H. S. McCORMACK.

TYPE WRITING MACHINE.

APPLICATION FILED NOV. 10, 1908.

915,875. Patented Mar. 23, 1909.

Fig. 1.

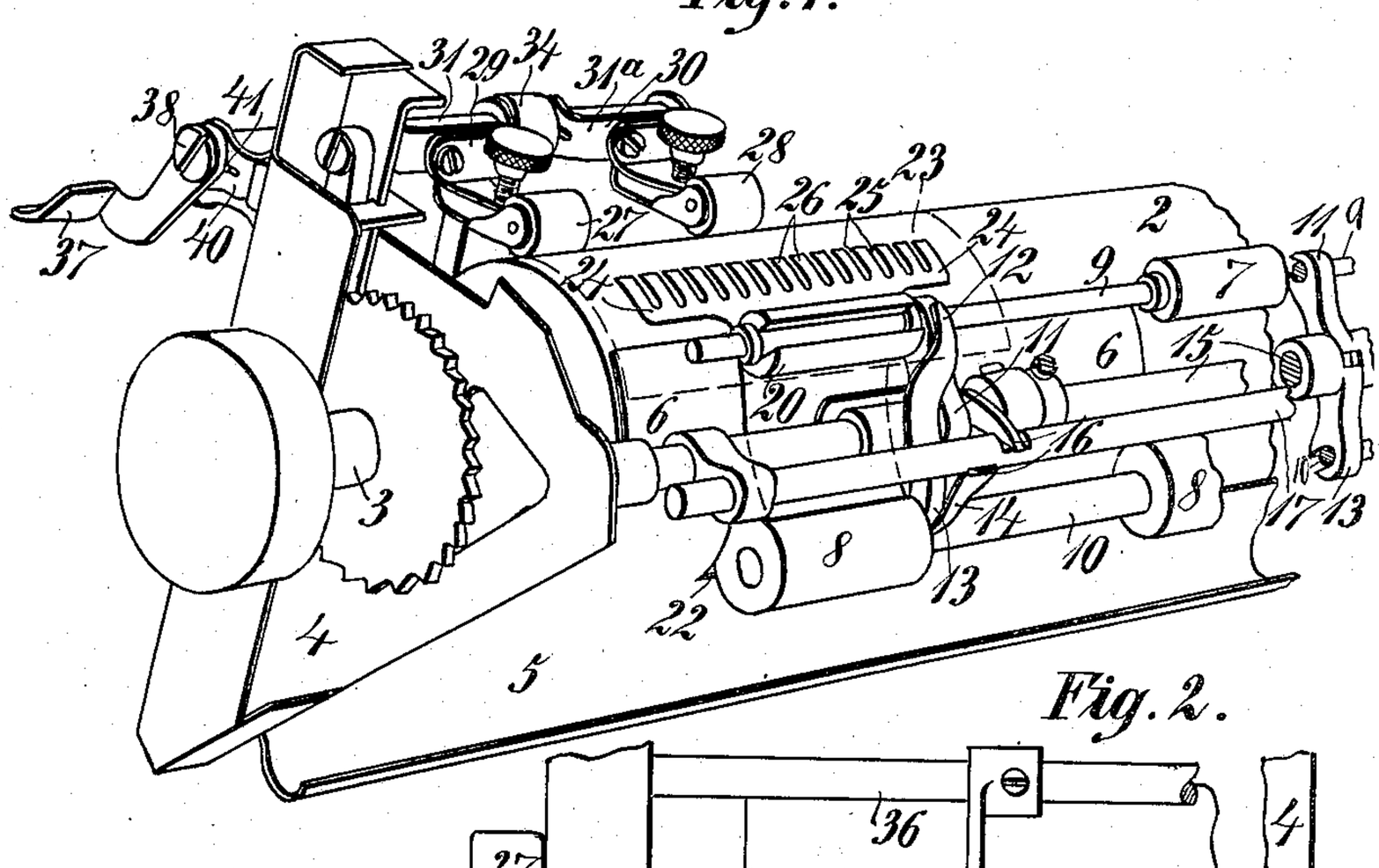


Fig. 2.

