

G. PERSSON.
PRINTING POINT INDICATOR FOR TYPE WRITERS.
APPLICATION FILED NOV. 2, 1905.

Fig. 1

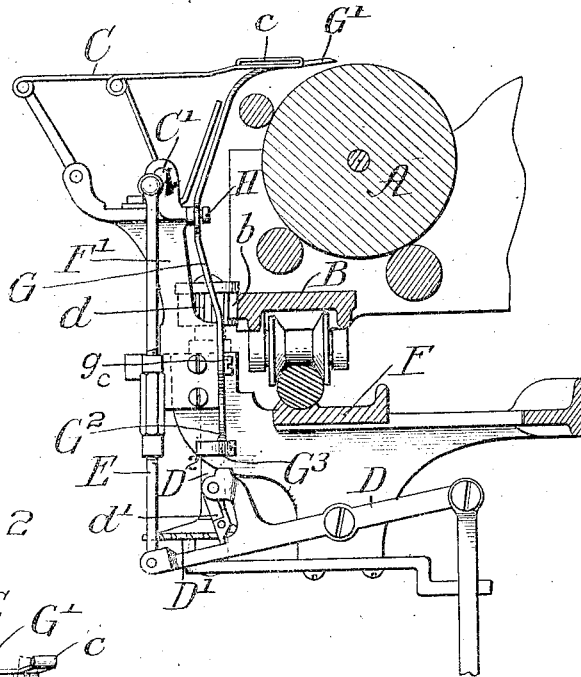


Fig. 2

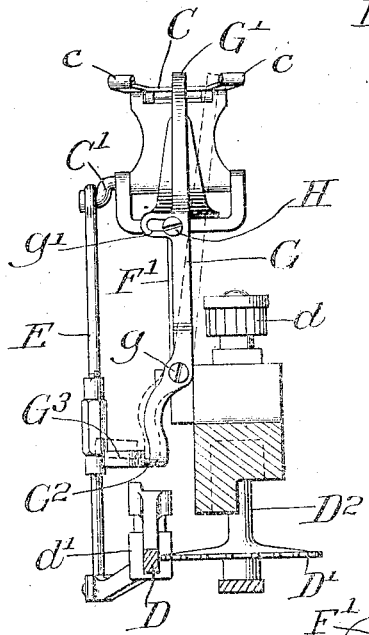


Fig. 3

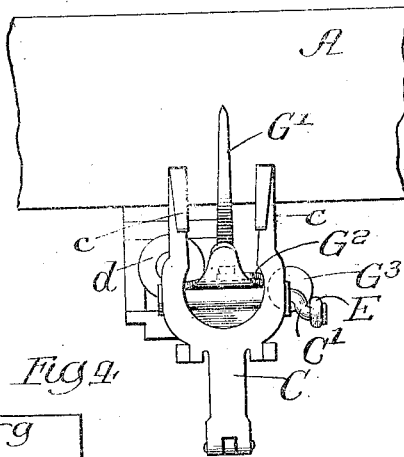
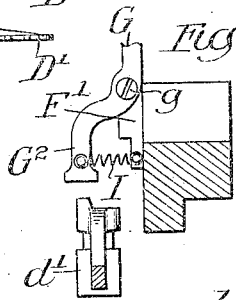


Fig. 4



Witnesses
J. G. Bennett
W. L. Hall

Inventor:
Gustaf Persson.
by R. O. Brown
His Attorney

UNITED STATES PATENT OFFICE.

GUSTAF PERSSON, OF WOODSTOCK, ILLINOIS, ASSIGNOR TO THE OLIVER TYPEWRITER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PRINTING-POINT INDICATOR FOR TYPE-WRITERS.

No. 836,944.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed November 2, 1905. Serial No. 285,602.

