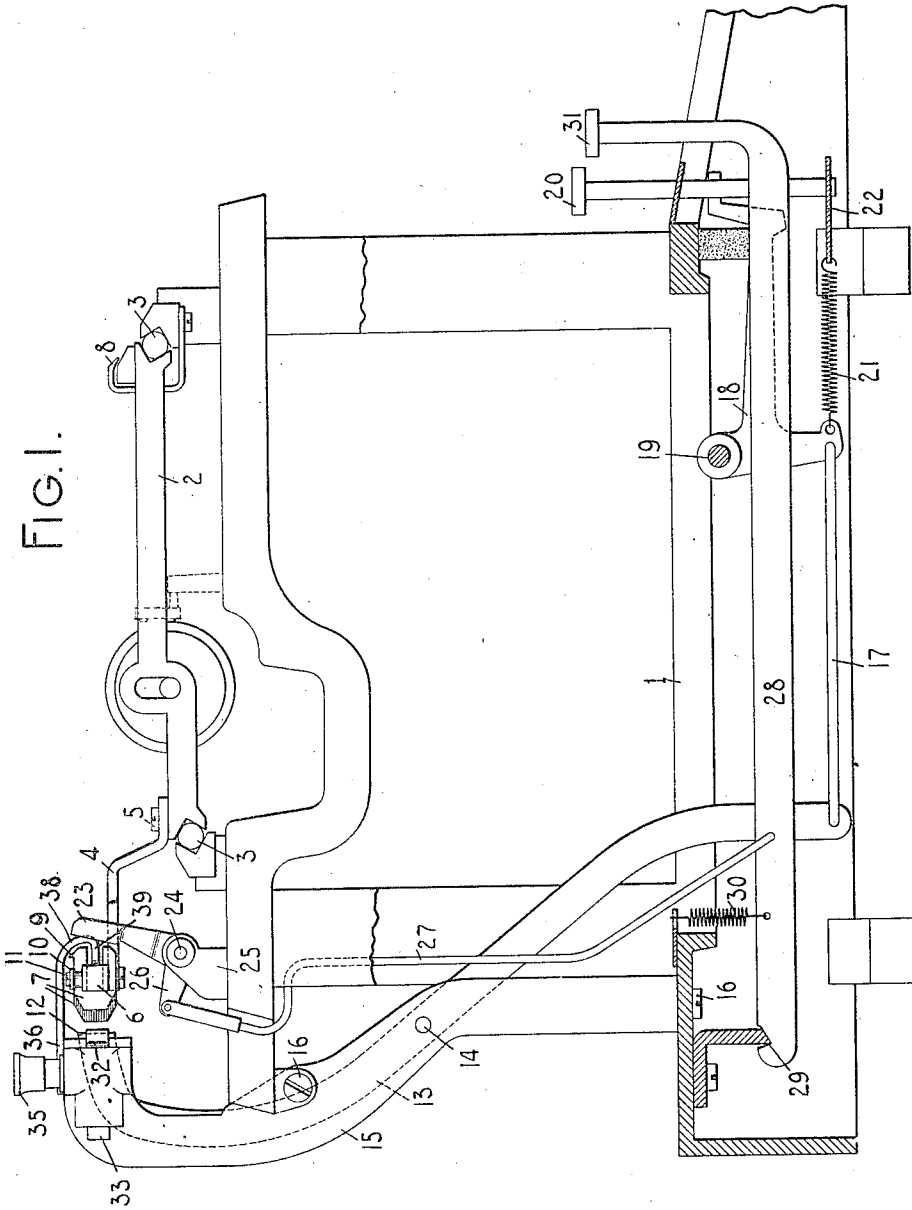


G. A. SEIB.
TYPE WRITING MACHINE.
APPLICATION FILED JUNE 9, 1910.

971,932.

