

(No Model.)

J. W. PECK.

TYPE WRITING MACHINE.

No. 353,965.

Patented Dec. 7, 1886.

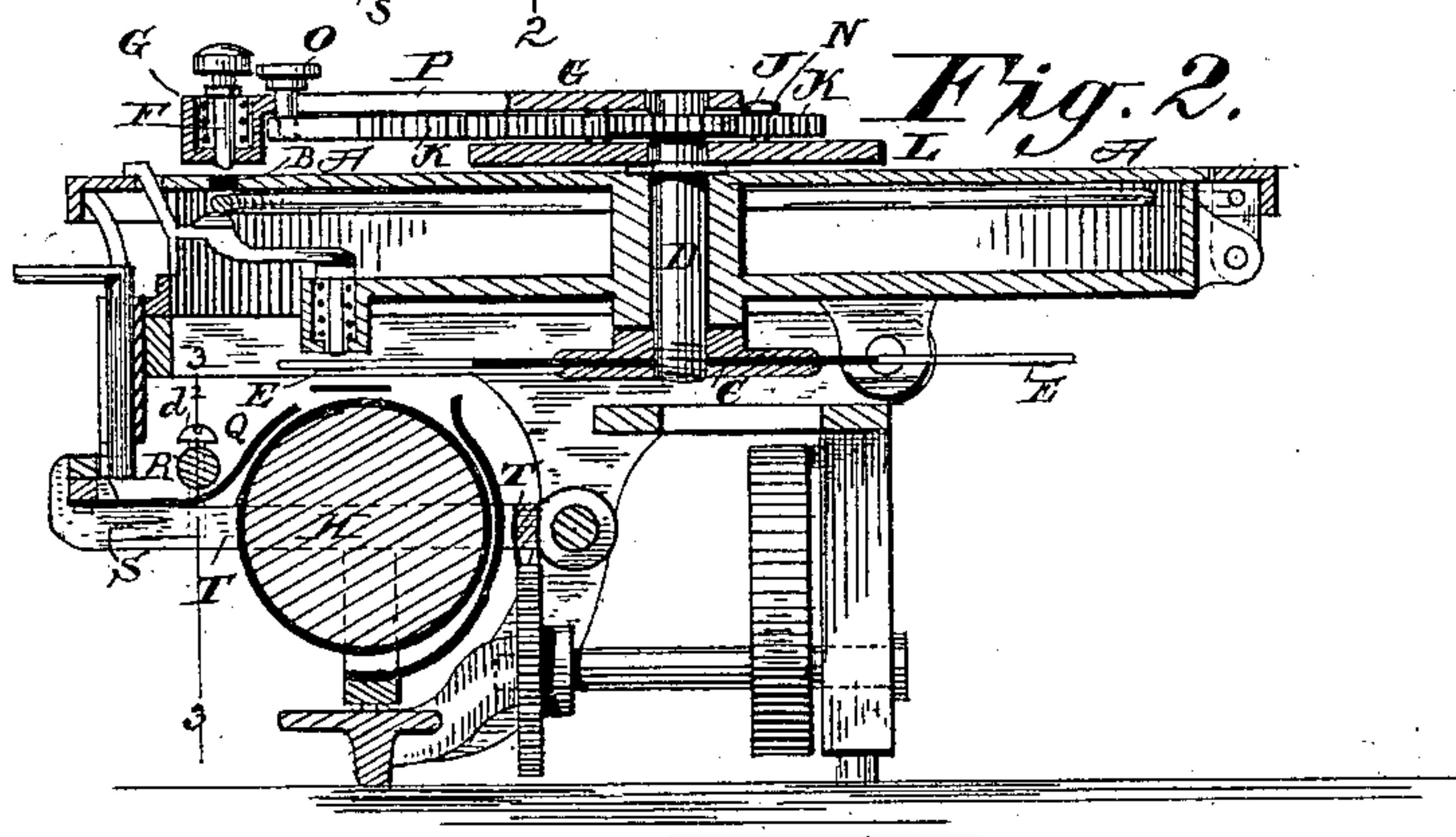
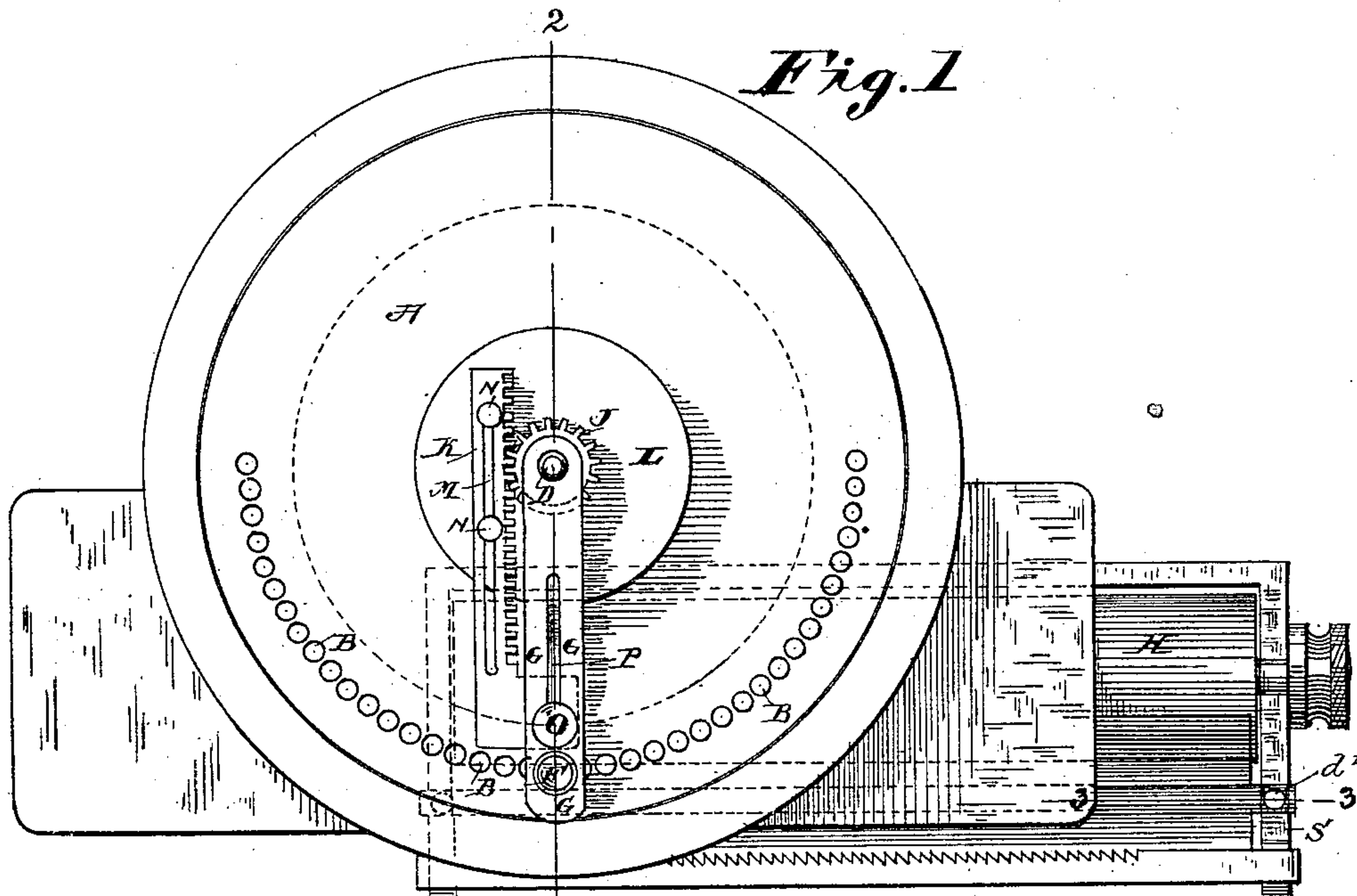
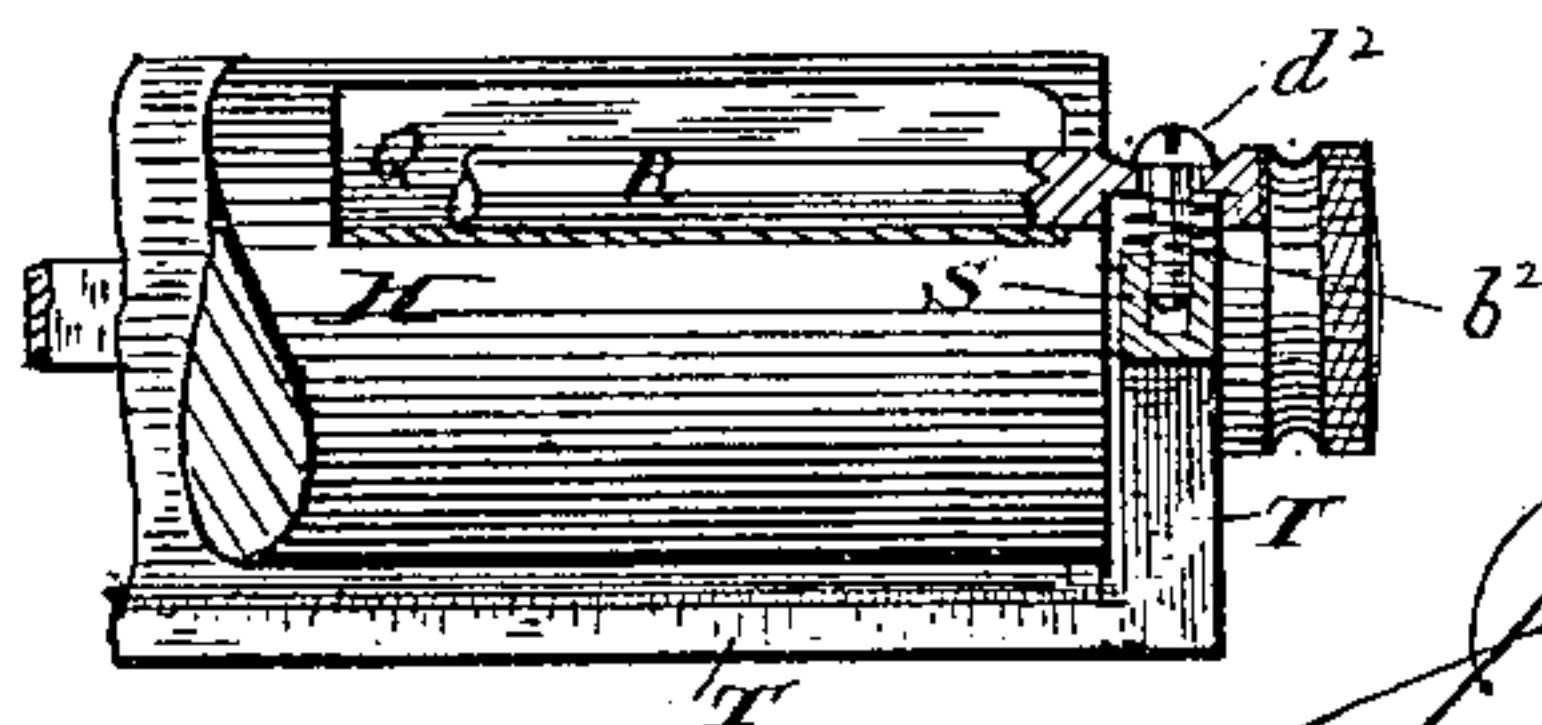


