(Model.) 2 Sheets—Sheet 1.

F. W. JONES.

COUNTER FOR TYPE WRITERS.

No. 482,361. Patented Sept. 13, 1892.

Fig. 2.

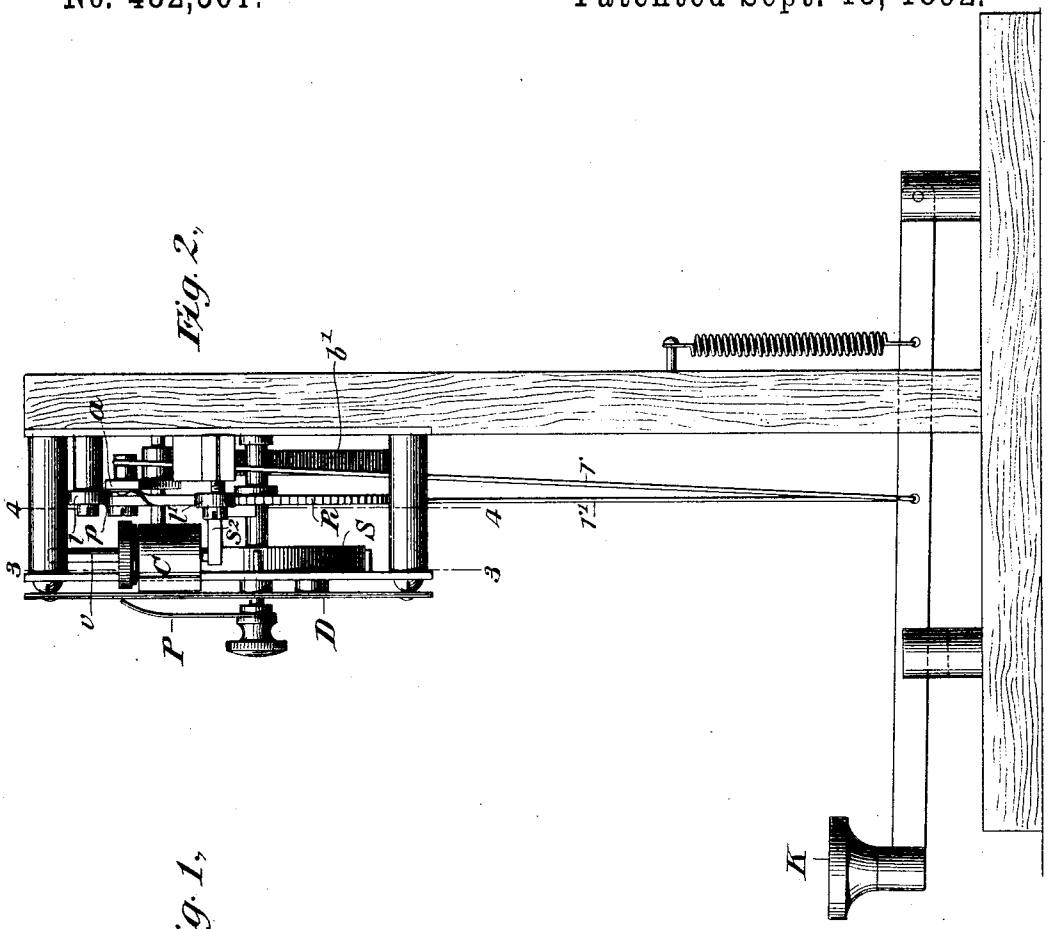
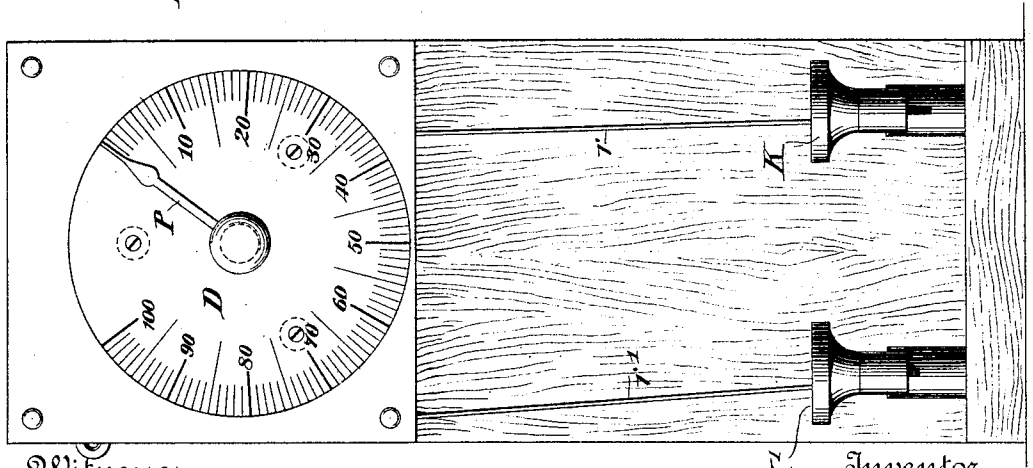


Fig. 1.