Patented Oct. 4, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

Wm. Wells
Wm. Smith

INVENTOR:

George A. Seib
By Jacob Felber

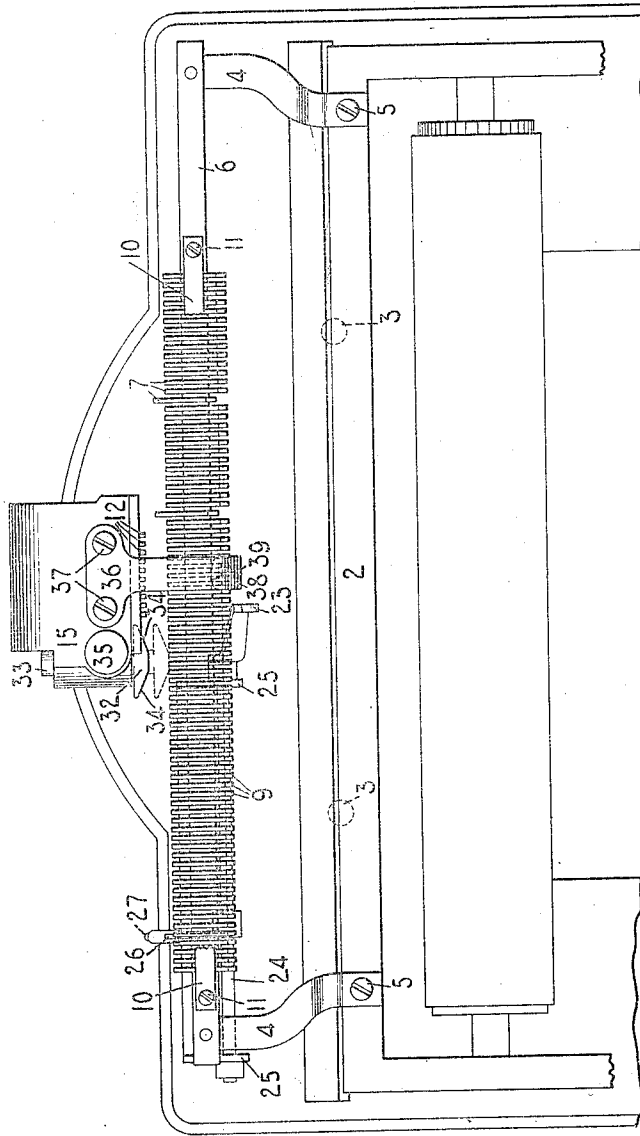
HIS ATTORNEY

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FIG. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE A. SEIB, OF ILION, NEW YORK, ASSIGNOR TO UNION TYPEWRITER COMPANY,
OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

971,932.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed June 9, 1910. Serial No. 565,948.

To all whom it may concern:

Be it known that I, GEORGE A. SEIB, citizen of the United States, and resident of Ilion, in the county of Herkimer 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 tabulator mechanism of the character disclosed in the application of Oscar Woodward, Serial No. 565,846, filed June 8, 1910. In the mechanism disclosed in said Woodward application, a series of column stops are cammed back to inoperative position by a resetting cam, and the main object of my present invention is to provide simple and efficient means for resisting undue strain on the column stop bar when the column stops are being cammed back to inoperative position.

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 appended claims.

In the accompanying drawings, wherein like reference characters indicate corresponding parts in the various views, Figure 1 is a fragmentary side elevation with parts in section of one form of typewriting machine embodying my invention; only a sufficient number of parts being shown to illustrate my invention in its embodiment therein. Fig. 2 is a fragmentary plan view of the same with parts broken away.

The general purposes to be attained by the construction as a whole shown in the accompanying drawings, are the same as those attained in the application of Sivertsen & Nielsen Serial No. 488,675, filed April 8th, 1909 and in the application of Oscar Woodward hereinbefore referred to, my invention being confined to the embodiment of the resisting bracket 36 in combination with devices shown in the Woodward application, for example.

I have illustrated my invention in the present instance embodied in a No. 11 Remington machine. It should be understood, however, that the invention may be embodied in various styles of typewriting machines.