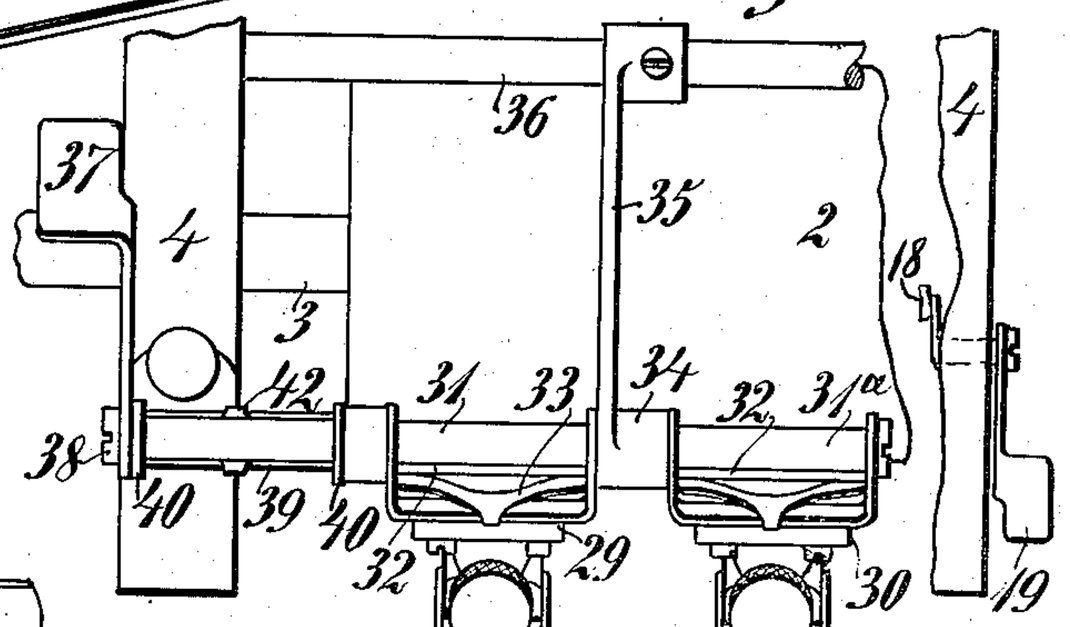


Fig. 3.

