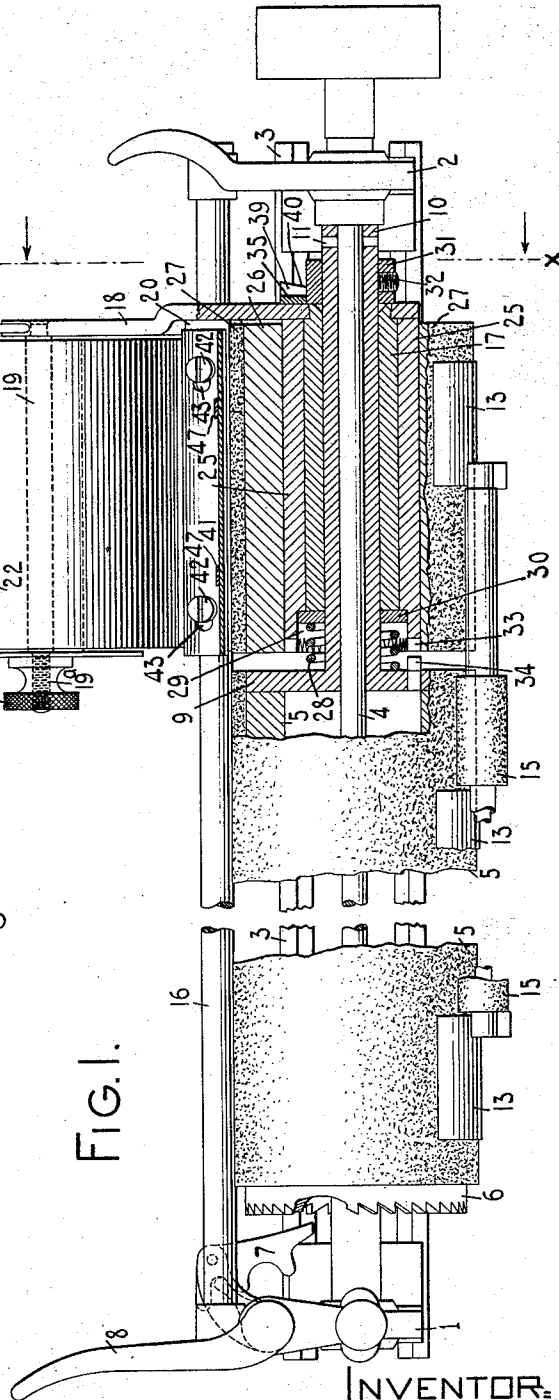
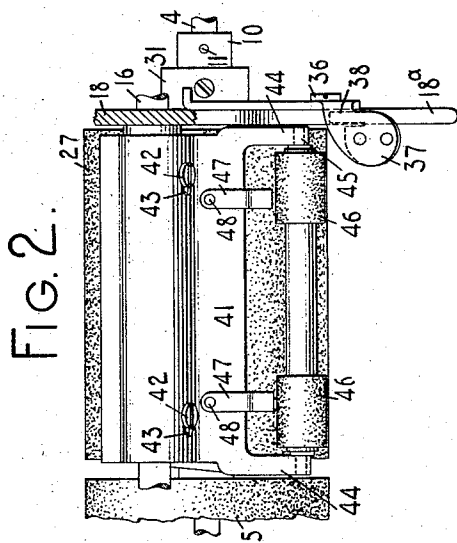
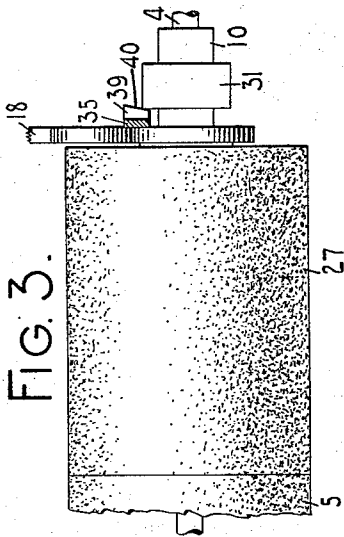


Patented Dec. 5, 1911.

2 SHEETS—SHEET 1.

1,010,970.



WITNESSES:

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1,010,970.

H. H. STEELE.
TYPE WRITING MACHINE.
APPLICATION FILED MAR. 12, 1910.

Patented Dec. 5, 1911.

