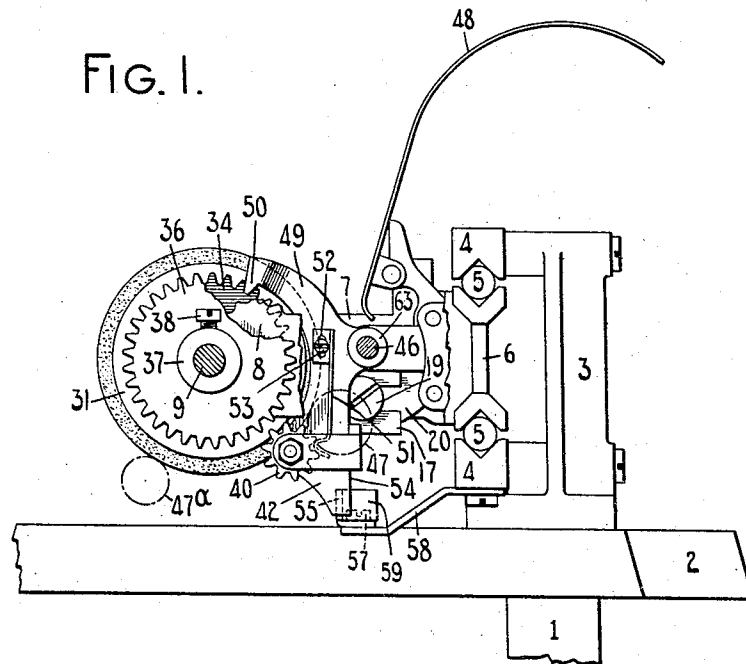
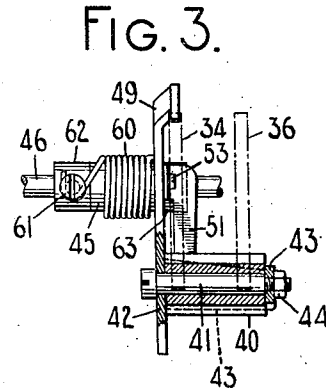
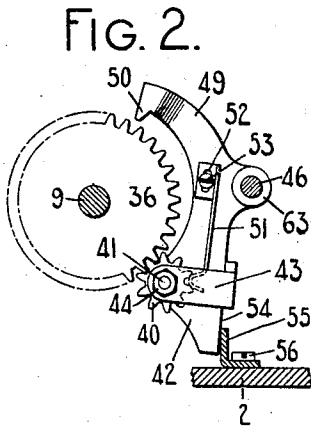


H. H. STEELE.
TYPE WRITING MACHINE.
APPLICATION FILED MAY 19, 1911.

1,052,186.

Patented Feb. 4, 1913.

2 SHEETS-SHEET 1.



WITNESSES:

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1,052,186.

2 SHEETS—SHEET 2.

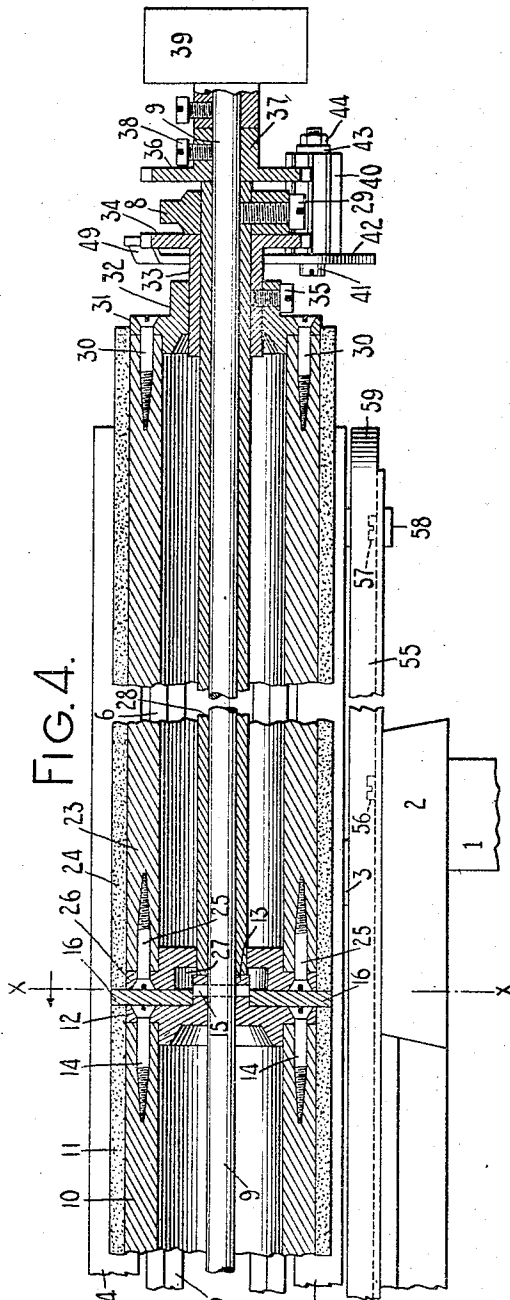


FIG. 4.

