No. 895,891. PATENTED AUG. 11, 1908.

G. PERSSON.

PRINTING POINT INDICATOR FOR TYPE WRITERS.

APPLICATION FILED JAN. 23. 1908.

Fig. 1.

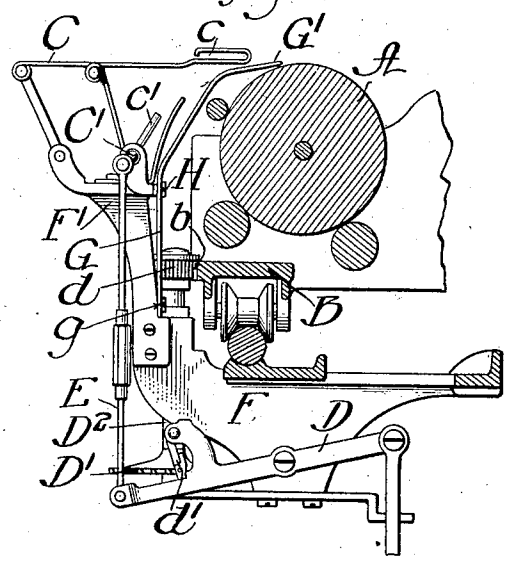


Fig. 2.

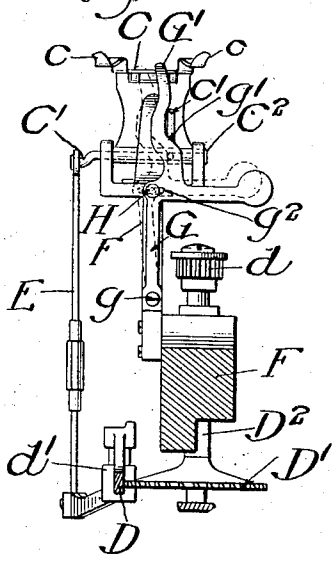
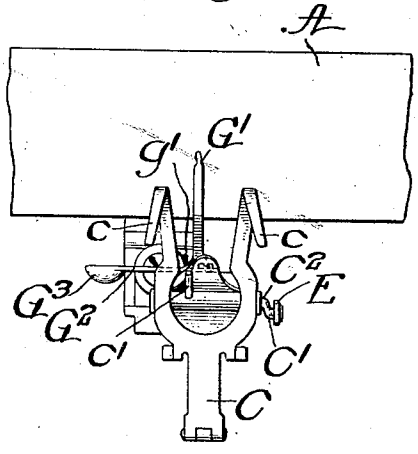


Fig. 3.



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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. 895,891. Specification of Letters Patent. Patented Aug. 11, 1908.

Continuation of application Serial No. 344,938, filed November 24, 1906. This application filed January 23, 1908. Serial No. 412,252.

To all whom it may concern:

Be it known that I, GUSTAF PERSSON, a citizen of the United States, and a resident of 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 an improved printing point indicator adapted for application to typewriting machines of the 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.

The invention is shown in the accompanying drawings as applied to a typewriter of the kind known as the "Oliver"; but the features constituting it may be applied to typewriting 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" typewriting 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.

As shown in said drawings, A indicates the platen, and B the main longitudinal member or frame bar 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" typewriting 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 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^1 the escape-wheel, mounted on an upright shaft D^2 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 under the action of the carriage actuating spring. Said escapement lever D is connected with and receives oscillatory motion from the universal bar of the machine, and is provided with a double pawl d^1 which acts on the escape-wheel D^1. E indicates the upright connecting bar or link through which motion is transmitted from said escapement lever through the crank C^1 to the rock-shaft C^2 by which the ribbon-guide C is given movement.

F^1 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 shown in the accompanying drawings are like those heretofore used on the "Oliver" typewriting machines.

Now referring more particularly to the features constituting the present invention, G indicates an upright or vertically arranged rocking lever which is pivotally supported at its lower end on the rear or inner face of the arm F^1, by means of a horizontal pivot stud *g* so that said lever 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^1 which extends from the top of the lever rearwardly over the top of the platen, with its free end 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*. The said lever G is provided above the pivot *g* with a horizontally extending arm G^2 which projects laterally therefrom and is provided at its end with a weight G^3. Said lever G is also provided at the side thereof at which the arm G^2 is located with a laterally projecting shoulder or cam projection g^1 having an oblique edge which is inclined in a di-

rection oblique to the direction of movement of the lever G.

c^1 is a rigid arm or stud projecting radially from the horizontal rock-shaft C^2. The oblique edge of the cam projection g^1 is located in the path in which the stud or arm c^1 swings in the movement of the rock-shaft C^2, and said stud is adapted for contact with the said cam projection g^1 when the rock-shaft C^2 is rotated in a direction to advance the ribbon-guide C toward the platen, thereby moving or shifting laterally the upper end of the lever against the action of the weight G^3 and carrying the pointer G^1 away from the printing point and out of the way of the type. This position of the pointer is indicated by dotted lines in Fig. 2. When the stud c^1 is withdrawn from contact with the cam g^1, the weight G^3 turns the lever G to its normal position with the pointer G^1 over the printing point on the platen.

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^1 and passes through a slot g^2 formed in the lever G concentrically with the pivot g thereof. The contact of said pin or stud with the ends of the slot limits the sidewise movement of the lever G and retains the pointer G^1 accurately in its indicating position when the lever is free from the influence of the stud c^1.

I claim as my invention:—

1. In a typewriting machine, the combination with the platen which receives the impressions of the type on its top surface, of an upright indicating lever located at the front of the platen and pivoted to swing on a horizontal axis located below the top of the platen and transverse to the central axis of the platen, said lever being provided at its upper end with a pointer which extends rearwardly over the platen, and above its pivot with a lateral cam projection, a horizontal rock-shaft arranged parallel with the platen, and having a rigid radial arm adapted to act upon said lateral projection, means yieldingly holding said lever in position with its pointer in line with the printing point, and means giving oscillatory motion to said rock-shaft corresponding to the movements of the universal bar of the machine.

2. In a typewriting machine, the combination with a platen, of an upright indicating lever pivoted to swing on a horizontal axis transverse to the central axis of the platen, said lever being provided above its pivotal axis with a laterally projecting weighted arm, and with a lateral cam projection located at the same side thereof as said weighted arm, a horizontal rock-shaft arranged parallel with the platen and having a rigid radial arm adapted to act on said lateral cam projection and means for giving oscillatory motion to said rock-shaft to correspond with the movements of the universal bar of the machine.

In testimony, that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 17th day of January A. D. 1908.

GUSTAF PERSSON.

Witnesses:
G. T. TOMPKINS,
L. L. SCHROEDER.