2 SHEETS—SHEET 2.

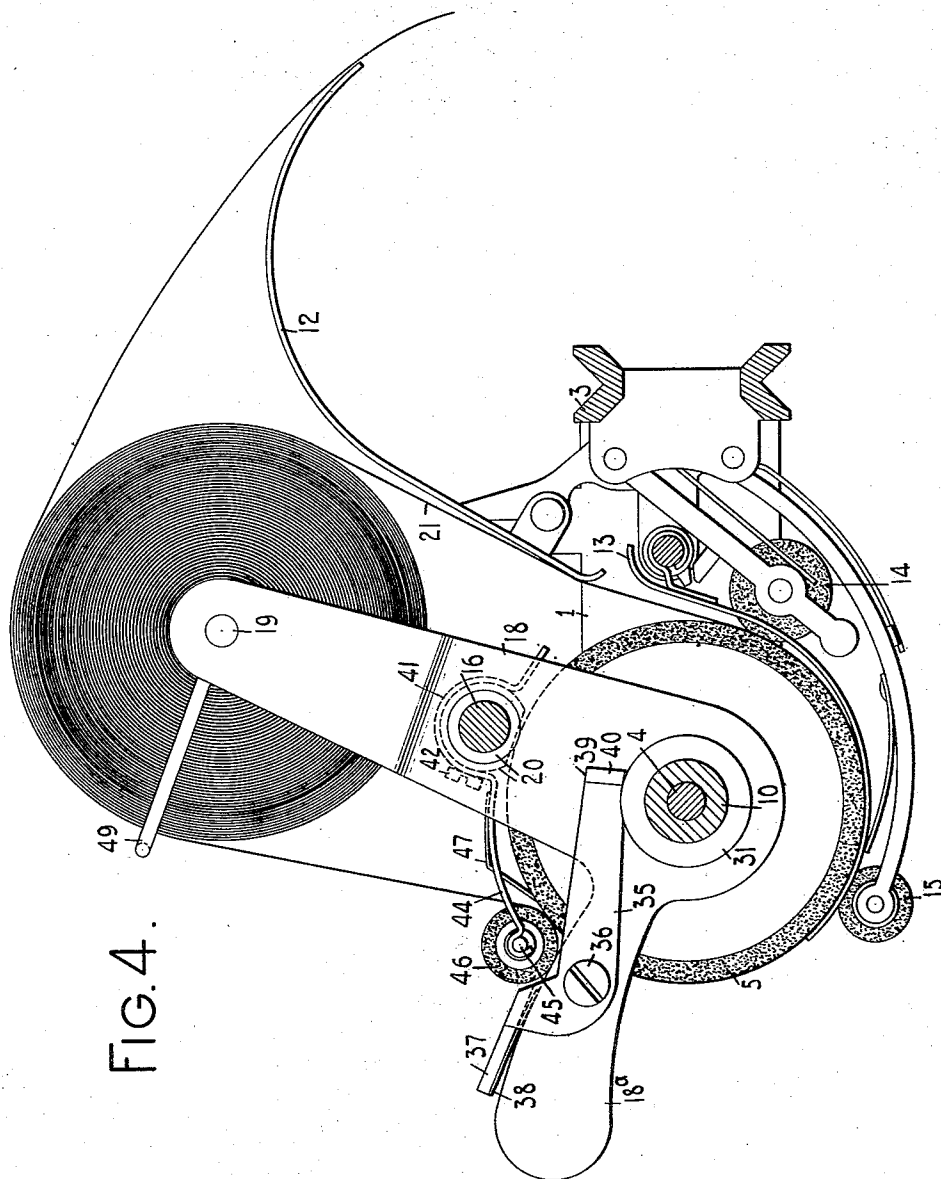


FIG. 4.

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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.

1,010,970.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed March 12, 1910. Serial No. 548,993.

To all whom it may concern:

Be it known that I, HERBERT H. STEELE, 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 especially to paper feeding mechanism for typewriting machines and the general object of said invention is to provide improved devices of the class specified.

More specifically my invention relates to what is commonly termed tally strip mechanism and is concerned with improved means for handling a tally sheet which is supplementary to the main work sheet or bill sheet and is ordinarily much narrower than the latter.

To the above and other ends which will hereinafter appear, 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.

My invention will be more particularly described in connection with the accompanying drawings, wherein—

Figure 1 is a fragmentary front elevation partly in section of the platen and platen carrier of a Monarch typewriting machine embodying my invention. Fig. 2 is a fragmentary plan view of part of the tally feeding mechanism. Fig. 3 is a front elevation partly in section of part of the tally feeding mechanism in different relationship from that shown in Figs. 1 and 2. Fig. 4 is a vertical sectional view taken on a plane represented by the dotted line $x-x$ of Fig. 1 and looking in the direction of the arrows at said line.