To all whom it may concern:

Be it known that I, GUSTAF PERSSON, a citizen of the United States, residing at Woodstock, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Printing-Point Indicators for Type-Writers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a novel printing-point indicator adapted for application to type-writing machines of that class in which the printing-point on the paper is visible to the operator during the printing operation and which embraces an index or pointer which has oscillatory movement by which it is carried away from said printing-point and out of the path of the type when the type-bars are advanced toward the paper and is restored to its position for indicating the striking-point of the type when the type-bars are retracted.

The invention consists in the matters hereinafter described, and pointed out in the appended claims.

My invention is shown in the accompanying drawings applied to a type-writer of the kind known at the "Oliver," but the features constituting my invention may be applied to type-writing machines of other forms.

In the drawings, Figure 1 is a view showing, in central vertical section, the platen and adjacent principal parts of an Oliver type-writing machine equipped with my improvement. Fig. 2 is a view in rear elevation of the lever which carries the pointer or indicator and parts for supporting and actuating the same. Fig. 3 is a plan view of the parts shown in Figs. 1 and 2. Fig. 4 is a view corresponding with the lower part of Fig. 1, showing a spring applied in place of a weight for actuating the pointer.

As shown in said drawings, A indicates the platen, and B the main longitudinal member of the paper-carriage in which the platen is mounted. Said frame-bar B has on its front edge the rack-bar *b* of the carriage.

C indicates the horizontally-reciprocating ribbon-guide constituting part of the ribbon-

throw mechanism of an Oliver type-writing machine. Said ribbon-guide has two arms *c c*, provided with loops for guiding the ribbon, and is given reciprocating motion so as to carry the ribbon over the striking-point of the types in the advance of the type-bars and to retract the ribbon and expose the printed line when the type-bars are retracted.

D indicates the oscillating escapement-lever, and D' the escape-wheel, mounted on an upright shaft D², which is provided at its upper end with a pinion *d*, which engages the carriage rack-bar *b*. These parts form part of the escape mechanism for controlling the endwise movement of the paper-carriage and platen under the action of the carriage-actuating-spring. Said escapement-lever D is connected with and receives oscillatory motion from the space-bar of the machine and is provided with a double pawl *d'*, which acts on the escape-wheel D'.

E indicates the upright connecting bar or link through which motion is transmitted from said escapement-lever to the rock-shaft C', by which the ribbon-guide C is given movement.

F' indicates the supporting-arm for the ribbon-guide mechanism. Said arm is located in front of the platen and is attached to and rises from the shift-frame F of the machine, on which the carriage is mounted and has endwise movement.

So far as described the devices herein shown in the accompanying drawings are like those heretofore used on the Oliver type-writing machine.

Now, referring more particularly to the features constituting the present invention, G indicates an upright or vertically-arranged rocking lever which is pivotally supported between its ends on the rear or inner face of the arm F' by means of a horizontal pivot-stud *g*, so that said arm has an oscillatory movement in a vertical plane parallel with the central axis of the platen. The lever G is provided with a horizontally-arranged pointer G', which extends from the top of the lever rearwardly over the top of the platen, with its free ends adjacent to the printing-line on the paper, and is adapted for lateral oscillation by the swinging of the lever G on its pivot *g*. At its lower end the said lever G

is provided with a horizontally-extending arm G^2 , which projects laterally therefrom and is provided at its end with a weight G^3 . Said laterally-extending horizontal arm G^2 of the lever G is located over and in position for contact with the forward end of the escapement-lever D . The parts are, moreover, so arranged that when the said escapement-lever is in its normal or depressed position the lever G will stand in position with the pointer G' in line with the printing or striking point of the type. When, however, the front end of the escapement-lever is lifted by actuation of one of the key-levers of the machine, then said forward end of the escapement-lever will strike and lift the weighted arm G^2 of the lever G , with the effect of throwing the upper end of said lever laterally and the pointer G' away from the printing-point and out of the way of the type which is brought in contact with the paper by the operation of the key-lever. This position of the pointer is indicated by dotted lines in Fig. 2.

