

H. H. STEELE.
TYPE WRITING MACHINE.
APPLICATION FILED DEC. 2, 1909.

1,018,786.

Patented Feb. 27, 1912.

2 SHEETS—SHEET 1.

FIG. 2.

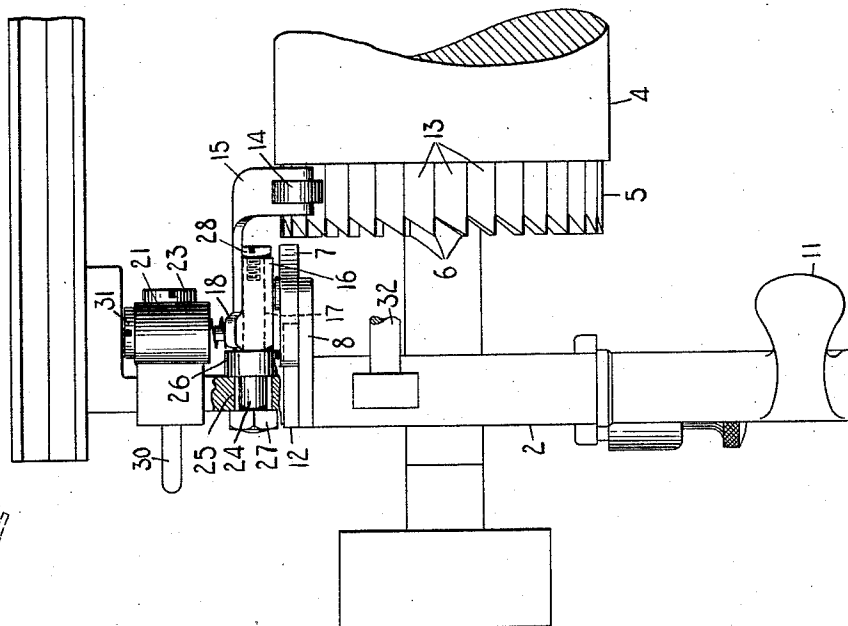
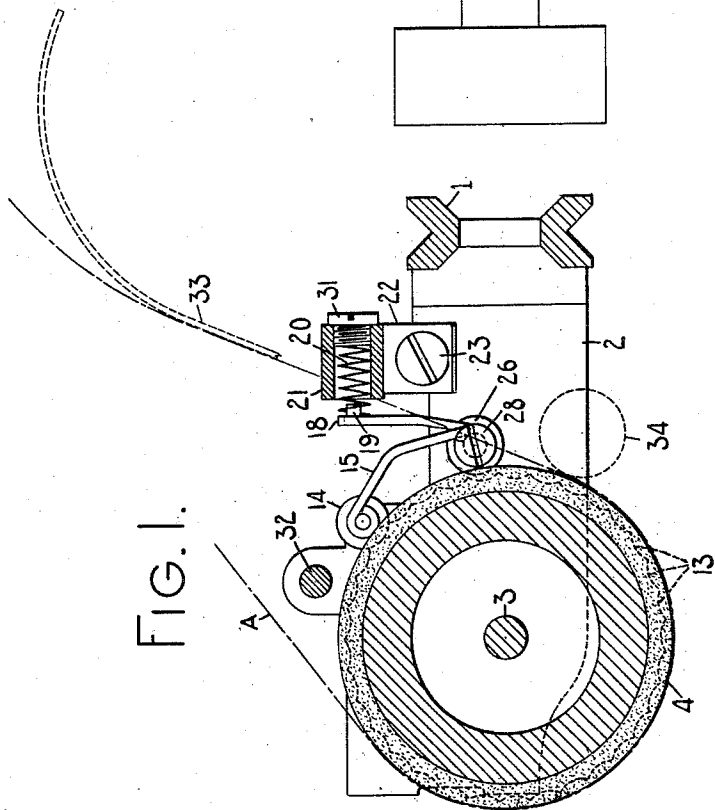


FIG. 1.



WITNESSES:

E. M. Wells.

R. H. Strother.

INVENTOR.