WITNESSES:

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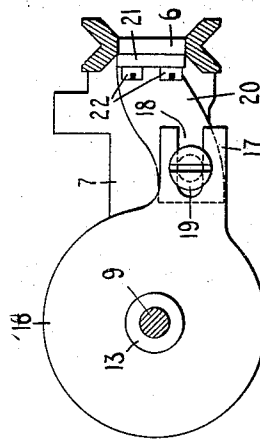


Fig. 5.

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UNITED STATES PATENT OFFICE.

HERBERT H. STEELE, OF MARCELLUS, NEW YORK, ASSIGNOR TO THE MONARCH TYPE-
WRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

1,052,186.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed May 19, 1911. Serial No. 628,165.

To all whom it may concern:

Be it known that I, HERBERT H. STEELE, a citizen of the United States, and resident of Marcellus, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to platens and paper feeding mechanism for typewriting machines and its object is to provide improved means for mounting and controlling the parts of a divided or sectional platen.

My present invention comprises improvements on the construction shown in my co-pending application, Serial No. 627,916 filed May 18, 1911, although it is to be understood that the principles of the present invention are applicable generally.

To the above and other ends my invention consists in the features of construction, arrangements of parts and combinations of devices to be hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a fragmentary side elevation partly in section of the upper part of a Monarch typewriting machine embodying my invention, said machine being of the wide platen style. Figs. 2 and 3 are respectively a side view and front elevation partly in section of the coupling devices for the platen sections. Fig. 4 is a fragmentary vertical longitudinal sectional view of the platen and associate parts. Fig. 5 is a transverse sectional view taken on a plane represented by the line $x-x$ in Fig. 4 and looking in the direction of the arrows at said line.

As appears from Figs. 1 and 4, the main frame of the machine comprises posts 1 supporting a top plate 2, whence rise standards 3 to which are secured grooved trackways 4 connected through anti-friction balls 5 with a slide or rear bar 6 comprised in a platen frame or carrier which further includes end bars 7 and 8. The end bars provide bearings for a platen axle 9 on which are mounted end to end the two sections or parts of a divided or sectional platen. The left-hand platen section comprises a core 10 and a sheath 11 and has operatively connected to its left-hand end

the usual line spacing ratchet wheel (not shown). As appears in Fig. 4, a platen head 12 provided with a hub 13 is secured to the right-hand end of the core 10 by wood screws 14, said platen head being overlapped by the sheath 11. A pin 15 passing transversely through the hub 13 and axle 9 secures the platen head 12 and the left-hand platen section to the axle 9.

The hub 13, as appears from Figs. 4 and 5, bears in a central opening in a circular supporting plate 16, said supporting plate having a rearward extension 17 formed with a horizontal open-mouthed slot 18 which receives the stem of a headed screw 19. Said screw engages in a tapped opening in the forwardly extending arm 20 of an angular bracket which further comprises a lateral arm 21 secured by screws 22 to the slide bar 6; and the head of said screw frictionally engages the extension 17. The bracket 20, 21 is thus rigidly secured to the platen supporting plate 16 is rigidly and adjustably secured by the screw and slot connection 18, 19 to said bracket, thus providing a rigid support for the left-hand platen section at its inner or right-hand end. The plate 16 is of substantially the same diameter as the platen section and its outer face or periphery conforms to the platen surface.

The left-hand platen section abuts against the left-hand face of the plate 16 while contiguous to the right-hand face of said plate is the right-hand platen section which comprises a core 23 and a sheath 24. Secured to the left end of the core by wood screws 25 is a platen head 26 which is overlapped by the sheath 24 and is formed with a depressed or recessed portion 27 which fits within the core 23 and also provides room for the hub 13. The platen head 26 bears on a long sleeve or collar 28 which surrounds the axle 9. The left-hand end of this sleeve 28 abuts against the hub 13; and said sleeve extends through the right-hand platen section and through the end bar 8, being secured in rigid relationship with said end bar by a screw 29 which, however, does not engage with the axle 9, said axle being free to turn in the sleeve 28 which is rigidly secured to the platen frame.

