(No Model.)

W. J. BARRON.

TYPE WRITING MACHINE.

No. 387,673. Patented Aug. 14, 1888.

Fig. 1.

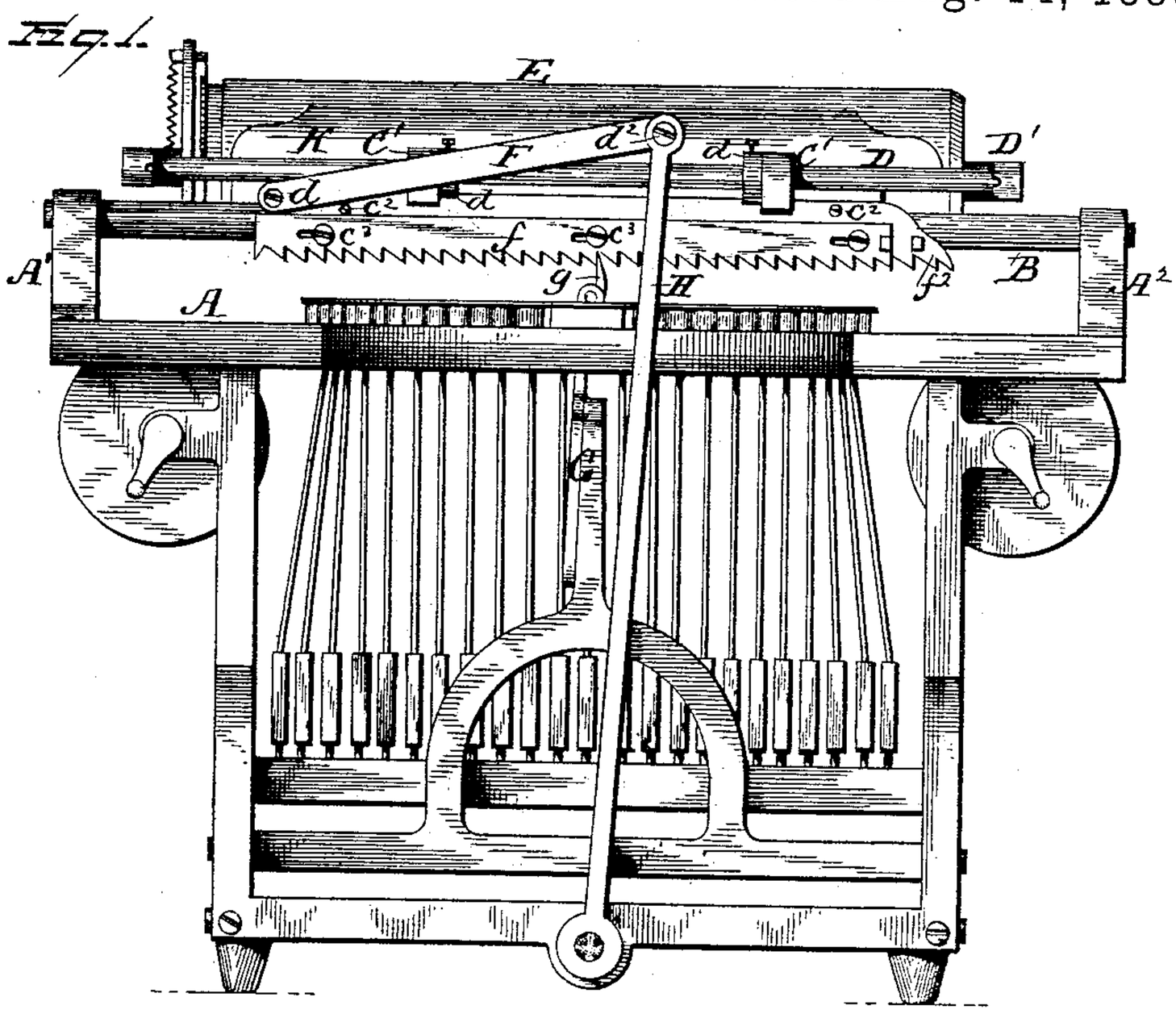


Fig. 2.