In the drawings, the platen frame or carrier comprises end bars 1 and 2 and a connecting rear bar 3 which is oppositely grooved to co-act with ball bearings on the frame of the machine. The end bars provide bearings for a platen axle 4 on which is mounted a platen 5. Operatively connected with the platen at its left-hand end is a line spacing ratchet wheel 6 with which co-acts a pawl 7 operated by manual devices comprising a handle or finger piece 8. The right-hand end of the platen terminates at a considerable distance from the end bar 2

and secured to said platen end is a platen head 9 which is formed with an elongated sleeve or hub 10, said hub extending rightward along the axle 4 and being secured thereto by a pin 11. The hub or sleeve 10 provides a bearing for novel devices presently to be described. Paper feeding and guiding devices of the usual or any other suitable type may be provided for the main platen 5, said devices including a paper table 12, a paper apron 13, a main feed roller 14 and a secondary feed roller 15, as well as paper fingers (not shown) mounted on a paper finger rod 16 extending lengthwise of the plane above the same and secured at its ends to the bars 1 and 2.

The tally strip devices are mounted on a slidable frame which comprises a hub or sleeve 17 slidably mounted on the hub 10. Fixed to the right-hand end of the hub 17 is an upwardly extending arm or standard 18 which is slightly off-set inwardly and has fixed near its top an inwardly extending horizontal rod 19, the left-hand end portion 19^a whereof is reduced and threaded. To prevent rotation of the standard 18 it has fixed to it a sleeve 20 which slidably engages the rod 16. Thus it will be seen that the slidable frame is supported both by the hub 10 and the rod 16. A tally strip 21 is wound into a roll on a core 22 of wood or the like, said core being loosely mounted on the rod 19 so that it may freely turn on said rod. The tally roll is held in place at the left by a flange or disk 23 which is secured in place against the shoulder formed by the rod 19 and its reduced portion 19^a by a thumb nut 24 threaded on said portion 19^a. The tally strip is led downward at the rear side of the tally roll and passes around a supplementary short platen section which comprises a metal core 25, bearing loosely on the sleeve 17 and on which is fixedly secured an outer core 26 of wood or the like and a sheath 27 preferably of a rubber composition. The three layers 25, 26 and 27 constituting the supplementary platen are fixed together so as to move together as a single piece on the sleeve 17.

The diameter of the supplementary platen is preferably equal to that of the main platen 5 and the two platens or sections are adapted to be connected so as to be rotatable together by an actuation of the line space handle 8, although for the greater

part of the time the platens are held apart so that the rotation of the main platen does not affect the supplementary platen. In the present instance the two platen sections are pressed constantly away from each other by a spring 28 which is coiled around the sleeve 10 and is seated within a countersink or depression 29 formed by counterboring the left end of the core 25 and by correspondingly cutting off the left end of the sleeve 17. One end of the spring presses against the platen head 9 and the opposite end of said spring presses against a washer 30 arranged within the countersink 29 and which transmits the spring pressure to both the supplementary platen and the slidable frame which carries the same. The spring 28 tends to maintain the right-hand end of the slidable frame in contact with a stop which is in the form of a collar 31 secured by a set screw 32 to the sleeve 10. At this time the two platen sections are disconnected so far as a turning of one by the other is concerned. The operative connections between the two platen sections are in the form of a two-part clutch and comprise pointed V-teeth 33 which may be formed at the left-hand end portion of the core part 25 in that portion of said core part remaining after the cutting of the depression 29. Coöperative with the V-teeth 33 is a single tooth 34 which projects laterally from the platen head 9 and is adapted to engage between any two of the teeth 33 to act as a driver. As shown in Fig. 1 the connecting or clutch devices or teeth 33 and 34 are separated but obviously by sliding the supporting frame leftward on the sleeve 10 against the spring 28, said teeth may be connected so that the platen sections will rotate in unison during such connection. Devices are provided which operate automatically to hold the two platen sections together at pleasure after the clutch parts engage, said devices comprising a spring-pressed latch or lock 35 pivoted at 36 on an extension 18^a integral with the standard 18 and projecting forward therefrom and serving as a finger piece for controlling slidable movements of the frame. The latch or lock 35 is a lever, the forward arm whereof is shaped and bent horizontally over the extension 18^a to provide a finger piece or key 37 for actuating said latch. Fixed to the under side of the key 37 is a flat spring 38 which re-acts against the top edge of the extension 18^a to communicate a constant downward pressure to the rear arm of the latch 35. Said rear arm terminates in a laterally bent or offset portion 39, the edge of which is beveled or inclined as indicated at 40 so that the portion 39 may serve as a wedge, co-acting with the inner side of the collar 31 to hold the supplementary platen leftward against the main platen and to

