

G. A. SEIB.
TYPE WRITING MACHINE.
APPLICATION FILED OCT. 19, 1906.

924,006.

Patented June 8, 1909.

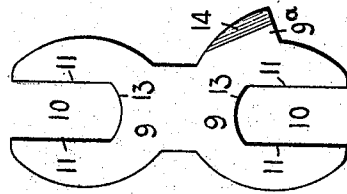
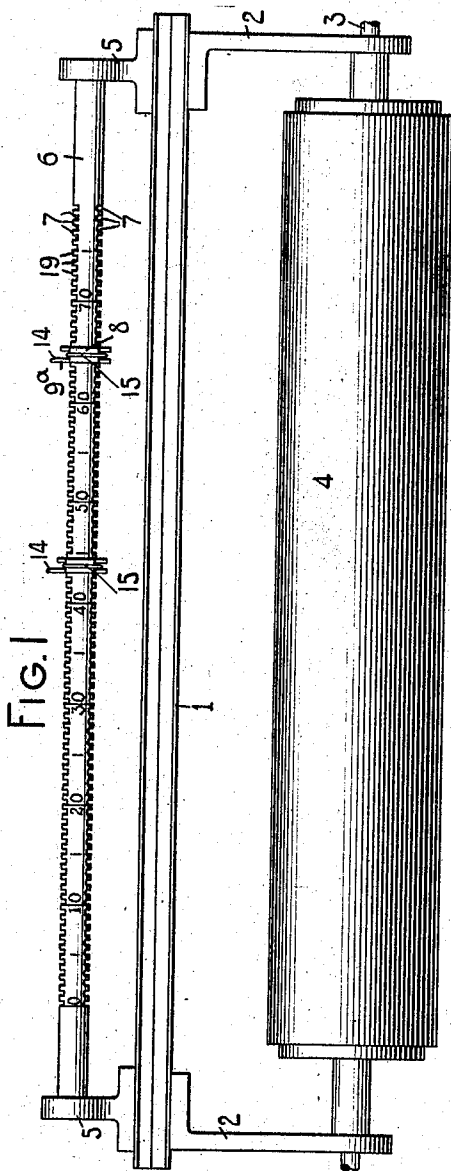


FIG. 2.

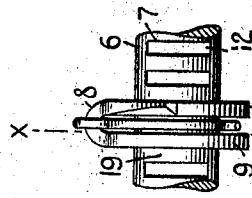


FIG. 3.

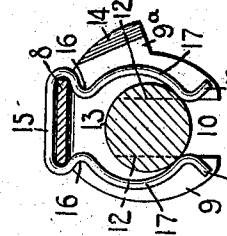


FIG. 4.

WITNESSES:

E. M. Wells

Charles E. Smith

INVENTOR:

George A. Seib

By *James F. Full*
HIS ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE A. SEIB, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE MONARCH TYPEWRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

No. 924,006.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed October 19, 1906. Serial No. 339,668.

To all whom it may concern:

Be it known that I, GEORGE A. SEIB, citizen of the United States, and resident of Syracuse, 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 carriage stops therefor.

The object of my invention is to provide a detachable stop which is simple in construction, cheap to manufacture and strong and efficient in use and is particularly adapted for tabulating purposes.

To the above and other ends which will hereinafter appear, my invention consists of a stop and stop rod constructed as set forth in the following specification and particularly pointed out in the claims.

In the accompanying drawing, Figure 1 is a top plan view showing the carriage of a typewriting machine with a tabulator stop rod and stops applied thereto. Fig. 2 is an enlarged detail plan view of a blank from which a stop is formed. Fig. 3 is an enlarged detail fragmentary rear view showing a stop in place upon the stop rod. Fig. 4 is a transverse sectional view of the same, the section being taken on the line $x-x$ in Fig. 3 and looking in the direction of the arrow at said line.

My invention is shown applied to the carriage of a Monarch typewriting machine, though the nature of the invention is such that it is capable of application generally to carriage stop mechanism and especially to tabulating mechanism.

