(No Model.)

A. L. MARINER.

TYPE WRITING MACHINE.

No. 457,088. Patented Aug. 4, 1891.

Fig 1.

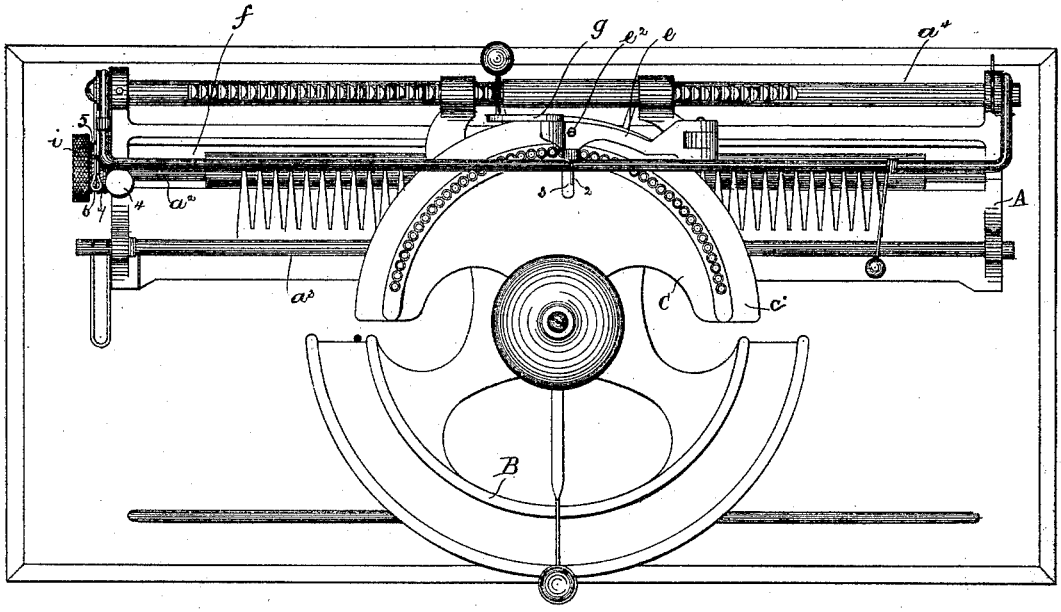

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Fig:2.

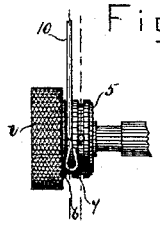


Fig:3.

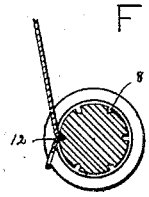
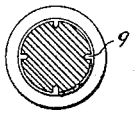


Fig:4.



Witnesses:

Fred. L. Gruel of
Francis L. Emery.

Inventor.

Abbott L. Mariner.

by Denby & Gregory.

Attys.

UNITED STATES PATENT OFFICE.

ABBOTT L. MARINER, OF WEST MEDFORD, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE POPE MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 457,088, dated August 4, 1891.

Application filed April 3, 1888. Serial No. 269,480. (No model.)

To all whom it may concern:

Be it known that I, ABBOTT L. MARINER, of West Medford, county of Middlesex, State of Massachusetts, have invented an Improvement in Type-Writing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to improve the construction of type-writing machines such as shown in United States patent of John Becker, No. 350,717, dated October 12, 1886, and has especial reference to the means employed for spacing the lines.

The invention consists in the combination, with the paper-feeding roll, of two series of limiting-stops, and a spring-acting arm having a projection adapted to co-operate with either series of stops, as desired, said stops having two similar limiting edges or faces to thereby enable rotation of the paper-feeding roll backward and forward. The limiting-stops of one series are located a different distance apart from the limiting-stops of the other series, so that the lines may be arranged near to each other, or some distance apart, by utilizing one or the other series.

Figure 1 shows in plan view a type-writing machine embodying this invention; Figs. 2, 3, and 4 details of the spacing or limiting devices for the paper-feeding roll.

The main frame A, the guide-rod a^4, the index-plate B, movable longitudinally and also adapted to rock on the guide-rod, the pivoted type plate or segment C, the printing-lever *e*, the feed-dog *g*, the pivoted operating lever or bar *f* for the printing-lever, the paper-feeding roll a^2, and guard or spring-acting plate a^3 are all substantially as in the patent referred to, wherein like letters represent like parts. In the said patent the guard a^3 is shown as a spring-acting strip of metal resting on the paper-feeding roll, whereas it is shown herein as the spring-acting plate or guard a^3, having a series of comb-like teeth acting on the paper-feeding roll. In each instance, however, the spring action is the same.

A milled-edged nut *i* is fixed to the paper-feeding roll a^2, the hub 5 of which has two circumferential grooves 6 7. The groove 6 is provided with a series of sockets or recesses 8, herein shown as six in number, located equal distances apart, and the groove 7 is provided with a series of sockets or recesses 9, herein shown as four in number, located equal distances apart.

A spring-acting arm 10 is attached to the main frame, its outer or free end bearing upon the hub and entering one or the other groove 6 7. The outer or free end of said spring-acting arm 10 is bent to form upon its under side a projection 12 of suitable size and shape to enter one of the sockets 8 or 9. When the arm 10 rests in the groove 6 and the paper-feeding roll is turned, said arm has a tendency to stop the movement of the roll at each recess or socket 8, and, as herein shown, it would stop six times during a complete revolution of the roll, and when the arm 10 rests in the groove 7 the roll would stop four times during its complete revolution.

As herein shown, the limiting-stops have two limiting edges or faces, and this form of stop or check is frictional; but I do not desire to limit my invention to such form; neither do I desire to limit my invention to the two series of stops or checks for the roll being formed upon the hub of the nut, as it is obvious that they may be formed upon independent disks fixed to the roll. It will thus be seen that when the arm 10 co-operates with the series of recesses 8 the paper will be moved forward at regular intervals a distance equal to the distance between the said recesses 8, and when the arm co-operates with the series of recesses 9 the paper will be moved forward at intervals equal to the distance between the recesses 9.

I claim—

In a type-writing machine, a spring-acting plate and a paper-feeding roll between which

the paper is fed, the hub 5 on the roll having grooves 6 7, each having a series of limiting-stops, as recesses 8 9, the recesses 8 being placed nearer together than the recesses 9, combined with the spring-acting arm 10, and its projection 12, adapted to co-operate with one or the other series, the said projection entering one of the recesses and holding the roll stationary, substantially as described.

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

ABBOTT L. MARINER.

Witnesses:
G. W. GREGORY,
J. C. SEARS.