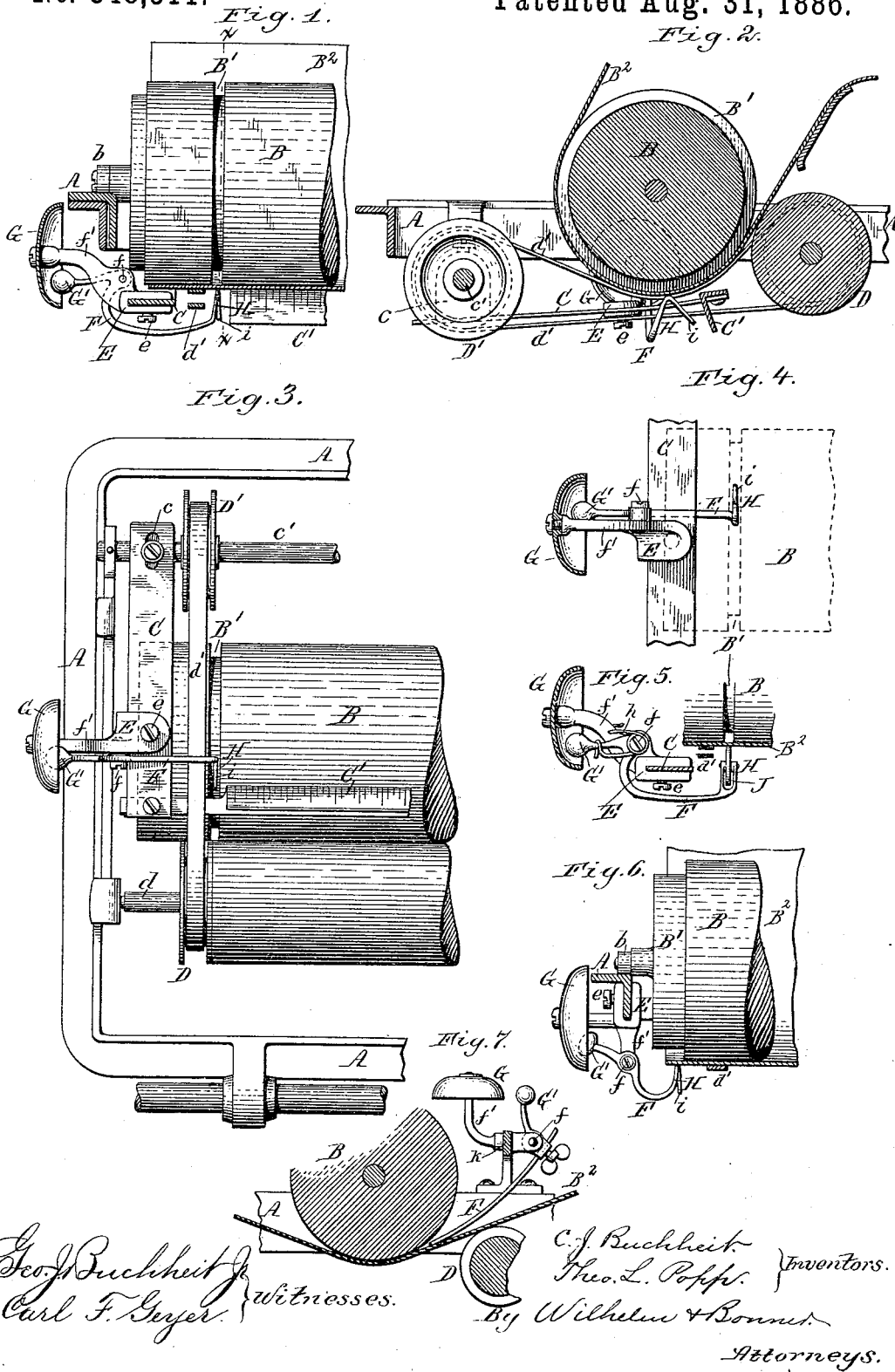


(No Model.)

C. J. BUCHHEIT & T. L. POPP.
TYPE WRITING MACHINE.

No. 348,511.

Patented Aug. 31, 1886.



UNITED STATES PATENT OFFICE.

CHARLES J. BUCHHEIT AND THEODORE L. POPP, OF BUFFALO, N. Y.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 348,511, dated August 31, 1886.

Application filed March 22, 1886. Serial No. 196,084. (No model.)

To all whom it may concern:

Be it known that we, CHARLES J. BUCHHEIT and THEODORE L. POPP, both of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Type-Writers, of which the following is a specification.

This invention relates more particularly to a device or attachment to be applied to type-writing machines for indicating when the bottom of the page or sheet of paper which is being printed upon approaches the printing line or point at which it receives the impression so closely as to make it necessary to remove the sheet and introduce a new one.

The object of our invention is to construct a simple alarm device, which is controlled by the movement of the sheet of paper under the platen or roller, and which is automatically actuated, and gives an audible alarm when the bottom of the page or sheet has arrived at the point where another line cannot be properly printed on the sheet.

