(No Model.) 2 Sheets—Sheet 1.

J. C. ALLEN.

TYPE WRITING MACHINE.

No. 312,546. Patented Feb. 17, 1885.

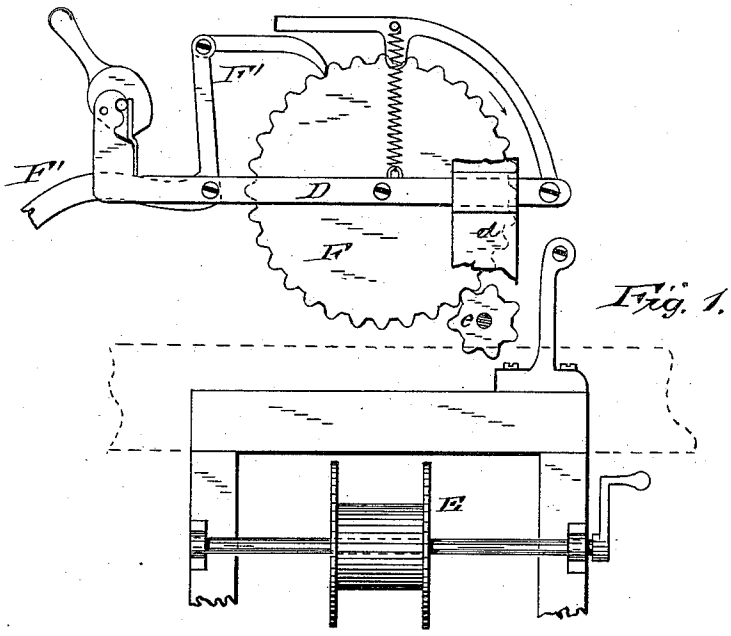


Fig. 1.

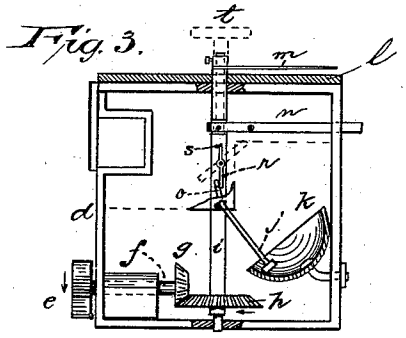


Fig. 3.

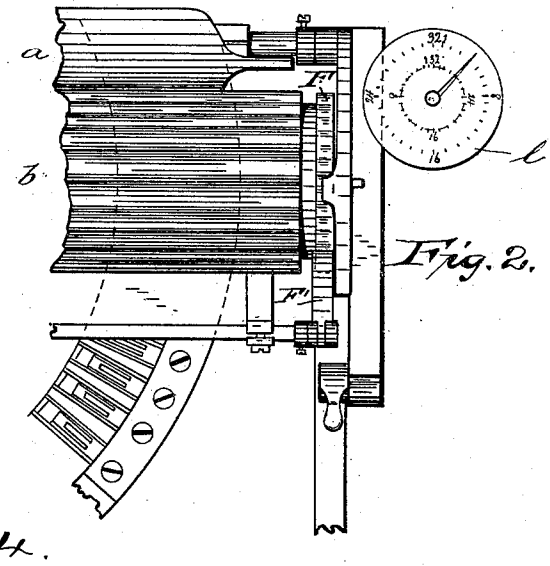


Fig. 2.

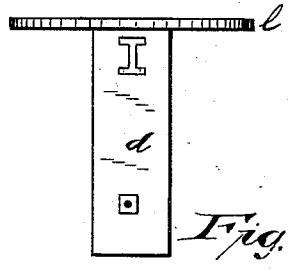


Fig. 4.

Attest:

F. K. Campbell
Edward G. Kempff

Inventor:

Joseph C. Allen,
by Drake & Co. Attys.

N. PETERS. Photo-Lithographer. Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. C. ALLEN.

TYPE WRITING MACHINE.

No. 312,546. Patented Feb. 17, 1885.

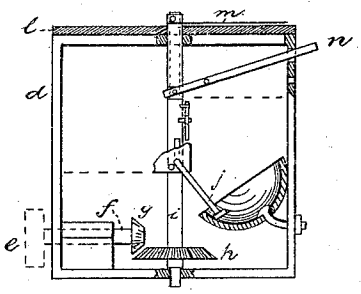


Fig. 5.

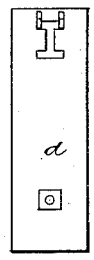


Fig. 6.

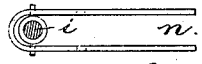


Fig. 7.

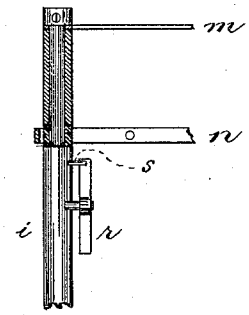


Fig. 8.

Attest:

F. M. Campbell

Edward G. Kempf.

Inventor:

Joseph C. Allen,

by Drake & Co.

Attys.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH C. ALLEN, OF PLAINFIELD, NEW JERSEY.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 312,546, dated February 17, 1885.

Application filed March 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. ALLEN, a citizen of the United States, residing at Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in End-of-the-Page and Folio Indicating Attachments for Type-Writers, Caligraphs, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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.

This invention relates to certain improvements in type-writing machines, and especially those commonly known as "caligraphs."

The object of the invention is to indicate or make known to the operator upon said machine his arrival at the end of the page or folio upon which he is writing.

The invention consists in the arrangements and combinations of parts, substantially as will be hereinafter set forth, and finally embodied in the clauses of the claims.

