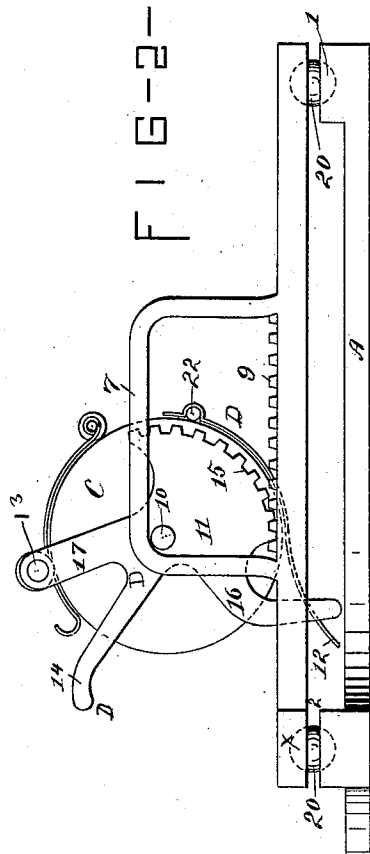
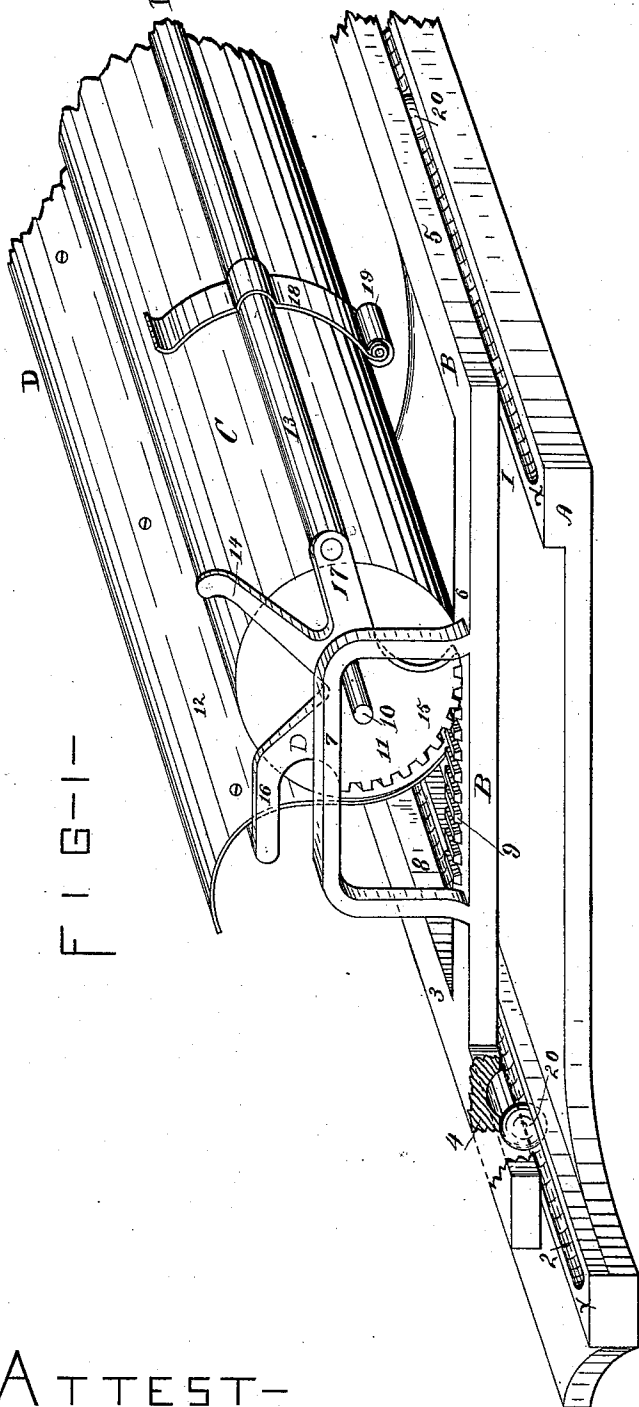


(No Model.)

