.

Fig.1.

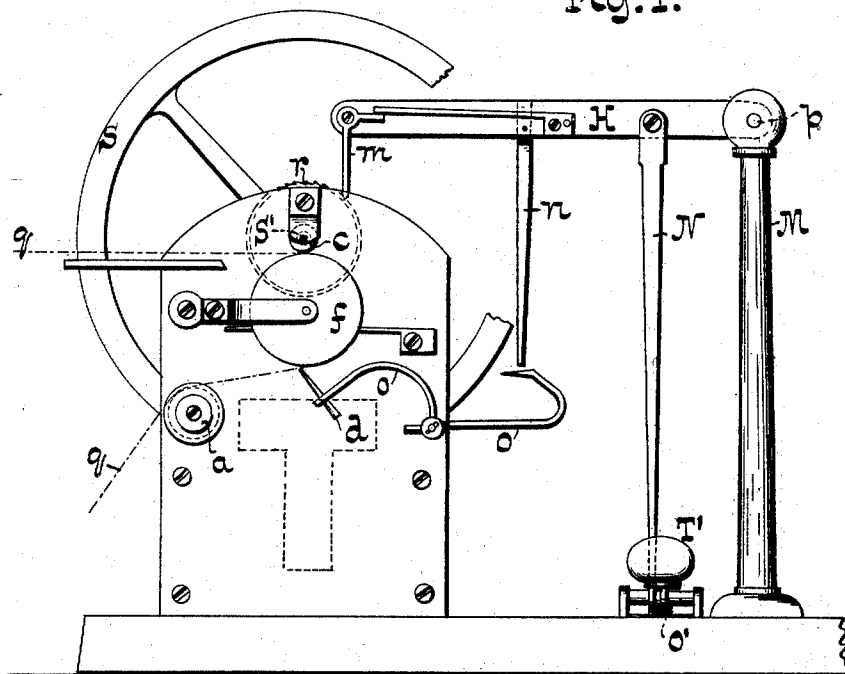


Fig. 3.

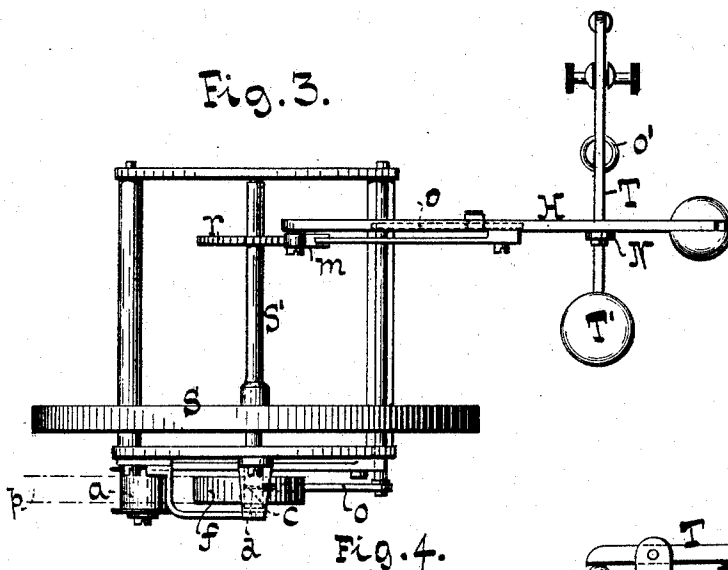


Fig. 2.

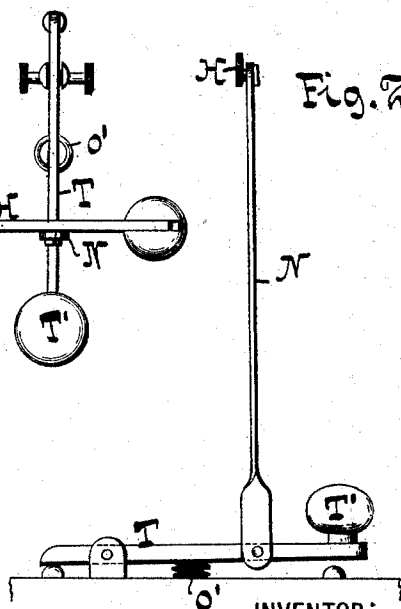
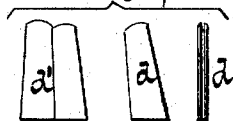


Fig. 4.