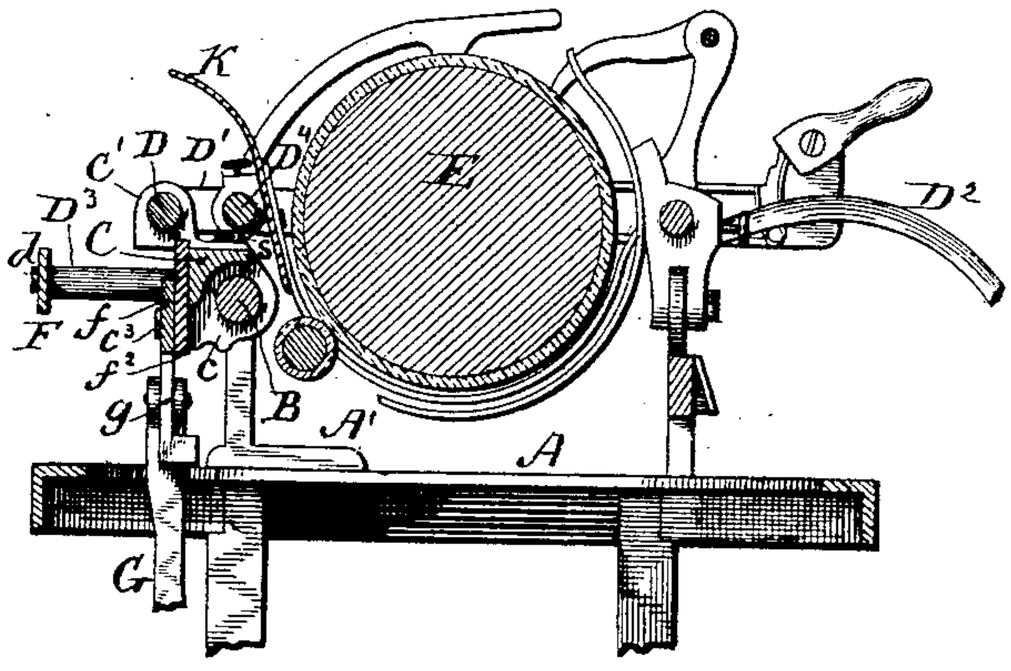
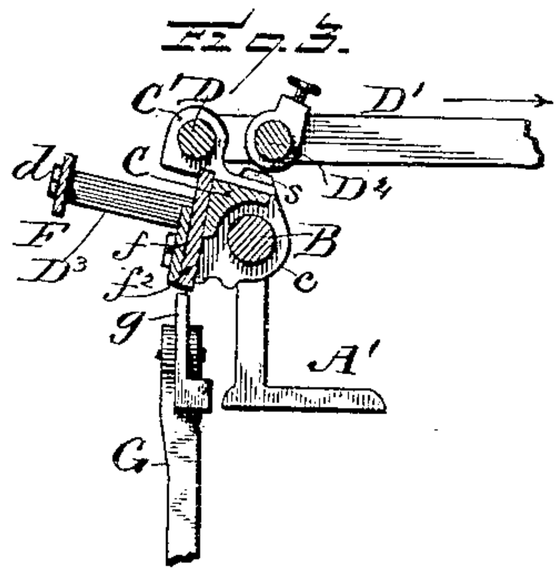


Fig. 3.



Witnesses:
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atty.

UNITED STATES PATENT OFFICE.

WALTER J. BARRON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO AMOS DENSMORE, OF MEADVILLE, PENNSYLVANIA.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 387,673, dated August 14, 1888.

Application filed April 20, 1887. Serial No. 235,519. (No model.)