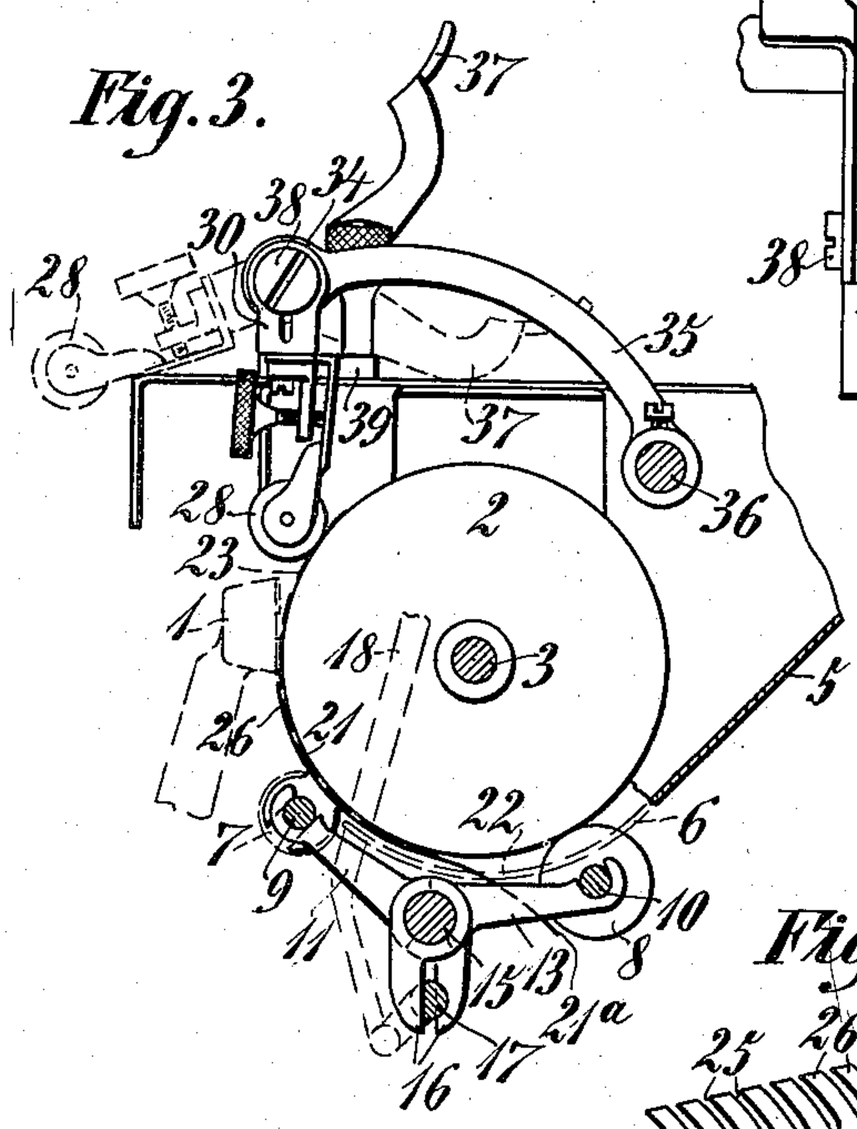


Fig. 4.

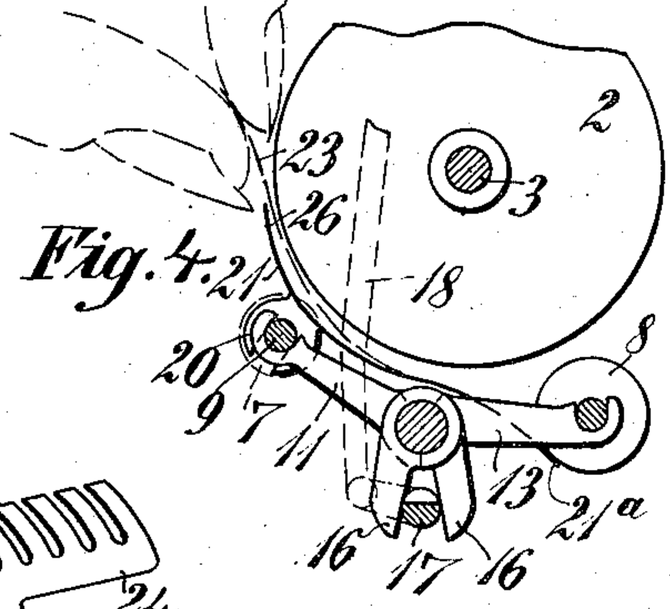
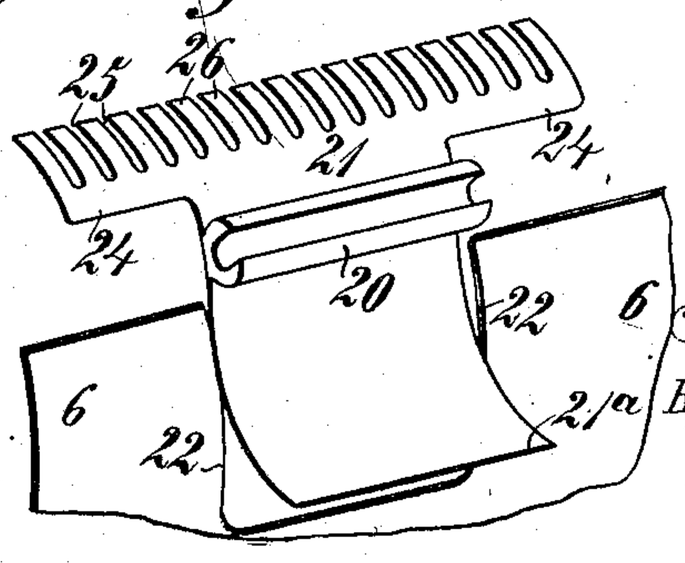


Fig. 5.



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UNITED STATES PATENT OFFICE.

HARRY S. McCORMACK, OF NEW ROCHELLE, NEW YORK, ASSIGNOR TO UNDERWOOD TYPE-WRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

No. 915,875. Specification of Letters Patent. Patented March 23, 1909.

Application filed November 10, 1908. Serial No. 461,848.