operatively connect the two together as will be understood from Fig. 3. The off-set portion or wedge end 39 will rest on top of the collar 31 when the platens are separated as shown in Fig. 1, but when the slidable frame is pushed inward against the spring 28 the latch 35 will move with said frame and the spring 38 will crowd or force the wedge end 39 into the space between the collar 31 and the standard 18 and will hold the platen sections locked together or connected through the clutch until the operator depresses the key 37. This operation raises the wedge end 39 out of action and permits the spring 28 to slide the supplementary platen and its supporting frame back against the limiting stop 31.

For feeding the tally strip, devices are provided which coöperate with the supplementary platen, said devices being mounted on a frame 41 of sheet metal which fits over the top of the sleeve or hub 20 and is secured thereto by headed screws 42. Said screws pass through slots 43 in the frame 41, the construction being such that by loosening the screws 42 the frame 41 may be adjusted longitudinally of the sleeve 20. The frame 41 is provided at its ends with forwardly extending fingers 44 the tips whereof are curved or bent to provide bearings for a shaft 45 carrying feed rolls 46 which are pressed constantly toward the supplementary platen at its front upper side by the inherent springiness of the fingers 44. Back of each feed roll 46 a spring guide finger 47 is riveted at 48 to the frame 41, the guide fingers 47 being bent down close to the platen behind the rolls 46 so that the tally strip after passing around the supplementary platen and between the same and the feed rolls 46 will be deflected upward by the guide fingers and may be guided over the tally roll as shown in Fig. 4 by an angular guide wire 49 mounted on the standard 18.

With the parts arranged as in Fig. 1 a bill or invoice sheet may be introduced into coöperation with the main platen 5 and its feeding devices, may be printed upon and fed around from line to line in the usual way without interfering with the supplementary or tally strip platen, the latter remaining motionless and not being in the field of operation of the paper feeding rollers 14 and 15 which are cut off to the left of said supplementary platen. After the last entry on the bill sheet has been made the operator shifts the slidable frame and the parts supported thereon toward the left, causing the engagement of the teeth 33 with the tooth 34, the latch 35 automatically operating to hold the two platen sections connected. Thereafter the handle 8 is operated to line space the two platen sections together and the totals or other data are printed first on the invoice sheet and then in duplicate on

the tally strip. Thereafter the operator presses the key 37, releasing the latch 35 and permitting the spring 28 to disconnect the two platen sections so that the completed bill or invoice may be withdrawn and the next invoice introduced, written upon and advanced from line to line or without affecting the tally strip or its controlling devices which are only brought into play when the next total or other data to be duplicated is in order.

I have called the narrow work sheet 21 a "tally strip" and the devices for feeding and controlling the same, "tally strip mechanism", it being understood that these terms are employed for convenience and that the invention is especially adapted to duplicating on the supplementary sheet, certain of the data from another sheet, it being unessential whether this duplicated work be employed for tallying purposes or for other purposes.

It will be observed that I provide single means for line spacing and advancing one platen section separately of and independently of another platen section; that I provide means, or, as shown, clutch devices, for connecting this other platen section with the first platen section so that the two may be turned together or advanced by said single means; but that the other platen section aforesaid is not adapted to be turned operatively independently of the first or main platen section but only when coupled with said main platen section and by the single line spacing means. The two platens are relatively movable, in this instance one having a movement of sliding translation into connection with the other and being held automatically locked in connection by a spring-pressed wedge against the pressure of spring means tending constantly to keep said platens and their connecting devices separated.

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 platen, a second platen, and means operative automatically to connect said platens during a relative movement between them.

2. In a typewriting machine, the combination of two platens, and means operative automatically to lock the two platens together.

3. In a typewriting machine, the combination of two platens, and means operating automatically to lock the two platens together during a movement of one of said platens relative to the other.

4. In a typewriting machine, the combination of two platens, and means operating

automatically to lock the two platens together during a movement of translation of one of said platens.