Referring to the accompanying two sheets of drawings, in which similar letters of reference indicate like parts in each of the several figures, Figure 1 is a side elevation of a portion of a type-writer or caligraph illustrating the relation of my attachment thereto. Fig. 2 is a plan of the same. Fig. 3 is a detached elevation of the attachment enlarged; Fig. 4, an edge view of said attachment; Fig. 5, Sheet 2, a second front view of said attachment, showing the cogs disengaged, and Figs. 6, 7, and 8 illustrate certain details, all of which will be hereinafter more fully described.

In said drawings, *a b* illustrate a guide and cylinder, between which the paper receiving the impressions of the type is caused to pass when the said cylinder is actuated by the ratchet and pawl F F'.

D represents a portion of the frame-work of the type-writer, furnishing bearings for the said cylinder and pawl.

E is a reel carrying or adapted to carry the inking-ribbon, and F is a ratchet wheel or cog secured to and revolving with the cylinder *b*.

Upon the frame D, adjacent to the ratchet or cog wheel F, I form or arrange a frame or box of any suitable construction, adapted to receive the indicating or alarm mechanism. Said box or frame provides a bearing for the pinion *e*, Figs. 1, 3, and 5, which engages with and is actuated by the said ratchet-wheel F, or other and equivalent mechanism working with the paper. On the arbor *f* of said pinion is arranged an angle gear-wheel, *g*, which co-operates with a corresponding wheel, *h*, working on the shaft *i*, which latter carries suitable mechanism adapted to raise the bell-hammer *j* as the shaft revolves, and to allow said hammer to fall on the bell *k* to sound an alarm.

The mechanism I prefer is a pivoted bar, *r*, working with the shaft and bearing at one of its extremities against the pin *s*. When the shaft revolves, the extremity of the bar opposite the pin strikes the arm *o* of the bell-hammer lever and causes the same to rise. By an opposite motion of the shaft, the pivotal bar, not being stopped by the pin *s* as before, passes over the end of the arm *o* without actuating the same, as will be understood.

At the top of the frame or bed *d* is arranged a dial-plate, *l*, Figs. 2 and 3, and above said dial the shaft *i* extends, being there provided with a suitable pointer or indicating-hand, *m*.

Suitable means—such as the lever *n*—are provided to disconnect the gearing *g h*, so that the indicating-hand may be set back or otherwise manipulated without disturbing the wheel F or other parts of the type-writer.

The operation of the device is substantially as follows, supposing, for illustration, that the operator is employed upon a continuous roll of paper, such as is above referred to: The said operator prints his line in the usual way. Then by manipulating the ratchet and pawl, or similar device for causing the paper to move forward, said paper is moved a single line. The train of indicating mechanism is also actuated, as will be evident. This process is repeated until the bottom of the page is nearly attained, when the hammer-raising mechanism enters into engagement with the arms *o* of said hammer, and raises the latter. At the next movement of the pawl, when the last line is reached, the raising mechanism passes the arm *o*, and allows the hammer to

sound an alarm, indicating to the operator the fact that the end of the folio or page is attained. Said operator may then skip four lines, more or less, and commence a new folio, the blank space serving, as usual, to receive the binding tape or fasteners.

Should I for any reason desire so write a number of lines less than any standard number, which may be arbitrarily fixed at thirty-two, I provide the dial-plate *l*, and graduate the same with lines corresponding to the said standard number, the same being properly marked so that the operator may know at a glance the number of lines he has written.

Should I desire to have the alarm strike at the end of, say, twenty lines, I may provide a second line of graduations with indicating-numerals arranged in reverse order. Then, by setting the indicating-hand back to the graduation marked "20," and then working forward, as before, the desired result will be attained. For thus setting the indicating-hand, I may provide the finger-piece *t*. (Indicated by broken lines in Fig. 3.)

I do not wish to be understood as limiting myself to the exact mechanism herein described, as it will be evident that many changes of construction may be made to accommodate the invention to the various styles of type-writing machines.

Devices for indicating the end of a line or the bottom of a folio are not, broadly, new, as indicated in patents to Tinsley, February 19, 1884, and Belden, October 28, 1884; hence I do not claim any mechanism for producing this result, but desire to cover my device as set forth herein.

Having thus described my invention, what I claim as new is—

1. In a type-writing machine, alarm mechanism substantially as described, and means, substantially as described, adapted to actuate said alarm mechanism and to move the paper forward simultaneously, said parts being arranged and combined substantially as set forth.

2. In a type-writing machine, the combination of a wheel, F, connected with mechanism, substantially as described, adapted to move the wheel forward, a train of mechanism, substantially as described, connecting said wheel with a bell-hammer and a bell, said parts being arranged and adapted to operate substantially as and for the purposes set forth.

3. In combination, in a type-writing machine, the wheel F, connected with mechanism, substantially as described, adapted to move the paper forward, a train of mechanism, substantially as described, connecting said wheel with a bell hammer, a bell, a dial, and an indicating-hand, all arranged and adapted to operate substantially as and for the purposes set forth and shown.

4. In a type-writing machine, the combination, with the ratchet or cog F, of the cog or pinion *e*, shaft *f*, gears *g h*, shaft *i*, mechanism, substantially as described, adapted to raise the hammer *j*, and said hammer, the bell *k*, the dial *l*, and indicating-hand *m*, all arranged and operating substantially as and for the purposes set forth and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of February, 1884.

JOSEPH C. ALLEN.

Witnesses:
CHARLES H. PELL,
F. F. CAMPBELL.