

R. A. SPURGIN.
TYPE WRITER.
APPLICATION FILED JUNE 30, 1911.

1,015,594.

Patented Jan. 23, 1912.
2 SHEETS—SHEET 1.

Fig. 1.

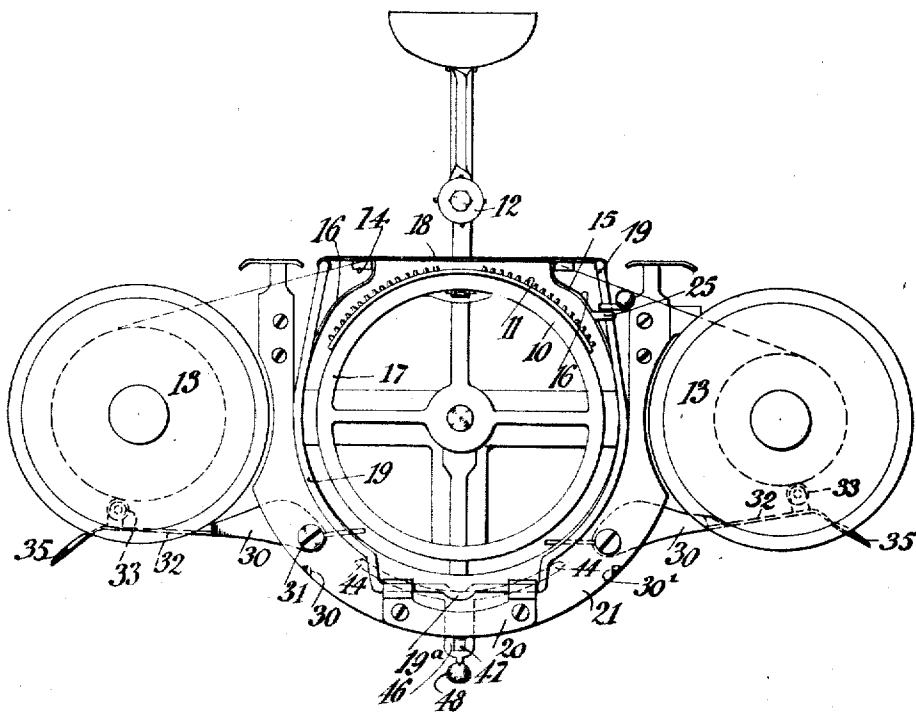
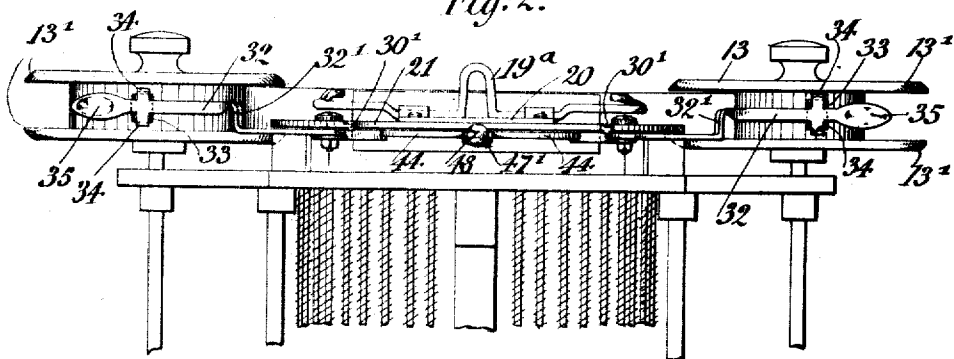


Fig. 2.



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2 SHEETS-SHEET 2.

Fig. 3.