5. In a typewriting machine, the combination of two platens, clutch devices for connecting said platens, and means brought into use automatically during a relative movement between the two platens to hold the clutch devices in engagement.

6. In a typewriting machine, the combination of two platens, clutch teeth on each platen, and means brought into use automatically during a relative movement between the two platens to hold the clutch teeth in engagement after they have been connected.

7. In a typewriting machine, the combination of two platens, clutch devices for connecting said platens, and an automatic locking wedge for holding said clutch devices in operation.

8. In a typewriting machine, the combination of two platens, clutch devices for connecting said platens, and an automatic lock for holding said clutch devices in operation, said lock being releasable by hand to enable the platen devices to separate.

9. In a typewriting machine, the combination of two platens, one slidable relatively to the other, clutch devices for connecting said platens, and means operating automatically when the clutch devices are connected by the sliding movement of the slidable platen to lock said clutch devices in engagement.

10. In a typewriting machine, the combination of two platens, clutch devices for connecting said platens, and a pivoted spring-pressed lock operating automatically to hold said clutch devices in engagement after they have been brought together.

11. In a typewriting machine, the combination of a platen, a platen carrier supporting the same, a frame movable on said platen carrier, a supplementary platen on said frame, and a paper supply roll on said frame.

12. In a typewriting machine, the combination of a platen, a platen carrier supporting the same, a frame movable on said platen carrier, a supplementary platen on said frame, a paper supply roll on said frame, and means for connecting the two platens when said frame is moved.

13. In a typewriting machine, the combination of a platen, a frame movable relatively to the platen and carrying a paper supply roll, paper feeding devices for said paper supply roll, said paper feeding devices being operative by said platen but normally disconnected therefrom, and means for moving said frame to connect said paper feeding devices with said platen.

14. In a typewriting machine, the combination with a rotary platen, line spacing de-

vices therefor, a movable frame provided with a paper supply device, feeding means for said paper supply, and a normally inoperative clutch between said feeding means and said platen, said frame being movable to render said clutch operative.

15. In a typewriting machine, the combination of a rotary platen, a tally strip supporting frame carrying a tally strip in roll form, a supplementary platen on said frame, a feed roll coöperative with said supplementary platen, and a clutch for connecting said supplementary platen with said first named platen by a movement of said frame.

16. In a typewriting machine, the combination of a platen having a head with an elongated hub, a platen carrier comprising a cross rod, a slidable frame provided with sleeves engaging respectively with said hub and said rod and carrying a supply of paper, paper feeding means for said paper on said slidable frame, and means for connecting said paper feeding means with said platen.

17. In a typewriting machine, the combination of a platen having a head with an elongated hub, a platen carrier comprising a cross rod, a slidable frame provided with sleeves engaging respectively with said hub and said rod and carrying a supply of paper, paper feeding means for said paper on said slidable frame, said paper feeding means comprising a supplementary platen and a coöperative feed roller, and means for connecting said supplementary platen with said first named platen.

18. In a typewriting machine, the combination of a platen having a head with an elongated hub, a platen carrier comprising a cross rod, a slidable frame provided with sleeves engaging respectively with said hub and said rod and carrying a supply of paper, paper feeding means for said paper on said

slidable frame, said paper feeding means comprising a supplementary platen rotatable on one of said sleeves, a feed roller coöperative with said supplementary platen, and a clutch for connecting said supplementary platen with said first named platen.

19. In a typewriting machine, the combination of two platens, clutch means for connecting said two platens, and means tending constantly to render said clutch means inoperative.

20. In a typewriting machine, the combination of two platens, a two-part clutch, one part on each of said platens, and a spring tending constantly to separate the clutch parts.

21. In a typewriting machine, the combination of two platens, a two-part clutch, one part connected to each of said platens, means tending constantly to separate the clutch parts, and a lock for holding the clutch means operative against said last named means.

22. In a typewriting machine, the combination of two platens, a two-part clutch, one part on each of said platens, a spring tending constantly to separate the clutch parts, and a rack for maintaining the clutch in operation against said spring.

23. In a typewriting machine, the combination of two platens relatively movable, a two-part clutch one part on each platen, a spring tending to separate said clutch parts, and a lock for overcoming said spring and holding said clutch parts engaged.

Signed at Syracuse, in the county of Onondaga and State of New York, this 7th day of March, A. D. 1910.

HERBERT H. STEELE.

Witnesses:

ANNA T. LYNCH,
ALICE GREENE.