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(Model.) 2 Sheets—Sheet 2.

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Fig. 3.

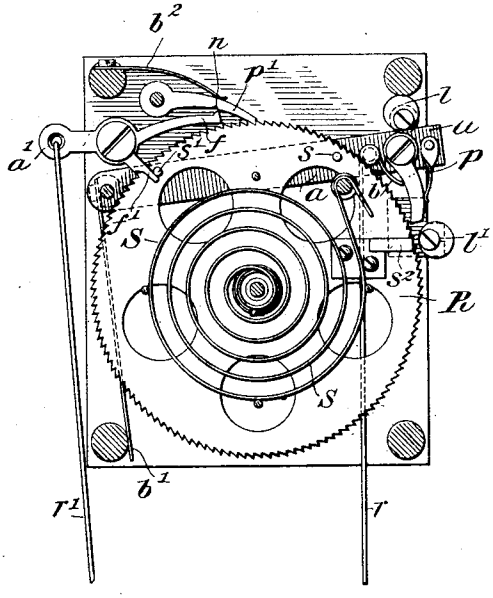


Fig. 4.

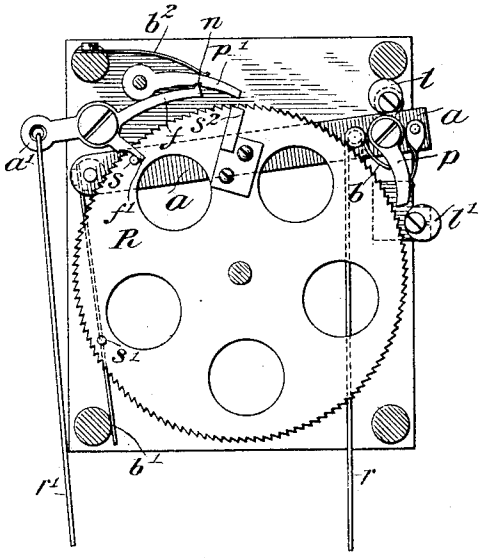
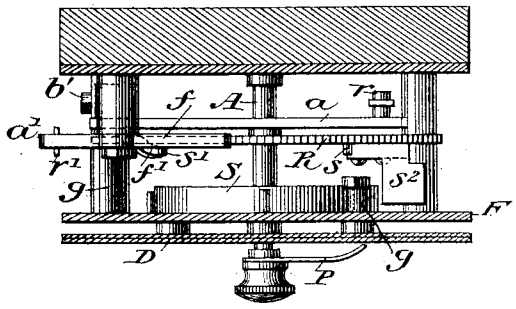


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANCIS W. JONES, OF NEW YORK, N. Y.

COUNTER FOR TYPE-WRITERS.

SPECIFICATION forming part of Letters Patent No. 482,361, dated September 13, 1892.

Application filed October 31, 1891. Serial No. 410,473. (Model.)

To all whom it may concern:

Be it known that I, FRANCIS W. JONES, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Counting-Machines, of which the following is a specification.

My invention relates to mechanical counting-machines in which a pointer is moved step by step across the face of a dial in conjunction with an actuating-key, a ratchet arm and wheel, and a means of releasing and returning said pointer to zero, either by means of a releasing key and spring whenever desired or automatically when the pointer reaches a predetermined point.

The object of my invention is to provide a simple and convenient method of counting letters, words, paragraphs, or pages, especially on a type-writing machine. I obtain this object by means of the machine illustrated in the accompanying drawings, which are made a part of this specification, and in which—

Figure 1 gives a front view of the machine, showing the dial, the pointer, and the actuating and releasing keys. Fig. 2 gives a side view of the machine, showing the connections between the different parts. Figs. 3 and 4 give sectional views of the machine in order to better illustrate the working of the same and the action of the different parts on each other. Fig. 5 gives a top view of the working parts.

Similar letters represent similar parts throughout.

In referring to the different views shown in the drawings, Fig. 1 gives a front view of the machine, in which is shown the dial D, marked from "1" to "100," the pointer P, the actuating-key K, the releasing-key K′, and the connecting-rods r and r'.

Fig. 2 gives a side view of the different parts of the machine, showing the machine at zero with stop-arm s^2 resting against valve-pin v of the pneumatic cushion C. The lever of key K is also shown connected to actuating-arm a by means of rod r.