Herbert H. Steele
By Jacob Feller

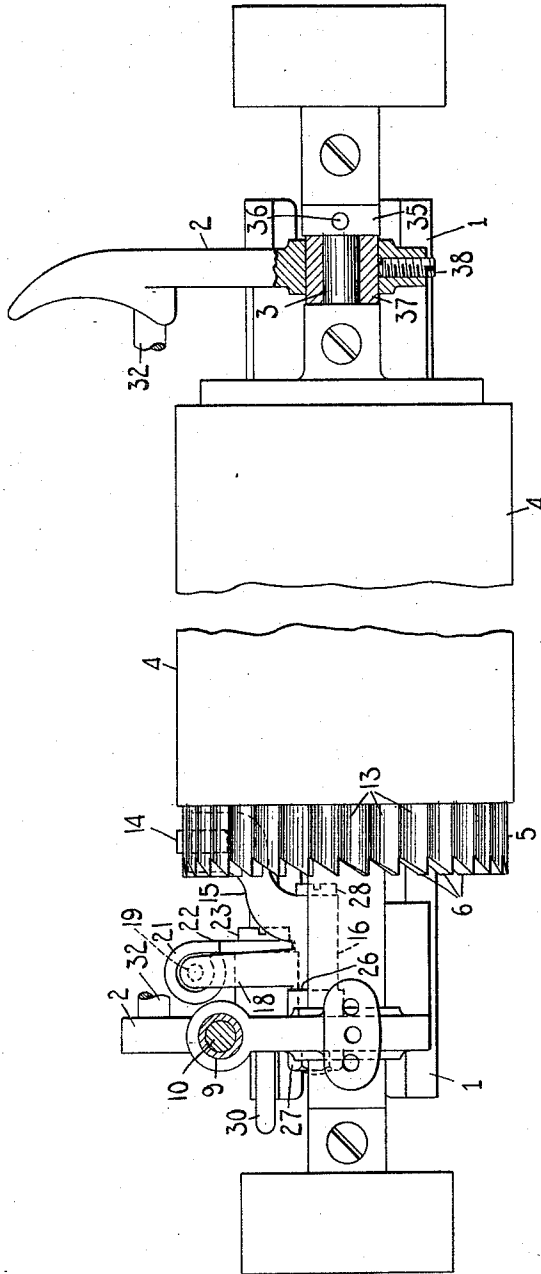
HIS ATTORNEY

1,018,786.

Patented Feb. 27, 1912.

2 SHEETS—SHEET 2.

FIG. 3.



WITNESSES:

E. M. Wells.

R. H. Strother.

INVENTOR:

Herbert H. Steele

By Jacob F. Fildes

HIS ATTORNEY.

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.

1,018,786.

Specification of Letters Patent.

Patented Feb. 27, 1912.

Application filed December 2, 1909. Serial No. 531,003.

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 to typewriting machines and more particularly to line spacing mechanism.

Some of the objects of my invention are to provide a pivoted detent for the platen; to make such detent adjustable; to make it of such form and so arranged as not to interfere in any way with the introduction of the paper into the machine; to make provision for regulating the spring tension of said detent; and, generally, to provide a device of the class specified that is simple and inexpensive to manufacture and that is substantial, durable and efficient.

My invention consists in certain features of construction and combinations and arrangements of parts, all of which will be fully set forth herein and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a fore and aft vertical sectional view through the carriage of a typewriting machine having my invention embodied therein, parts not necessary to an understanding of said invention being omitted. Fig. 2 is a fragmentary top plan view of one end of the carriage with parts broken away and parts in section. Fig. 3 is a front view of the carriage with parts in section and parts omitted and parts broken away.

I have shown my invention applied to the Monarch visible typewriter. The carriage of this machine comprises a back bar 1 having grooves in its upper and lower edges, constituting race-ways for roller bearings on which the carriage is mounted. Said carriage also comprises end pieces or brackets 2 projecting forward from the back bar 1 and having journaled therein the shaft 3 of a roller platen 4. Said platen at its left-hand end is provided with a line space wheel 5 having crown ratchet teeth 6 formed thereon for coöperation with a line space pawl 7, which pawl is pivoted on a carrier 8 (Fig. 2) which in turn is mounted on an adjustable sleeve 9 (Fig. 3) that extends fore and aft of the machine and is journaled in

the left-hand end bracket 2. A rock shaft 10, journaled in said sleeve 9, carries at its forward end a line space lever or handle 11 and at its rear end an arm 12 that operates the pawl 7. I have not illustrated this line space mechanism in detail as it is old and well known and as it forms no part of the present invention. Any suitable line spacing device may be employed so far as the present invention is concerned. The one illustrated is or may be like that shown in the patent to H. W. Merritt, No. 791,483, dated June 6th, 1905.