To all whom it may concern:

Be it known that I, HARRY S. MCCORMACK, a citizen of the United States, residing in New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the paper guiding devices of typewriting machines, and its object is to provide simple, effective and inexpensive means readily applicable to existing machines, for writing upon labels for medicine and other bottles. Paper labels of this class are usually of such small dimensions that it is found impracticable to write upon them as desired in typewriting machines as usually equipped; it being difficult to get the label into proper alinement or position upon the platen and almost impossible to write along the edges thereof, as often required. These objections I have overcome by providing a yielding plate to press upon the platen and extending close to the printing line thereon, and having its upper edge divided by numerous incisions into a comb consisting of highly flexible teeth. The plate curves from the front of the platen down around the lower side thereof, and is pressed by a spring against the platen over a considerable area of the latter, the pressure being applied to the plate between its top and bottom edges, and the plate serving substantially as the sole guide of the label from its insertion into the machine up to the time when its upper edge is caught by a releasable roll or rolls running upon the platen just over the printing line.

One of the principal objects of providing this label guiding plate is to permit the insertion of the label downwardly between the top edge of the plate and the platen, and for this purpose the plate is made releasable from the platen and is also preferably arranged at one end of the platen where it is most accessible.

I have shown the invention as applied to an Underwood front strike writing machine, and have hinged the plate upon the shaft usually provided for carrying the front pressure rolls. The plate is shown as provided with an open slotted bearing to permit it to slip readily upon the shaft in place of one of the rolls. The machine thus equipped may also be employed for writing upon ordinary letter sheets, etc., as usual.

In the accompanying drawings, Figure 1 is a perspective bottom front view of a platen frame of an Underwood front strike writing machine provided with my improvements. Fig. 2 is a plan of the same, showing the upper pressure rolls cast off from the platen. Fig. 3 is a part sectional end elevation of the same, showing the rolls and pressure plate in working positions. Fig. 4 is a similar view, showing the rolls and pressure plate released from the platen. Fig. 5 is a perspective bottom view of the yielding pressure plate, illustrating its insertion in an opening formed in the main guide plate.

Types 1 strike upon the front side of a platen 2, which is revolubly mounted by an axle 3 in a pair of ends 4, which are connected by a paper shelf 5 to form a platen frame; the bottom end of the paper shelf curving forwardly around the under side of the platen to form a main guide plate 6. Running upon the under side of the platen are forward and rear pressure rolls 7, 8, the former turning upon a shaft or axle 9, and the latter having a shaft or axle 10. The axle 9 is mounted upon a pair of hinged arms 11 pressed toward the platen by springs 12; and axle 10 is carried by a pair of hinged arms 13 pressed toward the platen by springs 14. Said arms are mounted independently of one another upon a rod 15 which rigidly connects the ends of the platen frame, and are provided with the usual releasing means, including opposite pairs of arms 16 appropriately connected with the arms 11, 13, and separable by means of a notched rock-shaft 17 connected by a link 18 to the usual releasing key 19, whereby the shafts may be dropped from the Fig. 3 to the Fig. 4 position.

Detachably hinged upon the front shaft or axle 9 in place of the left hand roll 7, by means of an open slotted bearing or socket 20, is an extremely thin and flexible guide plate 21 contiguous to the platen and curving from the bottom around the front of the platen and very close to the printing line thereon, as shown at Fig. 3. The rear end of the plate 21^a drops down through an opening 22 in the main guide plate 6 (the latter somewhat separated from the platen), so that if a large sheet is inserted back of the platen in the usual manner, it will be guided by the plate 6 properly into the bite of the pressure plate 21 and the platen. The pressure is applied by the shaft 9 between the top and bottom of that portion of the plate 21 which

bears upon the platen, and since the plate is extremely thin and highly flexible, it is effective to coöperate properly with the platen to feed the label up around the latter.