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH W. PECK, OF WALTHAM, ASSIGNOR TO JAMES H. WAITE, OF
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TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 353,965, dated December 7, 1886.

Application filed January 30, 1886. Serial No. 190,354. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. PECK, of Waltham, in the county of Middlesex and State of Massachusetts, have invented certain
5 new and useful Improvements in Type-Writing Machines, of which the following is a full, clear, and exact description.

This invention particularly relates to that class of type-writing machines in which an
10 imprint from the several type-characters—such as letters, -(capital and small,) marks of punctuation, &c.—with which the machine is provided is secured with the use of a stylus, which by the operator is changed about upon
15 the machine, and, being located at any one of a series of certain defined points, all preferably properly marked for identification and distinction one from the other, and in accordance with the type-characters used in the ma-
20 chine, is then and there made by the operation of it, and of the other parts of the machine properly arranged therefor, to secure an imprint of the type-character corresponding in character to that represented by the point of
25 the series of said points at which the stylus is located and operated.

This invention, however, in some of its parts or features, is applicable to other classes of type-writing machines, as will fully appear
30 from the description hereinafter given thereof.

One of the particular and most essential features of this invention consists in mechanism, substantially such as hereinafter described, by which to rotate the common holder
35 or carrier for the series of type-characters of the machine independently of the rotation thereof by the arm carrying the stylus, and through which stylus the imprint of the given type of the series of types is made by inserting
40 it in a given hole of the stationary perforated indicator or plate; and while, in one respect, the purpose of such an arrangement of mechanism is the same as of other well-known arrangements of mechanism—to wit, to enable either
45 series of a double series of type-characters arranged in a circle about the axis or center of rotation of their common holder and embracing the double series (a set of capital and a set of small letters of the alphabet) to be brought
50 into position for being printed from with the

use only of one set of corresponding lettered holes in said perforated indicator or plate, and the same stylus—another purpose of this invention is to enable said result to be accomplished in a most direct, simple, and ready
55 manner, and by means capable of convenient use at all times and without requiring any radical change in the position of the hands of the operator necessary for manipulating the stylus to secure imprints of the type-charac-
60 ters to which the machine is adapted.

