

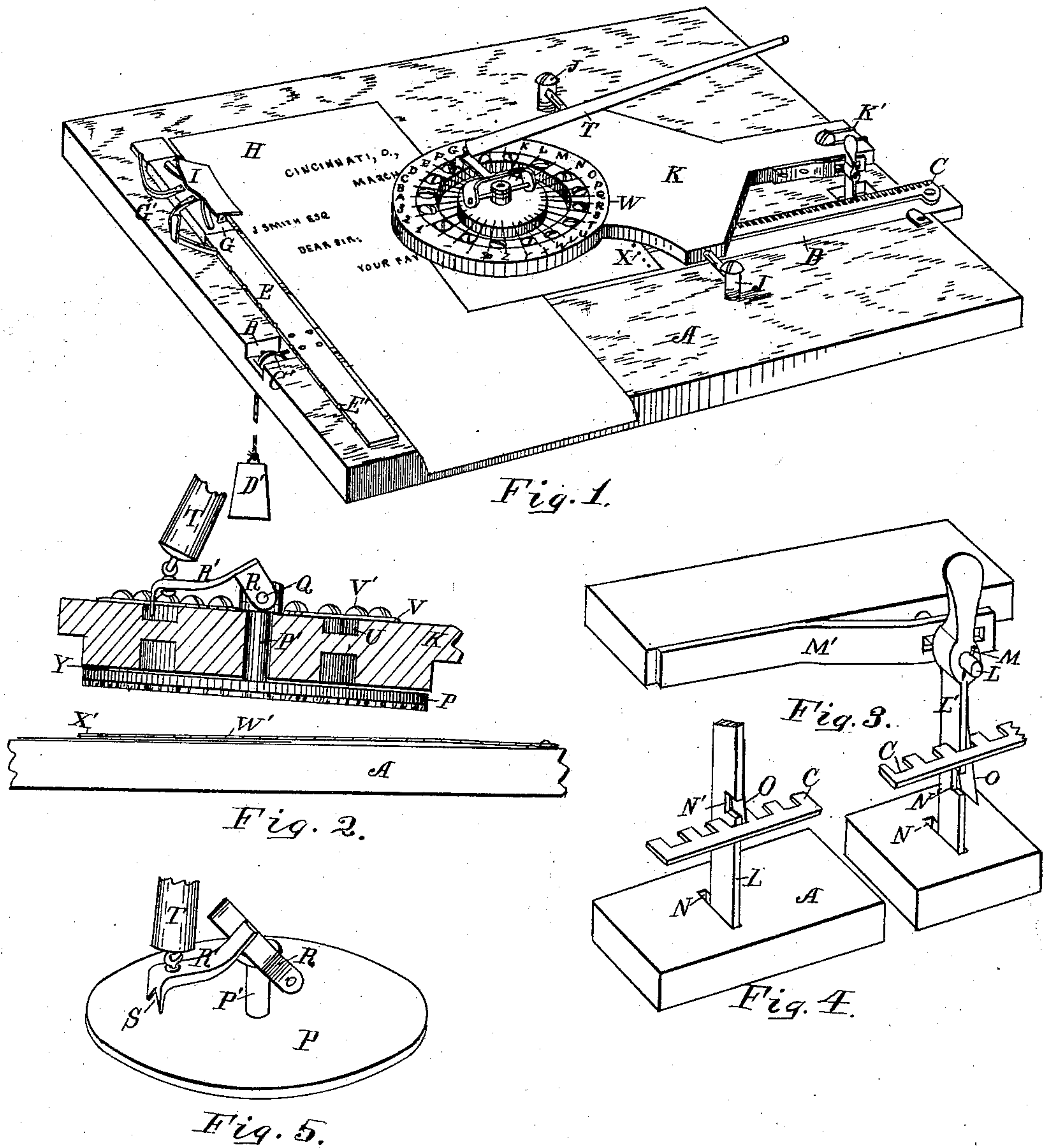
(No Model.)

J. S. MARTIN.

TYPE WRITER.

No. 264,091.

Patented Sept. 12, 1882.



Witnesses:
Alison M. Morrison
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UNITED STATES PATENT OFFICE.

JOHN S. MARTIN, OF CHERRY FORK, OHIO.

TYPE-WRITER.

SPECIFICATION forming part of Letters Patent No. 264,091, dated September 12, 1882.

Application filed March 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. MARTIN, of Cherry Fork, in the county of Adams and State of Ohio, have invented a new and useful
5 Improvement in Type-Writers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is an isometric view of the type-writer. Fig. 2 is a central vertical sectional
10 view of the forward end of the vibrating plate and type-disk. Fig. 3 is a perspective view of the rear end of the arm, showing the arrangement of the feeding mechanism for the paper. Fig. 4 is the same in different position, and
15 Fig. 5 is an isometric view of the type-disk.