In order to coöperate with my improved detent, the line space wheel 5 is formed in its periphery with a series of longitudinal corrugations 13 corresponding in number to the ratchet teeth 6. These corrugations, which may be of any suitable form, are engaged by a detent device comprising a roller detent 14 mounted in an arm 15 projecting from a barrel or hub 16 which is pivoted on a stud 17 projecting inward from the bracket 2. A second arm 18 projecting from said hub or barrel 16, is provided on its rear side with a stud 19 around which is coiled the front end of a compression spring 20 that is seated in a barrel 21 forming part of a bracket 22 that is secured to the bracket 2 by means of a screw 23. The arms 15 and 18 and the barrel 16 can be conveniently formed of a single piece of sheet metal stamped out with a suitable outline and having a part thereof bent or wiped into the form of the barrel 16. As shown in Fig. 2 said barrel does not extend as far inward as the left-hand face of the line space wheel. As shown in said Fig. 2 and also in Fig. 3 the arm 15 is set at an angle to the axis of the hub 16, extending from said hub at an inclination inward or toward the middle of the machine, said arm being suitably curved to bring the detent roller 14 into proper engagement with the line space wheel 5.

The stud 17 consists of the inwardly projecting end of a bolt 24 that passes through a hole 25 in the bracket 2, said bolt having an enlargement 26 inside said bracket 2 and being secured in position by a nut 27 threaded on to the outer end of the bolt. The hub 16 at one end abuts the enlargement 26 and said hub at the other end abuts the head of a screw 28 which is threaded into the end of the stud 17 to retain the detent in place on the stud. The hole 25 is larger than the bolt

24 so as to admit of a certain amount of adjustment of said bolt in the hole in order to bring the detent roller 14 into suitable relation to the line space pawl 7. The parts
5 are retained in adjusted position by tightening the nut 27.

The barrel 21 and bracket 22 which carry the spring 20 are here shown as formed of a single strip of sheet metal having an up-
10 right part and having its upper end bent into cylindrical form to receive the spring. The screw 23 is here shown as occupying the same place as a screw that has heretofore been used in the Monarch machine and
15 the outer end 30 of which projects beyond the bracket 2 and serves as a stop for the feed roll release lever. The rear end of the spring 20 bears against a screw 31 threaded into the barrel 21 from the rear. This screw
20 is here shown provided with a flat head that screws up tight against the barrel 21, but in case it is desired to make the screw adjustable this head may be omitted and a lock nut employed. The screw may then be ad-
25 justed to regulate the tension of the spring and be secured in adjusted position by tightening the lock nut. In the construction shown in the drawings the tension of the spring can be regulated by making the
30 springs of different gages of wire and in case a spring is a little too stiff a short piece can be cut off the end of it when the machine is assembled. With a short platen this
35 spring need not be as stiff as it is desirable that it should be in case a longer and heavier platen is employed. Hence in the manufacture of the machine, springs can be made of different sizes of wire and each one can be
40 put under a tension that is suitable for the particular machine in which it is employed.

The Monarch carriage comprises a cross rod 32 above the platen and a little back of the middle thereof and the paper, marked A in the drawing, after passing the print-
45 ing point, passes up in front of this rod. At the introductory side of the platen there is a paper table, the general position of which is indicated at 33 and the paper is
50 led from this paper table down to the rear feed roller 34. It will be seen that in introducing it into the machine the paper passes about opposite the head of the screw 28. This screw has its head entirely at the
55 left of the platen and in fact at the left of the line space wheel itself. The detent roller 14 and that part of the arm 15 which reaches over to the line space wheel, are above that part of the paper which is at the
60 introductory side of the platen and below that part of the paper that has been fed past the printing point, so that these parts of the detent device are not in the path of the paper at all. The line spacing pawl 7 and the parts associated therewith, are also
65 above and in front of the paper at the intro-

ductory side of the platen and below the paper that has been fed past the printing point. There is thus nothing about the line spacing mechanism or the detent mechanism to prevent the introduction into the machine
70 of sheets of paper even wider than the platen is long.

In the Monarch machine as heretofore constructed the platen detent consisted of a roller mounted on a flat spring which bore
75 against the crown ratchet teeth 6 so that this spring tended to press the platen toward the right. As this spring is not employed in the present construction I have added a collar 35 near the right-hand end of
80 the platen shaft 3, said collar being rigidly secured to the shaft by means of a pin 36 passing through the collar and shaft. The collar 35 abuts the right-hand end of a stationary sleeve 37 which is inserted in a bore
85 of the right-hand end bracket 2, where it is secured in position by a set screw 38.

