

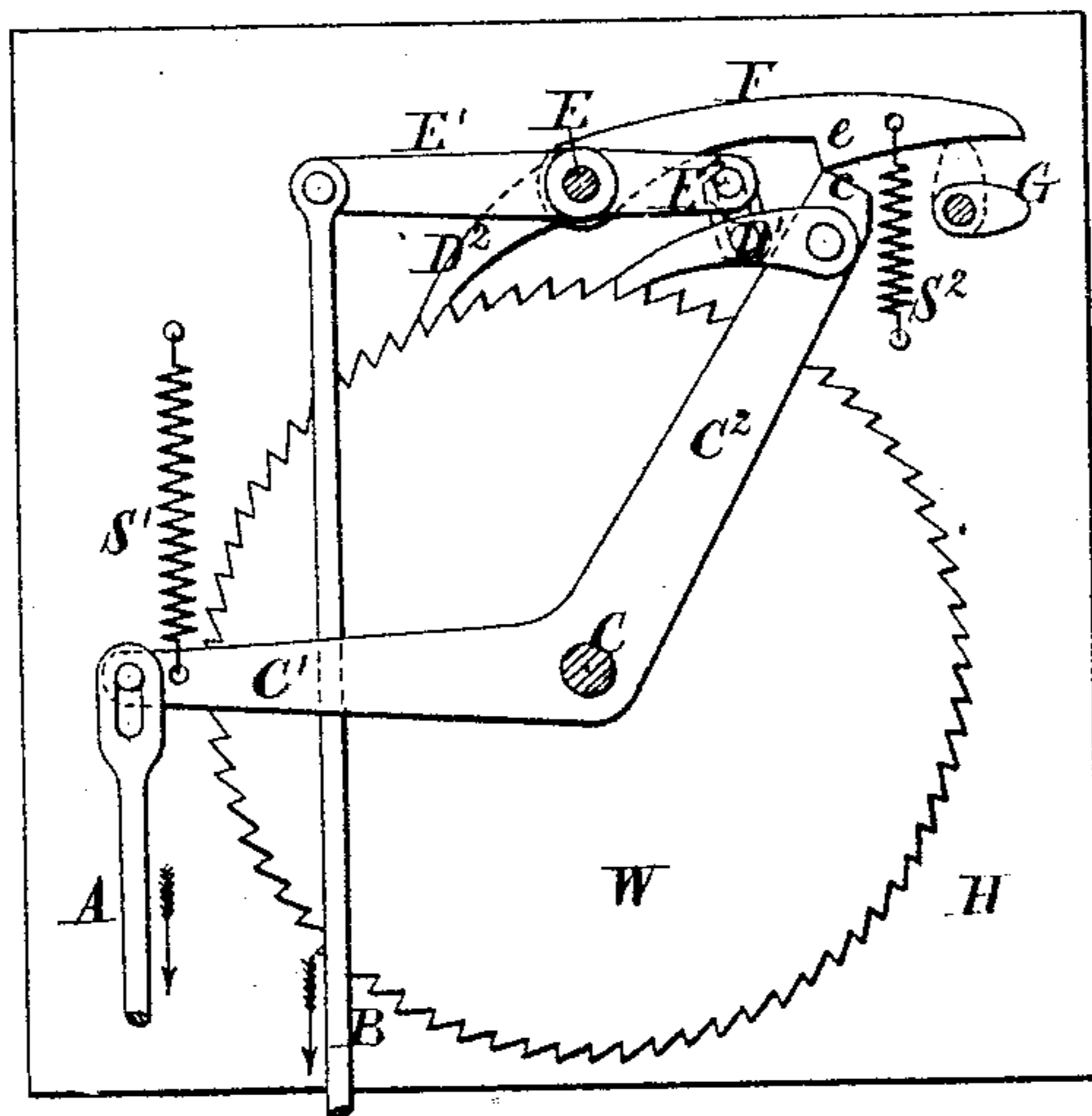
(No Model.)

E. C. DE SEGUNDO.

COUNTER OPERATING MECHANISM FOR TYPE WRITERS.

No. 455,123.

Patented June 30, 1891.



Witnesses:—
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UNITED STATES PATENT OFFICE.

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COUNTER-OPERATING MECHANISM FOR TYPE-WRITERS.

SPECIFICATION forming part of Letters Patent No. 455,123, dated June 30, 1891.

Application filed February 18, 1891. Serial No. 381,853. (No model.)

To all whom it may concern:

Be it known that I, EDWARD CARSTENSIN DE SEGUNDO, a citizen of England, residing at No. 7 Victoria Street, Westminster, in the county of Middlesex, England, have invented a new and useful Improvement in Counter-Operating Mechanism for Type-Writers, of which the following is a specification.

My invention relates to means for counting and registering the number of words printed by a type-writer so as to determine the charges which are usually made at certain prices per folio of seventy-two words, or of some other number that may be determined on. As there are many different constructions of type-writers, the apparatus for counting, according to my invention, may have to be more or less modified as to the forms and proportions of its parts; but as all type-writers must have special organs for impressing a type, and also for advancing the line of printing for a blank space separating two words when no type is printed, I can, by mere modifications of form and position of the counting apparatus to suit different forms of type-writers, utilize these two distinct movements for effecting the counting of words, as I shall explain, referring to the accompanying drawing, which is a front view of the motor part of apparatus applicable to a type-writer for counting the number of words printed.