WITNESSES :

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WRITING-RECEIVER.

SPECIFICATION forming part of Letters Patent No. 503,371, dated August 15, 1893.

Application filed January 21, 1893. Serial No. 459,267. (No model.)

To all whom it may concern:

Be it known that I, ALBRECHT HEIL, a subject of the Grand Duke of Hesse, residing at Fränkisch Crumbach, in the Grand Duchy of Hesse, German Empire, have invented new and useful Improvements in Writing-
5 Receivers, of which the following is a specification.

My invention has reference to an instrument adapted for beginners in learning tele-
10 graphy, as well as for preparing documents or messages in a secret writing composed of dots and dashes like those of the Morse alphabet.

It has for its object to provide in a simple instrument both a receiver and a transmitter,
15 without the use of electro-magnets or an electric current.

The nature of my invention will best be understood when described in connection with the accompanying drawings, in which—

20 Figure 1 represents a front elevation of an instrument constructed according to my invention. Fig. 2 is a detail view showing the arrangement and connection of the key. Fig. 3 is a plan or top view thereof, the base being
25 omitted. Fig. 4 represents detail views of a form of pen adapted for use in the instrument.

Similar letters of reference designate corresponding parts throughout the several views of the drawings.

30 In the drawings the letters T T' designate a key similar in construction to those usually employed in telegraphic transmitters, but formed without particular reference to the making and breaking of a circuit. It is con-
35 nected by a link N with a lever H pivoted at p to a post M. At the outer end of the lever H is connected a spring pressed pawl m adapted to engage with a ratchet wheel r
40 mounted on a horizontal shaft s' provided with a fly wheel S. Intermediate of said pawl and the point of pivoting of the lever H is attached a downwardly projecting tappet n adapted to engage one end of a spring lever
45 o carrying at its opposite end a pencil or ink style d arranged opposite to the tape roll or platen f. The paper tape g conducted from the reel (not shown), is passed over a guide roll a and about the platen f. It is fed forward by a small feed roll c on the shaft of
50 the ratchet wheel r as will be presently ex-

plained. The instrument is operated in substantially similar manner to the telegraph instruments now in use, the letters of the Morse alphabet being produced on the tape by depressing and releasing the key T T'. At each
55 depression of the key the pawl m engages the ratchet wheel r and turns the same, thereby turning the two rolls c and f to advance the tape. In view of the inertia of fly wheel S the rolls continue to revolve for a short
60 period of time. The tappet n at the same time engages the lever o and throws the pencil or style d into contact with the tape g. The pencil is held in this position until the
65 key is released, whereupon the spring o' elevates the key and the tappet n disengages the lever o. The tape g having continued to advance during the time that the pencil or style was in contact with the same, a corre-
70 sponding mark is produced thereon. The mark will be either a dot or a dash according to the length of time during which the key is held depressed.

In practice I prefer to use an ink style such as shown in Fig. 4, the same consisting of a
75 trough shaped metal tip formed with a rounded end which forms the writing point. The style can be conveniently made by bending up a blank, as d', about its longitudinal center line. This style I find gives good
80 results and can be readily and easily cleaned.

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

1. In an instrument of the character specified, the combination of a platen and feed
85 roll for the tape, a pencil or style lever adapted to the platen, a key, and operative connection between the key and the feed roll for advancing the tape on the depression of
90 the key, and a tappet arranged to engage with the pencil or style lever and in operative connection with the key, substantially as described.

2. In an instrument of the character specified, the combination of a key, a feed roll and
95 platen for the tape, a ratchet wheel for the feed roll, a pencil or style lever adapted to the platen, a lever provided with a pawl arranged to engage the ratchet wheel, and with
100 a tappet arranged to engage the pencil or

style lever, and a connection between the key and said lever, substantially as described.

3. In an instrument of the character specified, the combination of a key, a platen, a feed roll *c*, a fly wheel *S* and ratchet wheel on the shaft of the latter, a pencil or style lever, a lever *H* provided with a pawl engaging the ratchet and with a tappet adapted to engage the pencil or style lever, and a link connect-

ing the key and lever *H*, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBRECHT HEIL.

Witnesses:

JEAN GRUND,
FRANK H. MASON.