A. T. BROWN.
TYPE WRITING MACHINE.

No. 376,180.

Patented Jan. 10, 1888.



ATTEST-
Clerk C. Raymond
W. L. Williams

INVENTOR-
Alexander T. Brown
Per *Wallace A. Basile*
His attorney

UNITED STATES PATENT OFFICE.

ALEXANDER T. BROWN, OF SYRACUSE, NEW YORK.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 376,180, dated January 10, 1888.

Application filed June 2, 1886. Serial No. 203,536. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER T. BROWN, residing at Syracuse, in the county of Onondaga and 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, in which—

Figure 1 is a perspective, and Fig. 2 an end elevation, of the parts embodying my improvement.

A represents the top of the machine, across the front and rear of which I cut grooves 1 and 2.

B is the carriage-frame, consisting of a rear bar, 3, grooved, as at 4, upon its under face longitudinally, a front bar, 5, grooved in like manner, and end pieces, 6, all integral with each other, if desired. The ends 6 consist of the yoke 7, mounted upon a base-piece, which is offset as to that part between the upright arms of the yoke, as at 8, throwing it out of the same vertical plane as the yoke, and upon the top of this offset 8, or within the yoke, I construct a rack, 9. In the grooves 1 2, I place metallic balls 20, upon which I place the carriage, the grooves in the bars 3 and 5 receiving the upper portions of the balls.

C is the printing-roll, provided with bearing-gudgeons 10.

D is my shifting frame, consisting of ends 11, paper-apron 12, pressure-rod 13, and lever 14. Each of the ends 11 consists of a piece of metal having upon its lower side a segmental curved rack, 15, an upper rearward arm, 16, to the extremity of which the apron is secured, an upward lever, 14, and a front arm, 17, in which I mount an end of the rod 13, and also a hole to receive a gudgeon of the roll C. The apron 12 is of ordinary construction, except that adjacent to its front edge I form a groove or corrugation, in which I mount the roller or rollers 22, bearing against the roll or platen, and upon the flange in front of this groove I mark a scale. This groove or corrugation and the flange protect the rollers 22 from contact with the inking-ribbon. The pressure-rod 13 is provided with sliding or adjustable spring-fingers 18, one being shown at 18 adjustably secured to the rod. The upper arms of these fingers curve to conform to the roll C. The lower arms are curved in like manner, and adjacent to their lower ends I mount in each a transverse roller, 19, the inside of which roller bears against the face of the roll C.

In the grooves 1 2, usually at their ends, as well as at intermediate points, I place stops, as shown at *x*, which limit the travel of the balls and also of the carriage.

The shifting-frame D really constitutes a rocking carrier for the roll C, and I usually provide it with a mechanism to cause it to return to its position ready for printing.

In operation, when the operator wishes to inspect a line of writing as it is being printed, the backward pressure of the lever 14 and the rocking of the frame D cause the roll to change position backward and off from the printing-point, and without any actual rotation of the roll upon its gudgeons throws the roll over, so that the line being printed is brought up to the front side of the roll in full sight for examination, correction of a letter, &c. This rocking of the carrier does not change the relative positions of the roll, apron, pressure-rod, and fingers as to each other.

The rock upon the frame may be made inclined, or, in fact, actually vertical, so that the carrier will return of its own gravity to a normal position.

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

1. A type-writer carriage mounted upon balls traveling in grooves in the top of the machine and in the carriage-frame, said grooves having stops to prevent escape of the balls, substantially as shown and described.

2. A type-writer carriage consisting of a frame carrying a rocking platen carrier adapted to roll off from over the printing mechanism, substantially as described, for the purposes specified.

3. A type-writer carriage bearing a cradle in which the roll is mounted, said cradle rocking on ways on the carriage, the parts being combined, substantially as stated.

4. A type-writer carriage having a rack thereon, a cradle having teeth on its rockers engaging said rack, and a roll mounted in said cradle, all in combination, substantially as described.

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

ALEXANDER T. BROWN.

Witnesses:

W. A. BARTLETT,
M. L. WILLIAMS.