A is a rod connected either directly or it may be through suitable bell-crank or other levers to a lever or bar moved downward when any one of the types makes its impression, the connections being so arranged that for every impression the rod A is pulled down in the direction of the arrow. B is another rod similarly connected to that part of the type-writer mechanism which advances the line of printing for a blank space when no type is impressed, the rod B being by that action pulled down in the direction of the arrow. The rod A engages a pin on one arm C' of a bent lever pivoted by a pin C arranged in a hole which is slotted sufficiently to allow the rod A to make its upstroke without moving the lever-arm C'. The other arm C² of the lever carries a pawl D' and terminates with a square angled end c. The arm C' is urged upward by a spring S'. The rod B is jointed

to one arm E' of a lever which is pivoted by a pin E and has on its other arm a stud E², projecting under an arm F, which is mounted on the pin E, has a shoulder at e, and is urged down by a spring S². On the pivot-pin E is mounted a pawl D², which, as well as the pawl D', engages with the teeth of a ratchet-wheel W. When it is desired to count by folios, each of seventy-two words, I make the ratchet-wheel W with seventy-two teeth, or it might be with a simple fraction or multiple of 72, and I gear this wheel to a counter of any known kind, showing by dials and indices or otherwise units, tens, hundreds, or other multiples of the revolutions of the wheel W. When the counting is by some denomination other than that of folios, the number of teeth of W and its gearing to the counter can be suited to the denomination adopted. Under the end of the arm F is mounted a cam G, which can be turned by hand to the position indicated by the dotted lines, so as to prevent the arm F from descending. The pivots C and E, the axis of cam G, and the fixings of the ends of the springs S' S² are on a plate or frame H, of any convenient form, fixed in any convenient position on the framing of the type-writer and forming part of the casing of the counter.

The action of the apparatus is as follows: When a letter is printed, the rod A draws down the arm C', advancing the arm C² and causing the pawl D' to advance the wheel W one tooth; but by this movement of arm C² its end c comes in front of the shoulder e, and the arm F dropping holds arm C² in its advanced position, the arm C' being thus held down. Succeeding movements of rod A in the printing of succeeding letters have then no effect on arm C' and produce no further movement of the wheel W; but when after all the letters constituting a word have been printed the rod B is pulled down. Then arm F is raised, releasing the end c from the shoulder e, and arm C' is raised by the spring S', ready to be pulled down when the first letter of the next word is printed, so that the wheel W is again moved forward a tooth. Thus, however, many letters occur in a word, only one of them (the first) is registered on the counter, and however many blank spaces the line of printing may be advanced there

is no registration. The pawl D^2 prevents the wheel W from turning backward.

In many cases when numerals are printed it is usual to reckon every numeral as a word.

5 When this is to be done, the cam G is turned to the dotted position, preventing descent of arm F , consequently leaving the levers $C' C^2$ in condition to move the wheel W one tooth every time the rod A descends.

10 In the apparatus above described the rods A and B are assumed to have independent movements, the rod A being pulled down only when a type is impressed, and rod B being pulled down only when the line of printing is
15 advanced one space. As, however, the line must be advanced a space when a type is impressed, it may in some machines be difficult to secure the desired independent movements of rods A and B —that is to say, the depres-
20 sion of rod B in moving the line one space may be accompanied by depression of the rod A .

In order to prevent the depression of the rod A from registering when it accompanies
25 the depression of rod B , I link the pin on the arm E^2 to a pin on the pawl D' , so that whenever rod B is depressed the pawl D' is lifted out of gear with the teeth of W , and consequently the depression of the rod A at the
30 same time with rod B effects no registration.

Having thus described the nature of my invention and the best means I know for carrying it out in practice, I claim—

35 1. A counter-operating mechanism for type-writers, consisting of a rotating wheel for connecting with a suitable counter, an

oscillating bent lever carrying at one end a pawl for engaging the wheel and provided at the opposite end with a rod adapted to be moved by a part of the type-writer when an
40 impression is made, a pivoted lever having a rod adapted to be operated by a part of the spacing mechanism of the type-writer, a pivoted shouldered arm moved by and serving to engage the bent lever, and means for dis-
45 engaging the arm from the bent lever when the aforesaid rod is moved by the spacing mechanism of the type-writer, substantially as described.

2. The combination, in a counting mech-
50 anism for a type-writer, of a ratchet-wheel W , a bent lever having arms $C' C^2$, provided, respectively, with the rod A and pawl D' , the pivoted lever E' , having the rod B and stud E^2 , the pivoted shouldered arm F , adapted to
55 engage and hold the bent lever, and a cam G for holding the shouldered arm out of engagement with the bent lever, substantially as described.

In testimony whereof I have signed my
60 name to this specification, in the presence of two subscribing witnesses, this 6th day of February, A. D. 1891.

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