The frame 1 of the machine supports a carriage 2, which is adapted to travel from side to side of the machine over the top plate thereof; the carriage being supported on anti-friction balls or rollers 3. The carriage supports the usual cylindrical platen, conventionally represented in the present instance. Rearwardly extending bracket arms 4 are fixed to the carriage at 5 and support a column stop bar 6, which extends throughout, or substantially throughout, the length of the carriage. This bar is provided with teeth on the upper and lower sides thereof, with interdental spaces between said teeth for the reception of bifurcated column stops 7, which are adapted to slide fore and aft of the machine in said interdental spaces and into and out of operative position. The stops 7 are adapted to be held against accidental displacement from the operative or inoperative positions by frictional engagement between said stops and the column stop bar, or by the use of suitable friction springs. There are preferably as many pairs of interdental spaces in the column stop bar as there are letter space positions of the carriage in its travel from side to side of the machine, or as there are indices on the carriage scale, with which a fixed pointer 8 is adapted to cooperate. Each column stop has an upwardly extending stud 9 thereon adapted to cooperate with a bar 10 arranged above the column stops, and fixed at 11 to the column stop bar. The bar 10 limits the rearward movement of the column stops on the column stop bar 6 and prevents a removal of the stops therefrom, except when the bar 10 is detached.

Denominational stops 12 are adapted to cooperate with the column stops which are projected to operative position. The denominational stops are each formed as a part of an upright denominational stop lever 13, pivoted at 14 to a tabulator frame 15, secured to the frame of the machine by screws 16. The lower end of each denominational stop lever is connected to a link 17, which in turn is connected at its forward end to an angular lever 18, pivoted on a pivot rod 19 fixed to the frame of the machine. Tabulator keys 20 are operatively connected to the angular levers, to actuate them and effect a forward movement of the corresponding denominational stops into the

path of the operative column stops 7. Restoring springs 21 are each connected at one end to an angular lever 18, and at the opposite end to a guide plate 22 for the stems of the tabulator keys.

The different column stops are projected to operative position by selecting mechanism, which comprises an upright arm or finger 23; the contact end or portion of which is of sufficient width to cooperate with but one column stop at a time. The member 23 is rigidly connected to a rock shaft 24 mounted to turn in a bracket 25 secured to the top plate of the machine. A rearwardly extending crank arm 26 is secured to the rock shaft 24, and has a depending link 27 connected thereto. The lower end of the link 27 is connected to a key lever 28, fulcrumed at 29, and connected to a restoring spring 30. The key lever 28 carries a selecting key 31, which is arranged in the keyboard of the machine. A depression of the selecting key 31 effects a rearward movement of the finger 23, thus moving the column stop 7 which is in register therewith, rearwardly to operative position. When pressure on the key 31 is released, the spring 30, restores the key and the parts controlled thereby to normal position.

It will be understood that the particular column stop to be selected depends on the position of the carriage relatively to the selecting device or finger 23; the column stops being successively brought into register with said finger during the travel of the carriage.

In order to restore the various column stops to operative position, I have provided a cam 32 which is formed on a carrier or slide 33, adapted to move fore and aft of the machine and into and out of cooperative relation with the operative column stops. The cam 32 is provided with oppositely inclined cam faces 34, either of which faces is adapted to cooperate with the column stops; depending on the direction of travel of the carriage, and to cam the column stops forwardly to inoperative position. The cam 32, in its movement into and out of cooperative relation with the operative column stops, is controlled by a finger piece 35. The cam 32, its slide 33, and the finger piece 35, are all carried on the tabulator frame 15, which is fixed to the frame of the machine and may, for the purpose of the present invention, be regarded as a part thereof. The means by which the finger piece 35 is rendered effective to control the movement of the cam 32, and the construction of said cam and its slide 33, may be the same as those disclosed in the Woodward application hereinbefore referred to, and further detailed description of these parts is deemed unnecessary. It is sufficient, for the purpose of the present invention, that it be understood that a depression of the

finger piece 35 is effective to move the cam 32 from the full to the dotted line position in Fig. 2, and that a relative movement between the carriage and the cam at this time is effective to cam the operative column stops forwardly on the column stop bar, to inoperative position.