Wood screws 30 secure a platen head 31 to the right-hand end of the right-hand platen section, said platen head being provided with a hub 32 and bearing on the hub 33 of a gear wheel 34, which gear wheel 34 bears on the sleeve 28. The gear wheel 34 is rigidly secured to the right-hand platen section by a screw 35 which passes through the hub 32 and engages a tapped opening in the hub 33. The gear wheel 34 is at the left of the end bar 8. Outside said end bar and contiguous to the end of the sleeve 28 is a second gear wheel 36 provided with a hub 37 which receives a set screw 38 which abuts against the axle 9 and rigidly secures the gear wheel 36 thereto. The right-hand end portion of the axle 9 beyond the hub 37 has secured to it a finger wheel 39 of ordinary construction by which the axle 9, and under normal conditions, the left-hand platen section only, may be turned or rotated for line spacing or other purposes. The gear wheels 34 and 36 have the same number of teeth, which number may equal that of the teeth of the line spacing ratchet wheel (not shown).

The construction is such that the gear-wheel 34 is constantly connected to the right-hand platen section while the gear wheel 36 is constantly connected to the left-hand platen section. These two platen sections are normally independent but means are provided for connecting the two platen sections so that they will turn together, said means being movable independently of the two platen sections and into and out of engagement with the two gear wheels or connecting devices 34 and 36. Said means in the present instance comprise an elongated pinion 40 arranged at the rear, lower side of the gear wheels 34 and 36 and of sufficient length to engage with both gear wheels but normally out of mesh therewith. The pinion 40 is mounted to rotate on the body portion of a shouldered screw 41, the left-hand end of which is supported on a member 42, the right-hand end of said screw being supported on an angular extension 43 on said member. The right-hand end portion of the screw 41 is reduced and threaded and receives a locking nut 44 (Fig. 3). The member 42 is provided with a hub 45 which bears on a rod 46, this rod preferably being the rod or rock shaft which operates to release the usual feed rollers of the machine. Said feed rollers are diagrammatically illustrated in Fig. 1 wherein they are numbered 47 and 47^a and they cooperate with other devices including the paper table 48 to guide and control the paper. The member 42 has an upward and forward extension or arm 49 which terminates in a tooth 50 which is laterally off-set into the plane of the gear wheel 34 with the teeth whereof the tooth 50 normally engages as shown in Fig. 1.

The toothed arm or device 49, 50 cooperates with said teeth to lock the gear wheel 34 and the right-hand platen section normally against rotation. When disengaged, as is normally the case, the pinion 40 is prevented from turning accidentally by a spring detent 51, said detent being provided at its upper end with a slot 52 which receives a screw 53 which thus adjustably secures the detent to the member 42.

The rear edge 54 of the member 42 is normally vertically disposed and is adapted to cooperate with an actuating device or bar 55 arranged above the top plate 2 and secured thereto by a screw 56. Said bar 55 extends rightward beyond the top plate and its overhanging portion is secured by a screw 57 to a bracket 58 rigidly mounted on the lower track-way 4. The right-hand end of the bar 55 is curved or bent rearward as indicated at 59 so as to intersect the pathway of the edge 54 and this curved portion is so located that as the right-hand platen section approaches the printing field of the types the edge 54 will engage with the curve or cam 59 with the result that as the leftward movement of the platen continues, the edge 54 will be forced forward, swinging the member 42 on its pivotal axis 46. This swinging movement disengages the tooth 50, unlocking the right-hand platen section which previously had been prevented from turning during line spacing operations of the left-hand platen section. Also, the swinging movement carries the pinion 40 into mesh with the gear wheels 34 and 36, thereby connecting said gear wheels and through them the two platen sections. The pinion partially engages before the tooth 50 entirely disengages. The normal positions of the parts are shown in Fig. 1, and the operated position just described is shown in Fig. 2. It will be apparent that during additional further leftward movement of the platen the cam bar 55 will operate to maintain the pinion engaged or operative as in Fig. 2 so that a turning or line spacing movement communicated to the left-hand platen section will be participated in by the right-hand platen section, the two platen sections turning as a single platen. The connection between the two platen sections for this purpose is automatically brought about as soon as the right-hand platen section enters the printing field and such connection continues during the entire time that the right-hand platen section remains in position to cooperate with the types. It will be understood that the present construction, unlike that in my prior application aforesaid, permits of unlimited simultaneous rotation of the two platen sections while they are connected through the pinion 40.