Again, another feature of this invention, and which is quite essential and important in connection more particularly with the taking or making of manifold copies of the matter
65 printed, consists in a novel arrangement of the clips employed for binding the paper to the paper-supporting roller, whereby the pressure of said clips upon the paper to confine the same to the roller may be varied and
70 regulated at pleasure.

In the drawings forming a part of this specification, Figure 1 is a plan view of a type-writing machine of the class to which this invention relates, showing the mechanism of
75 the present invention just above referred to. Fig. 2 is a transverse section on line 3 2, Fig. 1. Fig. 3 is a detail view, partly in vertical section, line 3 3, Figs. 1 and 2.

As the features of this invention relate to
80 special parts of a type-writing machine of a class well known and before generally described, the machine, except as to the features of the invention, will be only described so far as may be necessary to make the present in-
85 vention intelligible.

In the drawings, A represents a horizontal and stationary or non-rotating indicator or plate, which, as usual, has a series of perforations or holes, B, arranged in a circle concentric with the axis of a horizontal rotating
90 holder or carrier, C, of a vertical arbor, D. This carrier C has a series of types, E, arranged in a circle concentric with its axis of rotation.

F is a stylus carried by a radial arm, G, of the arbor D, and adapted to be inserted in a hole, B, of said perforated indicator or plate A, and thereby to press the type of said series
95 of types of said carrier or holder and the one
100

corresponding to the mark of said hole into which said stylus is so inserted in a manner to make an imprint therefrom upon a papersheet confined to the paper-supporting roller H, and
5 always at a given or determined point of the machine, irrespective of the hole of the perforated indicator into which said stylus may be inserted, as aforesaid.

These mechanisms, so far as now described, 10 and with all the appurtenances thereunto belonging not particularly referred to, constitute no part whatever of the present invention, and so far as particularly shown in the drawings they are substantially such as are shown 15 and described in the application of a Mr. James H. Waite, of even date herewith, and for a more particular description thereof reference is hereby had to the specification and drawings of said application.

20 The common holder or carrier C of the type-fingers employed is in a horizontal plane below the horizontal perforated indicator or plate A, and its arbor D, turning in suitable stationary bearings at its upper end, carries a horizontal gear-wheel, J, and the 25 stylus-arm G, which is loose upon said arbor. K is a horizontal rack-bar meshing with said gear-wheel J on one side thereof, and arranged to slide horizontally upon a horizontal support, L, turning loosely on the type-finger-carrying arbor D, before referred to. This 30 rack-bar K has a slot, M, extending along its length, and it and vertical headed pins N of the support therefor act as guides to the horizontal slide of the bar on its said support, and 35 the rack-bar, by a pin, O, is engaged with a radial slot, P, of the arm G, carrying the stylus F, which pin is also headed, and secures the rack-bar against accidental escape from the 40 stylus-arm. Through this rack-bar K and gear-wheel J of the type-finger arbor D, with which it meshes, said arbor can be rotated, rotating at the same time the type-finger holder. With a proper relative arrangement of the 45 types of said type-holder and the providing thereof with a series of duplicate type characters—as, for instance, letters of the alphabet, one in capital and the other in small letters—either one of the said series can be brought into 50 position to secure an imprint therefrom, with only one series of said characters represented by the perforations of the perforated indicator or plate through the rotation of the type-carrying holder, just above described—that is, a rotation thereof by means of a slide of the 55 rack-bar K. This rotation of the type-holder, as is plain, is independent of the rotation thereof, through the swing of the stylus-arm, loosely hung upon the arbor of said type-holder, 60 and by such independent rotation of the type-carrying holder with said holder properly adapted, and, as well known, for the imprint of its separate types, when either of the same is brought to a determined and given position 65 in the machine by the operation of a stylus, and with said two series of type-characters

(capital and small letters) arranged for either one or the other thereof to be brought into operative position by the rotation of the type-holder through the swing of the stylus-arm, 70 the imprint of any of the letters of either of the two sets of letters can be secured, as well of the one set as of the other, and with only one series of holes in the perforated indicator. For said result—that is, the imprint either of 75 capitals or small letters—from a single set of holes in the perforated indicator or plate and by the insertion of the stylus, which is brought into proper position at each time by the swing of the arm carrying it into the proper hole of 80 the perforated indicator, to be accomplished under the conditions just above stated, the type-holder must be swung around by the independent means for swinging it, as described, sufficiently to bring the required series of let- 85 ters, whether it is the capital or small letters of the type-carrier, into proper operative position relative to the movements of said type-carrier from the stylus-carrying arm to bring the letter of said type-carrier at the said de- 90 termined and given point of the machine. The arrangement of the two series of type-characters in relation to each other for this purpose is well known, and therefore needs no more particular description herein. 95