The object of this invention is to provide a type-writer capable of being manipulated with one hand by means of a holder or stylus.

It consists—

20 First. In having the letters of the alphabet, figures, points, &c., cast on the lower face of the disk, the said letters and figures being in relief and homogeneous with the disk. Centrally is an arbor or spindle, which projects
25 vertically through and is journaled in the forward end of a vibrating arm. The upper end of the arbor or spindle is provided with a hinged arm having a downturned end or point, which is provided with a V-shaped fork. To
30 this arm is attached the lower end of the stylus or holder, which in writing is grasped by the hand.

Second. In providing a table directly beneath this elastic type-disk, with an ink-pad
35 having an aperture or opening at one side slightly larger than the face of one of the letters or characters on the disk, so that the letter-paper beneath the ink-pad will receive the impression of the letter or character which ap-
40 pears at the aperture in the ink-pad.

Third. In having the upper stationary face of the vibrating plate to which the revolving type-disk is journaled provided with letters, characters, or figures in a circle to correspond
45 with the letters and characters on the type-disk beneath, and each letter is provided with a radiating bar, so that the V-forked arm of the disk-arbor may be placed on said bars, as the different characters or letters desired are
50 successively selected by the operator.

Fourth. A vibrating arm having at its rear

end a retractile spring, and provided on the side with an adjustable latch for feeding the paper when the machine is in motion.

Fifth. A rack-bar sliding in a groove in the
55 table beneath the paper, with which the latch engages, having at the opposite end a transverse bar secured thereto, said bar being provided with a notched or serrated edge, to indicate the distance of the lines on the sheet in
60 writing; and, further, in having a sliding clasp secured to the transverse bar for holding the paper, all of which will now be described in detail.

In the accompanying drawings, A represents
65 the table to which the device is secured. This is provided with a groove, B, in its upper face, running from end to end, preferably a little to one side of the middle of said table, as shown. In this groove is placed a sliding bar, B', so
70 that its upper face will be flush with the upper surface of the table. At its rear end, and secured thereto, is a rack-bar whose toothed edge projects over the side of the sliding bar B'. To the forward end of the sliding bar B'
75 is attached a cord, which passes over the pulley C', and the lower or opposite end of the cord is equipped with a weight, D', so that the sliding bar, when not held by the feeding-latch, will be drawn up to the V-pulley C' or for-
80 ward part of the table. On the forward end of the sliding bar is secured a transverse bar, E, having a notched or serrated edge, E'. On the transverse bar is a sheath, G, adapted to
85 slide freely. To this sheath two curved spring-catches, G', are attached in such a manner that their ends diverge from each other and extend past the opposite ends of the sheath, so that their ends rest against the serrated or
90 notched edge of the transverse bar E, upon which the sheath slides. The ends of these spring-catches thus rest in the notches E', so that the operator, in manipulating the machine, simply disengages the spring-catches
95 from the said notches and slides the sheath up and down the transverse bar, as desired. The other side of the sheath has an extension (not shown) which projects under the paper H. On top of the sheath is a spring-lip, I, which
100 projects over the paper H to hold it in position.

Centrally on the table, and on each side of

the sliding bar B', is a stud, J. Between these studs, and pivoted thereto, is a vibrating arm, K. The rear end of this arm is flush with the rear end of the table A, and is provided with an elastic, K', or retractile spring for the purpose of holding the rear end of the vibrating arm down onto the table.

On the side of the arm K, at the rear end, is a stud, L, which carries thereon a vertical latch, L'. This latch is held on the stud by means of a pin, M; or a nut may be used for this purpose. A spring, M', is interposed between the arm K and latch L', so as to hold the latch on the stud away from the arm. The lower end of the latch projects through a slot, N, in the table. This slot is of sufficient length to permit the latch to be moved in toward the arm K without binding. The latch-piece L', when in its normal condition, as shown in Fig. 3, is in such a position that its outer edge enters the teeth of the rack-bar C on the sliding bar B'. At a suitable point on the edge is a recess or gain, N', and secured to the rear flat side of the latch is a flat spring, O, which overhangs the recess N', the end projecting somewhat below the recess. The weight D' tends to pull the rack-bar toward the forward end of the table; hence the tooth of the rack-bar presses against the flat spring O on the side of the latch-piece. As the vibrating arm is raised the spring O guards the tooth of the rack-bar, preventing it from entering the recess N'. When the lower end of the spring O passes above the rack-bar the spring retreats from the latch-piece L', and as the latch is again moved downward the tooth passes through the recess, permitting the succeeding tooth to rest against the spring O on latch L'. As the tooth passes through the recess N' the rack-bar and the transverse bar E, carrying the paper, move forward the distance of one tooth, allowing sufficient space for the operation of the next letter on the paper, and so on. The forward end of the vibrating arm has on its under side an elastic disk, P, on the lower face of which the letters, characters, &c., are formed in relief. These letters are preferably arranged in a circle. The elastic disk is secured to a spindle, P', which passes through and is journaled to the arm K, and on the upper end of the spindle is a cross-head, Q, to which are journaled, on opposite sides of the spindle, the branches R of an arm, R'. The free end of this arm is turned downwardly at the end and has a V-shaped fork, S. Secured to this end of the arm is the lower end of a holder or stylus, T, which is grasped by the hand. The holder or stylus may be attached to the arm R' by means of a swivel or otherwise in a manner most suitable, so that the spindle P' and disk can be revolved by the stylus without inconvenience. At the same time the outer end of the arm R' may be raised and lowered a limited distance by the holder T.