Fig. 3 gives a sectional view on lines 3 3 in Fig. 2 and shows retractile spring S, ratchet-wheel R, actuating-arm a, actuating-pawl p, attached to arm a, pinioned at g, retaining-pawl p', and forked releasing-arm a'.

The view shown in Fig. 4 is taken on line 4 4 in Fig. 2.

Fig. 5 gives a top view of the machine, showing the peculiar shape of arm s^2 and the relative position of the retractile spring S to the other parts, and also shows the outer end of spring S fastened to frame F by pin g'.

Now, taking Fig. 3 as the normal position for the different parts, actuating-pawl p and arm a are shown as held away from the ratchet-wheel R by means of the springs b and b', and the retaining-pawl p' is shown as held against ratchet-wheel R by means of spring b^2. The movement of arm a and pawl p is restricted by the limiting-stops l l'. The stop-pins s and s' and stop-arm s^2 are fastened to the ratchet-wheel R. One end of spring S is shown as fastened to the shaft on which pointer P and ratchet-wheel R are mounted. The other end of spring S is fastened to the front frame of the machine by means of the pin g'. (Shown in section.) Now by pressing down on key K arm a is pulled down by rod r, pressing pawl p against a tooth on the ratchet-wheel R, thereby moving it and pointer P one step. The spring b' lifts the arm a and pawl p away from ratchet-wheel R as soon as the key K is released. Of course the oftener the key K is actuated the farther around the dial-pointer P is moved. To release pointer P at any point below the "100" mark and allow it to return to zero it is necessary to press down key K′, thereby causing fork f of arm a' to press against retaining-pawl p' and lift it away from ratchet-wheel R, which is then compelled by spring S to return with pointer P to the starting or zero point, where it is stopped by arm s^2 striking against the valve-pin v of pneumatic cushion C. Should it be necessary for the pointer P to be moved around to the "100" mark, it will then be automatically released by pin s striking against fork f' of arm a', causing fork f to strike against pawl p', lifting, and by entering notch n on pawl p' holding, it away from the ratchet-wheel R, as shown in Fig. 4, until ratchet-wheel R and pointer P return to zero and cause pin s' to strike against fork f', as shown

in Fig. 3, and thereby release pawl p' and again allow it to come in contact with ratchet-wheel R. The pneumatic cushion C, having caught and deadened the sharp return stroke of the released spring, as before, thereby prevents undue shock or strain on the other parts of the machine.

While I believe this machine is especially adapted to be used in combination with a type-writer, it can be used for a number of different purposes where a counting and indicating machine may be found useful or necessary. I therefore do not limit myself to any particular use; but

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

1. In a mechanical counting-machine, the retaining-pawl p', notched at n, the releasing-arm a', arranged to interlock with pawl p' at n, and the releasing-pin s', in combination with the actuating-key K, the connecting-rod r, the actuating-arm a, and pawl p, the ratchet-wheel R, and spring S, all substantially as set forth.

2. In a mechanical counting-machine, the combination of releasing-arm a' and retaining-pawl p' with the ratchet-wheel R, pins s s', and spring S, all substantially as set forth, and for the purpose of automatically releasing ratchet-wheel R.

3. In a mechanical counting-machine, the combination of releasing-key K′, rod r', and forked arm a' with retaining-pawl p', ratchet-wheel R, releasing-pins s', and spring S, all substantially as set forth.

4. In a mechanical counting-machine, the combination of the pneumatic cushion C and plunger v with stop-arm s^2, ratchet-wheel R, and spring S, all substantially as set forth, and for the purpose of checking the momentum of ratchet-wheel R when it is released and returning to zero.

5. In a mechanical counting-machine, the combination of retaining-pawl p', having a notch n, with releasing-arm a', ratchet-wheel R, pins s and s', and spring S, all substantially as set forth.

6. A mechanical counting-machine consisting of the actuating-key K, actuating-arm a, connected to key K by means of rod r, pawl p, fastened to arm a and arranged to be pressed against wheel R, the ratchet-wheel R, arranged to be rotated step by step with the pointer P, retaining-pawl p', arranged to hold wheel R in place, the releasing-arm a', arranged to be pressed against pawl p', spring S, arranged to return wheel R to the zero-point when not held by pawl p', and pneumatic cushion C, arranged as a stop for wheel R, all as set forth and shown.

Signed at St. Louis, in the State of Missouri, this 17th day of October, A. D. 1891.

FRANCIS W. JONES.

Witnesses.

CHAS. F. BARTLETT,

THOS. P. WHEELER.