It is to be perceived that the platen detent is readily adjustable; that it is so mounted
90 as to be out of the path of the paper; that it is controlled by a coiled spring instead of a flat spring which has usually been employed heretofore; that it is a durable and
95 efficient construction; and that in the manufacture of a machine it is easy to regulate the spring pressure to which the detent is subjected. It will also be observed that the
100 pivot for the detent is arranged below the detent roller and substantially in a horizontal plane passing through the middle of the platen and that said pivot terminates
105 short of the detent wheel; also that the detent arm has a hub portion mounted on said pivot while the arm itself extends inwardly from the pivot and upwardly therefrom and
110 forwardly into engagement with the detent wheel at the upper part thereof.

Various changes can be made in the details of construction and arrangement with-
115 out departing from my invention.

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

1. In a typewriting machine, the combination with a platen frame having end pieces, a roller platen journaled in said frame, and
115 means for turning said platen, of a peripherally corrugated wheel on said platen, a pivot pin projecting from the end piece of the platen frame, a detent device pivoted on
120 said pin and having an arm extending inward at an inclination, a detent on said arm engaging said corrugated wheel, a second arm on said detent device, and a spring operating on said second arm.

2. In a typewriting machine, the combination with a platen frame having end pieces
125 and a roller platen journaled in said frame, of a line space wheel on said platen having crown ratchet teeth and peripheral corrugations, a line spacing device including a pawl
130

adapted to engage said crown ratchet teeth, a pivot pin on said platen frame, a detent device pivoted on said pin and comprising an arm extending at an inward inclination, a detent on said arm engaging the corrugations in said line space wheel, a second arm on said detent device, and a spring operating on said second arm.

3. In a typewriting machine, the combination of a platen frame, a roller platen journaled in said frame, a detent wheel on said platen, a pivoted spring-pressed detent engaging said wheel, a pivot pin for said detent mounted in the platen frame substantially in a horizontal plane passing through the center of the platen and terminating short of the plane of said detent wheel; said detent having a hub mounted on said pivot and said detent extending inwardly toward said detent wheel and upwardly and forwardly so as to engage said detent wheel at the upper portion thereof, whereby extra wide sheets may be fed to the platen without interference by said detent.

4. In a typewriting machine, the combination of a platen frame, a roller platen journaled in said frame, a corrugated wheel on said platen, a pivoted detent engaging said wheel, a pivot pin for said detent passing through a hole in said platen frame, said hole being larger than the pin so as to admit of an adjustment of said pin, a shoulder and a nut on said pin for securing it in adjusted position, and a spring operating on said detent.

5. In a typewriting machine, the combination of a platen frame, a roller platen journaled in said frame, a peripherally corrugated wheel on said platen, a pivoted detent device comprising a detent engaging said wheel, a pivot for said detent having its axis parallel to the axis of the platen but said

pivot not reaching as far toward the middle of the machine as the end of said platen, an arm extending from said pivot at an inward inclination and having said detent at its free end, and a spring operating on said detent device, said arm being made of sheet metal cut with a curved shape to reach to said wheel and having a part thereof bent around said pivot.

6. In a typewriting machine, the combination of a platen frame, a roller platen journaled in said frame, means for guiding a sheet of paper to said platen at the rear side thereof, a wheel on said platen having corrugations on the periphery thereof, a pivoted detent device having a detent engaging said wheel and an arm on which said detent is mounted, said arm extending inward from beyond the end of the platen and having the part thereof that carries said detent in front of the path of the paper, whereby said detent does not interfere with the use of wide sheets of paper, and said arm being made of sheet metal cut with a curved shape to reach to said wheel and having a part thereof bent around said pivot.

7. In a typewriting machine, the combination of a roller platen, a wheel on said platen having corrugations on the periphery thereof, a pivoted detent device having an arm carrying a detent that engages said wheel and having also a second arm, a bracket having a barrel, and a compression spring in said barrel operating on said second arm.

Signed at Marcellus in the county of Onondaga and State of New York, this 30th day of November A. D. 1909.

HERBERT H. STEELE.

Witnesses:

ANNA T. LYNCH,
BESSIE G. KITTELL.