When it is desired to insert a label 23, the key 19 is depressed and the label is inserted bottom first downwardly in front of the platen and back of the plate 21, as at Fig. 2, and then the key 19 is raised to cause the plate to clamp the label. Then the platen is turned in the usual manner to feed the label up line by line as it is written upon. The upper edge of the plate is so close to the printing line that it is effective to hold the label back firmly against the platen at the point where it is being written upon. The upper edge portion of the plate is extended beyond the body portion to form wings 24, and the extreme edge is divided by numerous incisions 25 into a comb consisting of a series of teeth 26. Owing to the length of the cuts 25 and the extreme thinness of the metal, each of these teeth is extremely flexible, and moreover may be flexed independently of the other teeth. The division of this edge into a comb is a matter of considerable importance, because, owing to the thinness of the metal, it is found impracticable to produce a satisfactory plate with an uncut edge and to maintain it in a straight condition, or so that it will bear evenly at all points of its length upon the platen; whereas the provision of the comb results in pressure upon the platen along the entire set of teeth, because if the teeth are out of line, the pressure caused by the shaft 9 will bring them substantially into line or at least cause a large number of them to bear upon the platen sufficiently for the purpose, and consequently there is no excessive pressure at any one point, and the label is therefore not liable to feed askew as the platen is rotated. It will be seen also that the incisions 25 are so deep that each of the wings 24 may be considered as a finger extending laterally from the body of the plate 21 and capable of yielding under the pressure of the shaft 9 to tend to bring all of the teeth 26 evenly against the platen. Owing to the provision of the teeth, it is often found practicable to insert the labels 23 downwardly, as at Fig. 4, but without depressing the key 19, which is a saving of time and trouble. As soon as the label is fed up past the printing line, it is caught by a pair of rolls 27, 28 running upon the upper front side of the platen and mounted in brackets 29, 30 hinged upon a shaft 31 and yieldingly keyed thereto by means of keys 32 and springs 33, so that either roll may be swung up independently of the other. Said shaft 31 is rotatably mounted in a bearing 34 formed upon the front end of an arm 35 and secured at its rear end to a rod 36, which extends along the platen and is fixed at its ends to the ends 4 of the platen frame. Said shaft 31 may be rotated in its support by means of a key 37 connected to the shaft by a screw 38. A bracket 39 is fixed upon the top of the left hand platen frame end 4, and has ears 40 which also form bearings for the shaft 31. The shaft is yieldably keyed to the bracket 39 by means of a key 41 (Fig. 1) and spring 42 (Fig. 2) of ordinary type similar to 32 and 33. Thus both rolls 27 and 28 may be lifted by depressing the key 37, so that the top of the label may be readily introduced beneath the rolls; the latter serving to feed the label up as the bottom thereof approaches the printing line. The bracket 30, it will be seen, is hinged upon an extension 31^a of the rod 31 which projects through bearing 34.

Labels of round, oval, square and odd shapes may be readily introduced and fed around the platen, as required, and written upon close to any edge without difficulty.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others. Certain features of the invention are also applicable to other purposes than label writing.

Having thus described my invention, I claim:

1. In a front strike typewriting machine, the combination with a revoluble platen, of a thin flexible metal plate curving around the under front side of the platen, a support upon which the plate is hinged, and a spring to press the support toward the platen, the upper edge of said plate extending along the platen substantially to the printing line thereon and finely slitted at close intervals to form a substantially continuous flexible guide.

2. In a front strike typewriting machine, the combination with a revoluble platen, of a thin flexible metal plate curving around the under front side of the platen, a support upon which the plate is hinged, a spring to press the support toward the platen, the upper edge of said plate extending along the platen in proximity to the printing line thereon and divided by incisions to form a comb having numerous highly flexible teeth, and a releasable pressure roll running on the front side of the platen above the printing point and immediately over said flexible plate.

3. In a front strike typewriting machine, the combination with a revoluble platen, of a rod or shaft extending along the platen, a spring to press said rod or shaft toward the platen, and a thin highly flexible metal plate curving around the under front side of the platen and hinged upon said shaft, said plate extending close to the printing line and having its upper edge divided by numerous incisions into a row of highly flexible teeth forming a comb.

4. In a front strike typewriting machine,

the combination with a revoluble platen, of a rod or shaft extending along the platen, a spring to press said rod or shaft toward the platen, and a thin highly flexible metal plate curving around the under front side of the platen and having on its under side an open slotted bearing to fit upon said shaft, said plate extending close to the printing line and having its upper edge divided by numerous incisions into a row of highly flexible teeth forming a comb.

5. In a front strike typewriting machine, the combination with a revoluble platen, of a thin flexible metal plate curving around the under front side of the platen, a support upon which the plate is hinged, a spring to press the support toward the platen, the upper edge of said plate extending along the platen in proximity to the printing line thereon and divided by incisions into numerous highly flexible teeth forming a comb; and means for withdrawing said support and plate from the platen to permit a label to be dropped between the front of the platen and the comb.