The machine herein described for the independent rotation of the type-carrier stated obviously enables the change from one to the other series of the two series of the letters of the alphabet—as, for instance, from capital to 100 small letters, or vice versa—to be made in a ready, easy, and quiet manner, and without necessitating any radical change in the position of the hand to operate the stylus, as has been explained. 105

The paper supporting roller is, as usual, provided with spring-clips Q, partially surrounding it, and by which to confine the paper closely to such an extent as not to tend to interfere with its proper feed forward when the 110 roller is actuated therefor, but at the same time to allow the paper to pass under the same as it is fed.

As well known, in all type-writing machines the success of the imprint of the types depends 115 in a great degree upon the closeness with which the paper is held in contact with the surface of the supporting-roller therefor at the place of impact of the type thereon, and that as a matter of course it is desirable that this 120 closeness of contact should be capable of adjustment to suit the various thicknesses of material which may be used from time to time, and as more particularly illustrated, when manifold or carbon copies to any number are 125 to be made, as is commonly the case. The adjustment by this invention of the pressure or confinement of the paper, &c., upon the paper supporting roller H is by means of a horizontal bar or rail, R, which is arranged 130 along the length of the paper-roller at the front side, and from end to end thereof, and

in front of and across and so as to bear against the outside of the spring-clips Q at said side of the roller, and is attached at each end support, S, of the carriage T for the paper-supporting roller. Said bar is backed up by a spring, b^2 , and so backed it is adapted to be adjusted to its pressure against the spring-clips Q of the paper-supporting roller through the turning in or out of their screw-sockets of set-screws d^2 , properly applied therefor, and so as to have a bearing against said bar on the opposite side thereof to that bearing against said springs.

Having thus described my invention, I claim—

1. In combination, a rotating type holder or carrier having a series of concentrically-arranged types, each adapted by a proper application of pressure thereto to have an impression taken from it, co-operating with an ink-ribbon suitably located therefor, a stationary or non-rotating perforated indicator or plate at one side of and concentric with said type-carrier, an arm turning loosely around the axis of rotation of the type-carrier, and mechanism, substantially such as described, which connects said arm and rotating type-carrier both from a swing of and from a forward or backward slide of a part of said mechanism on said arm, each rotation so secured being independent of the other, substantially as described, for the purpose specified.

2. In combination, a rotating type holder or carrier having a series of concentrically-arranged types, each adapted by a proper application of pressure thereto to have an impression taken from it, co-operating with an ink-ribbon suitably located therefor, a stationary or non-rotating perforated indicator or plate at one side of and concentric with said type-carrier, a radial arm carrying a reciprocating stylus adapted to be entered into and forced through a hole of said perforated indicator, and thus to exert pressure on the type of the type-carrier in line therewith, and turning loosely about the axis of

rotation of the type-carrier, and mechanism, substantially such as described, which connects said radial arm and rotating type-carrier, and is adapted to rotate said type-carrier both from a swing of and from a forward or backward slide of a part of said mechanism on said arm, each rotation so secured being independent of the other, substantially as described, for the purpose specified.

3. In combination, a rotating type holder or carrier having a series of concentrically-arranged types, each adapted by a proper application of pressure thereto to have an impression taken from it, co-operating with an ink-ribbon suitably located therefor, a stationary or non-rotating perforated indicator or plate at one side of and concentric with said type-carrier, an arm turning loosely about the axis of rotation of the type-carrier, and mechanism composed of a gear-wheel, J, on the arbor of the rotating type-carrier, and a rack-bar, K, meshing with said gear-wheel and carried by the said arm, on which it is adapted to slide, whereby said type-carrier can be rotated both from a swing of and from a forward or backward slide of a part of said mechanism on said arm, each rotation so secured being independent of the other, substantially as described, for the purpose specified.

4. In combination, in a type-writing machine, a rotating paper-supporting roller, a spring clip or clips, Q, for said roll, secured to a suitable stationary support, and adapted to confine the paper, while permitting it to be fed forward by the roller under its rotation, and a bar or rail, R, to press said clip or clips toward and against said roller and the paper carried by it, and which is capable of being adjusted and set as to such pressure, substantially as described, for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

J. W. PECK.

Witnesses:

WM. S. BELLOWS,
A. W. BROWN.