When the platens are restored toward the right far enough to disengage the edge 54

from the cam bar, the connecting and locking device 42, 49 will be forced back to the normal position by a coiled restoring spring 60, said restoring spring being wound around the hub 45 and having one end secured to the arm 49, the opposite end being hooked around a screw 61 which secures a limiting collar 62 to the rock shaft 46. The collar 62 coöperates with a collar 63 at the opposite side of the member 42, 45, 49 to prevent endwise movement of the said member on the rock shaft while permitting the member to rotate relatively to said shaft.

My present invention is particularly useful in connection with commercial billing work wherein a series of bills or invoices are being written and a record is being kept of certain data from each bill. For example, the bill sheets may be written on the left-hand platen section while the totals of each bill may be written on a continuous sheet or tally strip which is fed around the right-hand platen section. It will be understood that the usual or suitable paper controlling devices, such as the paper table 48 and feed rollers 47 and 47^a, may be employed in connection with the left-hand platen section; while with the right-hand platen section paper supporting, feeding and controlling devices of the character described and claimed in my application aforesaid may be used.

From what has been said it will be understood that the right-hand platen section is held locked against rotation during the writing and line spacing of the work sheet on the left-hand platen section but when the right-hand platen section has been brought opposite the printing point it will be unlocked and automatically connected with the left-hand platen section so that the two may be turned or rotated together simultaneously.

Various changes may be made without departing from the spirit and scope of my invention.

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

1. In a typewriting machine, the combination of a plurality of platen sections; and means operating automatically to couple said platen sections together, said means including a coupling device normally disconnected from said platen sections but operative to couple said platen sections so that they may be turned together to an unlimited extent.

2. In a typewriting machine, the combination of separate platen sections, a lock for one platen section, and means operating automatically to release said lock and to couple the platen sections together so that they may be rotated together to unlimited extents.

3. In a typewriting machine, the com-

bination of a divided platen comprising two sections, and means operating automatically to couple the platen sections together, said means including a rotary pinion which is normally disconnected from both platen sections.

4. In a typewriting machine, the combination of a platen, a toothed wheel connected therewith, a second platen, a second toothed wheel connected with said second platen, and a pivotally supported pinion on a pivoted support and operative to engage with said toothed wheels to connect them.

5. In a typewriting machine, the combination of a platen, a toothed wheel connected therewith, a second platen, a second toothed wheel connected with said second platen, and a pivotally supported pinion for engaging with said toothed wheels and connecting them, said pinion being normally disengaged from both toothed wheels.

6. In a typewriting machine, the combination of a platen, a toothed wheel connected therewith, a second platen, a second toothed wheel connected with said second platen, a pinion for engaging with said toothed wheels and connecting them, said pinion being normally disengaged from both toothed wheels, and means comprising a cam bar for automatically moving said pinion into operative engagement during traveling movements of said platens.

7. In a typewriting machine, the combination of a platen, a toothed wheel connected therewith, a second platen, a second toothed wheel connected with said second platen, a member carrying a lock for one of said toothed wheels and also a pinion for engaging both said toothed wheels and connecting them, and means for moving said member to bring said lock and said toothed wheel alternately into operation.

8. In a typewriting machine, the combination of a platen, a toothed wheel connected therewith, a second platen, a second toothed wheel connected with said second platen, a member carrying a lock for one of said toothed wheels and also a pinion for engaging both said toothed wheels and connecting them, means for moving said member to bring said lock and said pinion alternately into operation, said member being pivotally mounted, and means comprising a fixed cam bar for thus operating said member.

9. In a typewriting machine, the combination of separate platen sections, and means operating automatically to couple said platen sections together, said means including a pinion which is normally disconnected from the platen sections, and a detent device normally coöperating with said pinion.

10. In a typewriting machine, the combination of a platen frame, a platen compris-

ing two sections supported on said frame, a supplementary platen support on said frame interposed between said platen sections, and means for affording an adjustment of said supplementary support in any desired direction radial of said platen section.

Signed at Syracuse, in the county of

Onondaga, and State of New York, this 17th day of May, A. D. 1911.

HERBERT H. STEELE.

Witnesses:

WILLARD C. HAY,
DAN O. MUNROE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."