Referring to the drawings, the carriage comprises a rear slide bar 1 to which forwardly projecting arms 2 are connected, said arms having bearings in which a platen shaft 3 is journaled. A platen 4 is mounted on the platen shaft in the usual manner. Extending rearwardly from the slide bar 1 of the carriage are bracket arms 5 in which are secured the ends of a cylindrical tabulator or stop rod 6 which is notched or slotted upon opposite sides thereof as indicated at 7, the notches being situated a letter space distance apart. The bottom walls of the notches 7 are parallel as indicated in Fig. 4. The upper face of the rod is preferably provided with the usual

scale to aid in properly positioning the column stops. Each column or tabulator stop is formed from a blank of sheet metal of the character shown in Fig. 2, the thickness of the sheet metal corresponding substantially to the width of each of the notches 7 in the stop rod. The blank is bent at 8 into substantially a U-shape as shown in cross section in Fig. 3 in order to provide parallel arms 9, the distance between which corresponds to the distance between any two adjacent notches 7 at the same side of the stop rod. Each of the arms 9 is bifurcated by slotting it at 10, the width of each slot 10 forming the bifurcations corresponding to the distance between the bottom wall 12 of a notch 7 on one side of the stop rod and the bottom wall 12 of the associate notch 7 on the other side of the rod as shown in Fig. 4. The inner walls 11 of the slots 10 are parallel in order to engage the bottom walls 12 of the notches 7 and prevent the stop from turning on the rod. The closed end 13 of each slot 10 is curved to conform to the rounded upper side of the rod against which it is seated as indicated in Fig. 4.

A projection 9^a extends from one of the arms 9 in the same plane as the arm to form a contact portion or abutment for the stop and with which the cooperating tabulator stop or stops (not shown) are adapted to cooperate. The right-hand side of each of the projections 9^a is beveled at 14 in the usual manner.

A wire spring is connected at each of the stops by extending the central portion 15 of the spring in a straight length over that portion 8 of the stop which forms the loop or bend therein, and by bending the spring inwardly on each side of the loop or bend 8 as indicated at 16 so as to embrace the portion 8 and firmly connect the spring thereto. Downwardly extending free ends or arms 17 of the spring are situated between the arms 9 of the stop and on each side of the slots 10 therein as clearly shown in Fig. 4. The lower ends of the spring arms 17 are bent outwardly as indicated at 18 in order that said arms may properly cooperate with and be deflected laterally by the stop rod when the stop is forced into proper position thereon, the arms of the spring cooperating with the teeth 19 formed between the notches 7 on the stop rod. After the ends of the spring

pass beyond the widest portion of the rod they exert an inward pressure against the under side of the rod as shown in Fig. 4 and clamp the rod and tend to prevent accidental displacement of the stop therefrom. In order to detach a stop it is merely necessary to move it upwardly, overcoming the tension of the spring arms 17 and withdrawing the arms from the slots or notches 7 in the stop rod.

10 It will be observed that the construction provides four arms, two formed by each of the parallel bifurcated members 9 and each of which arms is adapted to be seated in a notch or groove 7 in the stop bar in order to effect a secure engagement between the stop and rod and to provide a rigid and reliable stop member and one which cannot be readily bent or distorted by the impact between the tabulator stops.

20 It has been found heretofore in practice that the employment of a plate-like bifurcated sheet metal tabulator stop was unreliable and that the stop was liable to become bent or distorted and did not afford a sufficiently rigid connection between the stop and stop bar. One of the objects of my present invention is to overcome these difficulties.

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

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

1. A detachable sheet metal stop folded to form substantially parallel securing arms, each of said arms being bifurcated to straddle a supporting rod, and a wire spring bent to embrace the stop and forming a clamping spring connected to the stop and operable directly on the supporting rod to prevent an

accidental withdrawal of the stop from its supporting rod. 40

2. A detachable stop substantially U-shaped in cross section, each arm of the stop being bifurcated to straddle a supporting rod, and a wire spring bent to embrace the looped portion of the stop and extending between the arms thereof and operable directly on the supporting rod. 45

3. A detachable stop substantially U-shaped in cross-section, each arm of the stop being bifurcated to straddle a supporting rod, and a wire clamping spring bent in at each side of the looped portion of the stop to connect the spring to the stop and having arms that extend on each side of the slots formed by bifurcating the arms of the stop. 50 55

4. In a typewriting machine, the combination of a stop rod notched on opposite sides thereof, a sheet metal stop bent into substantially U-shape, the arms of said U-shaped stop being bifurcated to straddle the stop rod, whereby each stop may be seated in four notches in the rod, and a wire spring embracing the looped portion of the U-shaped stop and bent inwardly between the arms thereof to connect the spring to the stop, said spring having free ends that extend between the arms of the stop and embrace the stop rod on opposite sides thereof to clamp the rod and prevent an accidental withdrawal of the stop from the rod. 60 65 70

Signed at Syracuse, in the county of Onondaga, and State of New York, this 15th day of October A. D. 1906.

GEORGE A. SEIB.

Witnesses:

JOHN S. MITCHELL,
W. J. LOGAN.