The invention consists to that end of the improvements, which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a fragmentary sectional elevation of the upper portion of a type-writer provided with our improvement. Fig. 2 is a vertical cross-section of the carriage-frame, platen, and tape-rollers with the sheet of paper in position. Fig. 3 is a bottom plan view of the same with the sheet of paper removed. Fig. 4 is a sectional top plan view of our improvement. Fig. 5 is a sectional elevation of the device slightly modified. Fig. 6 is a fragmentary sectional elevation showing a modified construction of our improvement. Fig. 7 is a fragmentary sectional elevation showing another modified construction of our improvement.

Like letters of reference refer to like parts in the several figures.

A represents the movable carriage-frame of a type-writing machine, and B represents the platen or roller, which is journaled in bearings *b* in the frame A, and provided near one of its ends with an annular groove or recess, B'.

C represents a bar or plate, secured at one end, below the frame A, to a suspended carrying-block, *c*, and which supports at its oppo-

site end the scale-bar C'. The block *c* is secured to a rod, *c'*, which is supported in the frame A.

D D' represent pulleys or rollers mounted, respectively, on a shaft, *d*, and the rod *c'*, and which carry an endless rubber tape, *d'*, which latter serves to hold the sheet of paper B² against the roller or platen B in the usual manner.

E represents a clamp or jaw arranged underneath the frame A, at one end of the platen B, and secured to the bar C by means of a set-screw, *e*. If desired, the clamp E may be secured to the frame A, as shown in Fig. 6.

F represents a curved or bent arm, pivoted at *f* to an arm, *f'*, which latter is formed with or secured to the clamp E.

G represents an alarm gong or bell secured to the arm *f'*, and G' the hammer, which is secured to the outer end of the arm F, and adapted to strike against the gong or bell G and sound an alarm.

H represents an upwardly-projecting finger, formed at the inner end of the arm F, and bearing against the under side of the sheet of paper B², opposite the groove or recess B' of the platen B.

The groove or recess B' of the platen B is arranged in line with the finger H, so as to permit the latter to enter the same when released by the sheet of paper. The weight of the hammer G' is sufficient to hold the finger H against the under side of the sheet, and when the bottom of the sheet has been reached the finger H will be released and enter the groove B', and cause the hammer G' to strike the bell and sound an alarm. If desired, a coiled or other suitable spring, *h*, may be interposed between the arm *f'* and the hammer arm, as shown in Fig. 5, to insure a more perfect contact between the finger H and the sheet of paper, and also to assist the hammer G' to elevate the finger H into the recess B' when the end of the sheet of paper has been reached, whereby a louder and more distinct alarm is rendered.

The feeling-finger H of the arm F is provided on its front side with an inclined nose or guide *i*. The nose *i* projects below the surface of the platen or roller B when the finger H has entered the groove or recess B', so that when a new sheet of paper is being in-

roduced between the platen and tapes the top edge of the paper will ride over the incline or nose *i* and withdraw the finger H from the groove B'. If preferred, the finger H may be provided with a small roller, J, instead of the nose *i*, whereby the same result is obtained.

It is obvious that the groove or recess B' may be formed at one end of the platen B, as clearly shown in Fig. 6, in which case the edge of the sheet of paper is allowed to project sufficiently over the end of the platen B to permit the finger H to bear against the same.

Our improved device is equally adapted to stationary platens, in which case it is only necessary to form a notch or recess in the platen opposite the point of contact of the feeling-finger H, to permit the latter to enter the same when released from the end of the sheet of paper.

In the construction shown in Fig. 7 the arm F is pivoted to a cross-bar, *k*, secured to the frame in any suitable manner, and bears with its lower free end upon the sheet of paper, so that when the end of the same has been reached the arm is permitted to fall and render an alarm.

We claim as our invention—

1. The combination, with the platen of a type-writer, of a movable finger which is supported by the paper and an alarm which is sounded by the movement of the finger when

the latter is released by the paper, substantially as set forth,

2. The combination, with the platen of a type-writer having a groove or depression, of a movable finger having its end arranged in line with said groove or depression, and supported by the paper extending over the same, and an alarm which is sounded when the movable finger enters said groove or depression upon being released by the paper, substantially as set forth.

3. In a type-writer, the combination, with the platen B, of a clamp, E, carrying a bell, G, and an arm, F, pivoted to the clamp and provided at one end with a hammer, G', and at its opposite end with a finger, H, adapted to rest on the paper, substantially as set forth.

4. In a type-writer, the combination, with the recessed platen B, of the bell G and a pivoted hammer-arm provided with a finger, H, having a guide, *i*, whereby the finger is removed from the recess of the platen upon applying the paper to the platen, substantially as set forth.

Witness our hands this 20th day of March, 1886.

CHAS. J. BUCHHEIT.
THEODORE L. POPP.

Witnesses:

OSCAR SCHAUB,
JNO. J. BONNER,