It sometimes occurs, especially on long carriages, that the camming of a considerable number of the operative column stops forward to inoperative position, unduly strains the column stop bar and tends to flex the same forwardly. In order to resist any undue flexing of the column stop bar, and to resist any undue strain thereon, I have provided a rigid bracket, or resisting device 36, which is secured by screws 37 to the tabulator frame. This bracket extends forwardly over the column stop bar and is bent downwardly as at 38 in front of the column stop bar and then rearwardly as at 39. The free end of the part 39 is adapted to just clear the forward face of the column stop bar so that if the column stop bar should be flexed forwardly, during the camming forward of the column stops on the bar, it would be brought into contact with the fixed bracket, which latter would resist further flexing movement of the stop bar, and resist any undue strain thereon. It will be seen that the part 39 of the bracket is received between the arms of the series of bifurcated column stops and that the bracket in no manner obstructs the free movement of the carriage from side to side of the machine.

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

1. In a typewriting machine and tabulating mechanism, the combination of a stop bar, a series of stops mounted on said stop bar for movement into and out of operative position, means for moving the stops on the stop bar, means independent of but cooperative with said stop bar to resist straining the bar when said stops are being moved on the bar by said stop moving means, and a key controlled stop cooperative with said first mentioned stops.

2. In a typewriting machine and tabulating mechanism, the combination of a stop bar, a series of stops mounted on said stop bar for movement into and out of operative position, means for moving the stops on the stop bar, a carriage, the stop bar and stop moving means being carried one on the carriage and the other on the frame of the machine, and means carried by the same part that carries the stop moving means to resist straining the bar when the stops are being moved on said bar by said stop moving means, and a key controlled cooperative stop.

3. In a typewriting machine and tabulating mechanism, the combination of a carriage, a stop bar carried thereby, stops

mounted on said bar for movement into and out of operative position, stop moving means for moving said stops on the bar, said stop moving means being carried by the frame of the machine, and a device fixed to the frame of the machine and coöperative with said stop bar to resist straining the bar when the stops are being moved thereon by said stop moving means, and a coöperative key controlled stop.

4. In a typewriting machine and tabulating mechanism, the combination of a carriage, a column stop bar carried thereby, and a bracket fixedly connected with the frame of the machine and coöperative with said column stop bar to resist strain thereon.

5. In a typewriting machine and tabulating mechanism, the combination of a carriage, a stop bar carried thereby, stops mounted on said bar for movement into and out of operative position, a resetting device carried by the frame of the machine and coöperative with said stops to move them on the stop bar to inoperative position, and a device fixedly connected to the frame of the machine and coöperative with the stop bar on the side thereof opposite the resetting device and resisting strain on the bar due to the operation of the resetting device on the stops.

6. In a typewriting machine and tabulating mechanism, the combination of a carriage, a stop bar carried thereby, stops mounted on said bar for movement into and out of operative position, a resetting wiper carried by the frame of the machine and movable thereon into and out of coöperative relation with said stops and operative to move the stops on the stop bar to inoperative position during the travel of the carriage, and a device fixedly connected with the frame of the machine and coöperative with the stop bar on the side thereof opposite the wiper to resist strain on the bar due to the

camming back of the stops on the bar by said wiper.

7. In a typewriting machine and tabulating mechanism, the combination of a carriage, a stop bar carried thereby, stops mounted on said bar for movement into and out of operative position, a resetting hand controlled cam carried by the frame of the machine and movable thereon at will into and out of coöperation with said stops and operative to move the stops on the stop bar to inoperative position during the travel of the carriage, and a bracket carried by the frame of the machine and disconnected from but coöperative with the stop bar and operative to support the bar against the strain exerted thereon by the cam during its action on the stops.

8. In a typewriting machine and tabulating mechanism, the combination of a carriage, a stop bar carried thereby, stops mounted on said bar for movement into and out of operative position, a resetting hand-controlled cam carried by the frame of the machine and movable thereon at will into and out of coöperation with said stops and operative to move the stops on the stop bar to inoperative position during the travel of the carriage, and a bracket carried by the frame of the machine and disconnected from but coöperative with the stop bar and operative to support the bar against the strain exerted thereon by the cam during its action on the stops, the cam co-acting on one side of the bar with the stops and the bracket co-acting with the bar on the opposite side thereof.

Signed at Ilion, in the county of Herkimer, and State of New York this seventh day of June, A. D. 1910.

GEORGE A. SEIB.

Witnesses:

WM. HURLEY,
LIDA THORNELEY.