6. In a front strike typewriting machine, the combination with a revoluble platen, of a thin flexible metal plate curving around the under front side of the platen, a support upon which the plate is hinged, a spring to press the support toward the platen, the upper edge of said plate extending along the platen in proximity to the printing line thereon and divided by incisions to form a comb having numerous highly flexible teeth, and a main guide plate curving around the under side of the platen and having an opening down through which the rear portion of said flexible plate drops.

7. In a front strike typewriting machine, the combination with a revoluble platen, of a shaft extending along the under side of the platen and carrying a pressure roll, a spring to press said shaft toward the platen, a thin highly flexible metal plate mounted on said shaft and curving therefrom around the under side of the platen and up in front thereof in contiguity thereto substantially to the printing line, the upper edge of said plate divided by numerous incisions into a row of highly flexible teeth forming a comb, and a key to move said shaft away from the platen to release the pressure roll and plate.

8. In a front strike typewriting machine, the combination with a revoluble platen, of a thin flexible metal plate curving around the under front side of the platen, a support upon which the plate is hinged, a spring to press the support towards the platen, the upper edge of said plate extending along the platen in proximity to the printing line thereon and divided by incisions to form a comb having numerous highly flexible teeth, and a key connected to said plate to withdraw it from the platen.

9. In a typewriting machine, the combination with a revoluble platen, a platen frame having ends, and a rod extending over the platen and connecting said ends, of an arm extending forwardly from said rod, a shaft turning in a bearing in the forward end of said arm and carrying a bracket which is yieldingly keyed thereto, said bracket having a pressure roll to run upon the front of the platen, and said shaft being yieldingly keyed to the platen frame, and also provided with a finger-piece whereby it may be turned to throw said pressure roll away from the platen.

10. In a typewriting machine, the combition with a revoluble platen, a platen frame having ends, and a rod extending over the platen and connecting said ends, of an arm extending forwardly from said rod, a shaft turning in a bearing in the forward end of said arm and carrying a bracket which is yieldingly keyed thereto, said bracket having a pressure roll to run upon the front of the platen, and said shaft being yieldingly keyed to the platen frame, and also provided with a finger-piece whereby it may be turned to throw said pressure roll away from the platen, said shaft also having an extension projecting through the bearing on said arm and carrying a second pressure roll bracket yieldingly keyed thereto.

11. In a typewriting machine, the combination with a revoluble platen, a platen frame having ends, and a rod extending over the platen and connecting said ends, of an arm extending forwardly from said rod, a shaft turning in a bearing in the forward end of said arm and carrying a bracket which is yieldingly keyed thereto, said bracket having a pressure roll to run upon the front of the platen, and said shaft being yieldingly keyed to the platen frame, and also provided with a finger-piece whereby it may be turned to throw said pressure roll away from the platen, and a thin flexible metal plate curving around the under front side of the platen and in contiguity thereto and spring-pressed thereagainst, the upper edge of said plate extending along the platen in proximity to the printing line thereon, and divided by numerous incisions into highly flexible teeth forming a comb.

12. In a typewriting machine, the combination with a revoluble platen, a platen frame having ends, and a rod extending over the platen and connecting said ends, of an arm extending forwardly from said rod, a shaft turning in a bearing in the forward end of said arm and carrying a bracket which is yieldingly keyed thereto, said bracket having a pressure roll to run upon the front of the platen, and said shaft being yieldingly keyed to the platen frame, and also provided with a finger-piece whereby it may be turned to throw said pressure roll away from the platen, a thin flexible metal plate curving around the

under front side of the platen and in contiguity thereto and spring-pressed thereagainst, the upper edge of said plate extending along the platen in proximity to the printing line thereon, and divided by numerous incisions into highly flexible teeth forming a comb, and means to release said plate from the platen.

13. The combination with a revoluble platen, of a pressure roll running thereon, a pressure plate curving around the platen and having a tandem relation to said pressure roll, means to release said plate and roll simultaneously, and a main guiding plate curving around the platen, and having openings through which said roll and plate extend.

14. The combination with a revoluble platen, of a pressure roll running thereon, a pressure plate curving around the platen and having a tandem relation to said pressure roll, and means to release said plate and roll simultaneously, said roll carried by pivoted arms, and said plate carried by independently pivoted arms.

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