U is a concentric annular groove in the upper face of the vibrating arm K to permit the

downturned V-forked end S to enter at any point in its revolution. Radiating from the center and extending across this annular groove is a series of bars, V, secured on the outside of the groove to the vibrating arm by means of common screws V'. On a line with each bar V on the periphery of the disk is a letter or character to correspond with the letter or character on the elastic revolving disk P below.

Beneath the revolving disk P is a thin inked pad, W', secured along its inner edge X to the table. The forward edge of this pad has an opening or recess, X', at a point to correspond with the letters or characters in the elastic type-disk above, so that as the said type-disk revolves the various characters and letters will appear above the opening or recess X' in the ink-pad. Between the elastic type-disk and the under side of the vibrating arm, directly above the aperture in the ink-pad, is a raised surface, Y, so that the letter or character which appears beneath the raised surface will more readily make an impression on the paper beneath as the vibrating arm is pressed down.

The operation will now be described.

The sheet of paper or letter-head is secured under the clip I, as shown in Fig. 1, and the opposite edge of the sheet put under the ink-pad W'. The latch L' is then pressed toward the vibrating arm K, so that it will clear the teeth of the rack-bar C. The transverse bar E, carrying the paper, is then moved up to the type-disk P, and the paper H adjusted by moving the shield G down on the transverse bar E to the point desired. The stylus T is then grasped by the hand, and the arm R' raised, so that the fork S will clear the bars V, and rotated or turned until the fork appears over the letter-bar V, selected on the upper disk. The characters or letters on the revolving type-disk beneath are so arranged that a letter will appear over the aperture X' in the ink-pad, similar to the one selected by the operator above. Thus should the operator put the forked arm R' on the bar which indicates the letter Y a similar letter will appear at the aperture X' in the pad. The fork S having been placed on the bar, the hand at the same time moves the stylus downward by a sudden impulse, causing the relief-type on the elastic plate to make the imprint of its character on the paper H. The rear end of the vibrating arm is by this motion elevated, causing the spring O to appear above the rack-bar C. As the rear end of the vibrating arm descends and the recess or gain N appears at the tooth of the rack-bar the weight D' forces the rack-bar forward a distance equal to one tooth. The next tooth in the rack-bar, being on the opposite side of the spring O, is prevented from passing through. The apparatus is then in a position for the operator to repeat the process by selecting the next letter or character with the fork S and im-

5 pelling the vibrating arm downward. Thus the only manipulation required is to hold the stylus in the hand, as in ordinary letter-writing, and successively select the letters by rotating the spindle carrying the type-disk and force down the plate to make the impression.

10 I do not confine myself strictly to the latch mechanism for feeding the paper forward, since it is obvious various mechanical means for the same purpose may be devised. The same is true of the clip I and shield G for securing and adjusting the paper; but the forms herein shown appear the most suitable to accomplish the purpose.

15 Having described my invention, what I claim is—

20 1. An elastic revolving type-disk on the under side of a vibrating arm, secured to a spindle and operated by means of a hinged arm secured to a stylus, as herein shown.

25 2. An elastic revolving type-disk on the under side of a vibrating arm having a swivel to which it is secured, and a cross head having a hinged arm forked and provided with a manipulating holder or stylus, in combination

with radiating bars for receiving the forked arm, and letters or characters corresponding with the radiating bars, substantially as herein set forth:

3. In type-writers, the vibrating arm K, having at the rear end a retractile spring, K', carrying a latch, L' provided with a recess, N', and overhanging spring O, with the sliding bar B', carrying a rack-bar, and the weight D', substantially as and for the purpose set forth.

4. In type-writers, a table having the longitudinal groove B and the sliding bar B', provided with a rack, C, and weight D', in combination with the transverse bar E, notched on one side, E', and carrying a sheath, G, provided with spring-arms G', and clip I, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of March, 1882, in the presence of witnesses.

JOHN S. MARTIN.

Witnesses:

ALISON McMORRISON,
J. D. THOMPSON.