A stop for limiting the movement of the lever G and the pointer under the action of the weight G^3 is provided by means of a headed stud H , which is secured in the rear or inner face of the standard F' at a point near the upper end of the lever and passes through a slot G' , formed in the lever G concentrically with the pivot g thereof. The contact of said pin or stud with one end of said slot serves to limit the movement of the pointer toward the right under the action of said weight and to thereby retain the pointer accurately in its indicating position when the lever is free from the influence of the escapement-lever. Contact of the stud H with the opposite end of said slot serves to limit the movement of the upper end of the lever toward the left, and thereby prevent excessive movement thereof when swung away from the printing-point by the striking of the escapement-lever against its weighted arm.

Instead of employing a weight for returning the pointer to its normal position a spring may be used for this purpose. Such a spring is indicated by I in Fig. 4, the same being shown as having the form of a coiled-wire spring, attached at one end to the lower arm of the lever G and at its opposite end to the ribbon-throw arm or standard F' .

While the lever G is shown as actuated by the contact therewith of the escapement-lever of the machine, the same result will be produced by an arrangement of the parts by which said lever is operated by some other vibratory part of or on the machine, the movements of which correspond with those of the universal bar of the machine, and I do not, therefore, wish to be limited to the particular construction illustrated in the means for actuating said lever except as so far as the same may be set forth in the appended claims.

I claim as my invention—

1. The combination with a platen, printing means acting downwardly on the top surface thereof and a supporting-arm which rises at the front of the platen, of an upright indicating-lever pivoted to the inner face of said supporting-arm to swing on a horizontal axis transverse to the central axis of the platen and having at its upper end a pointer which extends rearwardly over the platen, means yieldingly holding the said lever in position with its pointer in line with the printing-point, and a vibratory part of the machine, the movement of which corresponds with that of the universal bar of the machine adapted to act on said lever to throw the pointer away from said printing-point.

2. The combination with a platen, a supporting-arm which rises in front of said platen, an escapement-wheel and an escapement-lever which swings in a vertical plane, of an upright indicating-lever pivoted to the inner face of the said supporting-arm to swing on a horizontal axis transverse to the central axis of the platen and provided at its upper end with a pointer which extends rearwardly over the platen, and at its lower end with a laterally-extended arm located in position for contact therewith of said escapement-lever in the vibratory movement of the latter, and means yieldingly holding said lever in position with its pointer in line with the printing-point.

3. The combination with a platen, of an indicating-lever provided at its upper end with a pointer, said lever being pivoted to swing on a horizontal axis transverse to the central axis of the platen and provided at its lower end with a laterally-extending weighted arm and a vibratory part of the machine having movement in a vertical plane and the movement of which corresponds with those of the space-bar of the machine, said vibratory part being adapted to act on the said weighted arm to throw the pointer away from the said printing-point.

4. The combination with a platen and a supporting-arm which rises at the front of the platen, of an indicating-lever provided at its upper end with a pointer, said lever being pivoted to the inner face of said supporting-arm to swing on a horizontal axis transverse to the central axis of the platen, means yieldingly holding said lever in position with the pointer in line with said printing-point, a stud on said supporting-arm engaging a transverse slot in said lever to limit the movement of the lever in both directions, and a vibratory part of the machine the movement of which corresponds with that of the space-bar of the machine and which is adapted to act on said lever to throw the pointer away from the said printing-point.

5. The combination with a platen, a supporting-arm which rises in front of said

platen, of an escapement-wheel and an es-
capement-lever which swings in a vertical
plane, of an indicating-lever provided at its
upper end with a pointer, said lever being
5 pivoted to the rear face of the said support-
ing-arm to swing on a horizontal axis trans-
verse to the central axis of the platen, and
being provided at its lower end with a later-
ally-extended weighted arm located in posi-
10 tion for contact therewith of said escape-

ment-lever in the vibratory movement of the
latter.

In testimony that I claim the foregoing as
my invention I affix my signature, in pres-
ence of two witnesses, this 28th day of Octo- 15
ber, A. D. 1905.

GUSTAF PERSSON.

Witnesses:

WM. H. O'BRIEN,
B. C. YOUNG.