To all whom it may concern:

Be it known that I, WALTER J. BARRON, a citizen of the United States, residing at New York city, in the county of New York, State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to type-writers, particularly in the machine known as the "Caligraph;" and the objects of my invention are to increase the steadiness of the paper-carriage and prevent its vibration while operated under high speed, and at the same time to diminish the power required to move or the friction of said carriage against its supports by dispensing with one of the guide-rods lately used on said caligraph, and for which said Letters Patent No. 330,198 were granted to me November 10, 1885; and also to provide means to release the carriage and permit the operator to slide it with one hand to the right or left the whole length of the guide-rodes, and also permit the same line to be written over and over again on the same place, and is an improvement upon the construction shown in Letters Patent No. 361,114, granted to me April 12, 1887. I accomplish these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a rear view of a type-writer provided with my improvement. Fig. 2 is a transverse vertical section of the carriage and its supporting-frame in its normal position. Fig. 3 is a transverse vertical section of the carriage-hinge, showing the carriage racks disconnected from their pawl, as when said carriage is pulled in the direction of the arrow thereon.

In said drawings, A represents the main frame of the type-writer, and A′ and A^2 are standards secured upon the top of the frame, adjoining its ends, to retain the rear guide-rods, B. Upon this rod is mounted the yoke C, having a perforated pendent lug, *c*, near each end, that can slide freely but with great steadiness thereon. The yoke is also provided with two lugs, C′, projecting upward at points sufficiently apart, and these lugs are perforated to receive the back rod, D, of the carriage D′, carrying the platen E, said rod being rigidly connected to the carriage and forming the hinge on which the carriage turns, while the guide-rod B forms the hinge on which the carriage can be rocked while being pulled toward the operator to disconnect the racks $f f^2$ from the spacing-pawl *g*, pivoted on the upper end of the spacing-lever G, and permit the carriage to be moved to the right or left, said carriage being prevented from sliding endwise independently of the yoke C by means of collars *d*, secured upon the back rod, D, of said carriage, bearing against the sides of the upwardly-projecting lugs C′ of said yoke. The stationary rack f^2 is secured, as usual, to the yoke C by the screws c^2, while the spring-moved rack *f* is connected with the rack f^2 by screws c^3, passing through slots in the rack *f*. To disconnect the racks from the pawl *g*, the operator, by means of the front handle, D^2, (shown broken away,) simply pulls the carriage toward him, as shown by the arrow in Fig. 3, until arrested by the binding of the joints $d\ d^2$ of the connecting-rod *f* against the ends of the arms D^3 and H, said joints being somewhat loose-fitting for that purpose. The carriage, being thus released from the racks, can be moved to the right or to the left without releasing the handle D^2; but as soon as the handle is released the carriage returns automatically back to its normal position, and its racks are again in engagement with the pawl on account of its peculiar construction—that is, of the peculiar location of its back rod, D, relatively to the rear guide-rod, B, that supports the carriage on the rear thereof.

The carriage-frame D′ extends farther back than as heretofore constructed, so that a vertical plane passing through the rod D would be considerably in the rear of a vertical plane passing through any part of the guide-rod B. Consequently, the weight of the carriage acting by gravity upon the upper lugs, C′, of the yoke, the latter revolves upon the rod B (its fulcrum) until the racks are in engagement with the pawl *g*. The retraction of the carriage by gravity may be arrested by the racks coming in contact with the pawl; but this would cause unnecessary friction of said pawl

against the grooves at the bottom of each tooth. I obviate this friction by having the retraction arrested either by the paper-table K against the lugs *c*, or the inner rod, D^4, of the carriage, or other rigid parts of the carriage, against the heads of screws *s*, projecting from the top of the yoke C, and thus have the end of the pawl free from wear and friction.

Having now fully described my invention, I claim—

1. In combination with a type-writer frame and its paper-carriage, guide-rod B, and letter-spacing mechanism, the paper-carriage having its hinge-rod in a vertical plane clearly in the rear of a vertical plane passing through the guide-rod B, whereby the carriage is retracted to its seat by gravity and independently of a spring, substantially as and for the purpose described.

2. The combination of the pawl of the letter-spacing mechanism of a type-writer, the rack-bars and yoke having lugs on top thereof, with the paper-carriage back rod, D, passing freely through said lugs, and the paper-carriage guide-rod B, located in a vertical plane inwardly of the rod D, whereby the carriage is free to be drawn forward to disengage the spacing racks from their pawl and allowed to be moved to the right or to the left and returned to its seat by gravity and independently of a spring, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER J. BARRON.

Witnesses:

EMMET DENSMORE,

AMOS DENSMORE.