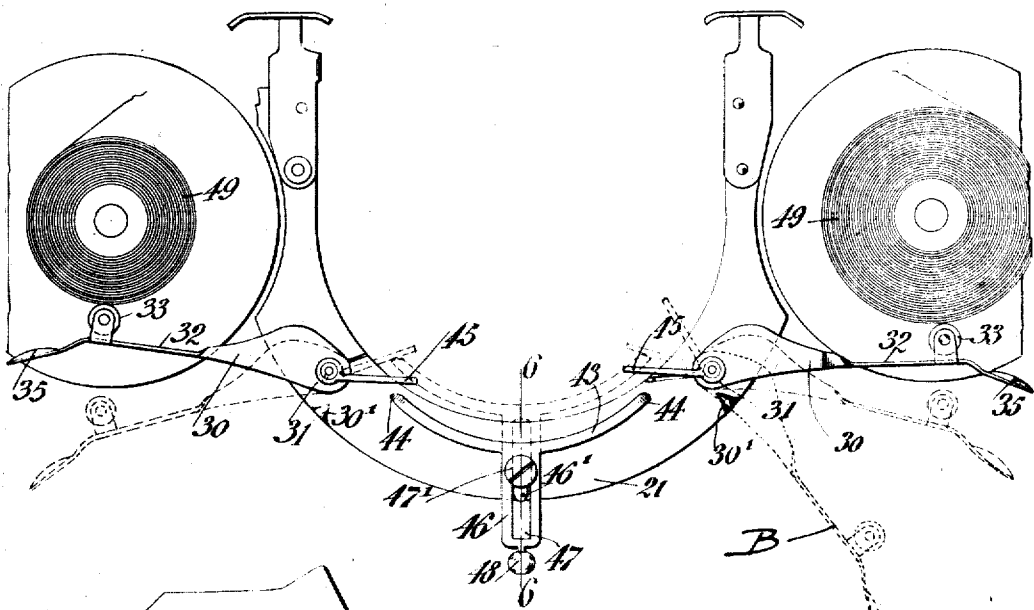


Fig. 4.

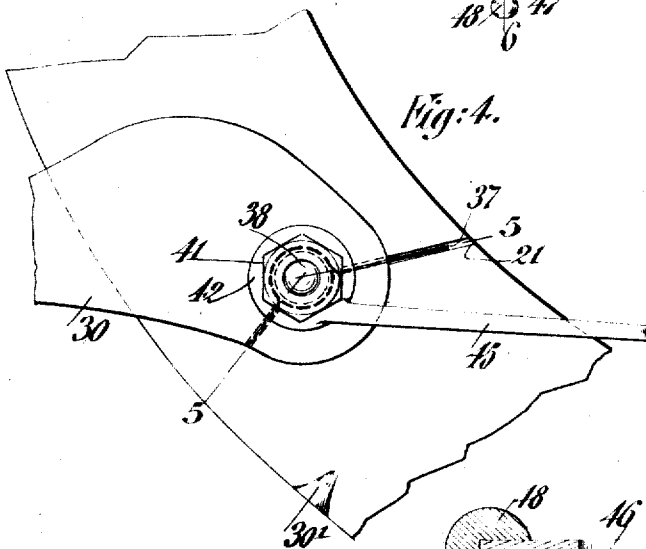


Fig. 5.

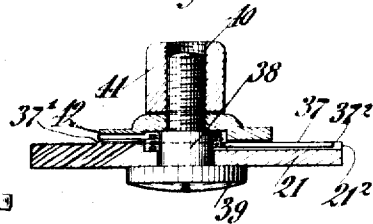
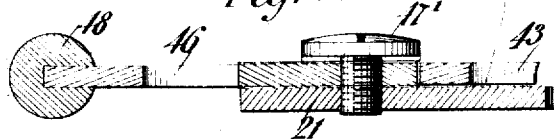


Fig. 6.



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UNITED STATES PATENT OFFICE.

RICHARD A. SPURGIN, OF LONDON, ENGLAND, ASSIGNOR TO THE HAMMOND TYPE-WRITER CO.

TYPE-WRITER.

1,015,594.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed June 30, 1911. Serial No. 636,258.

To all whom it may concern:

Be it known that I, RICHARD A. SPURGIN, a subject of Great Britain, residing in London, England, have invented certain new and useful Improvements in Type-Writers, of which the following is a specification.

This invention relates to typewriters, and more particularly to means for guiding and tensioning the typewriter ribbon of the typewriter known as the Hammond typewriter.

Hitherto in the use of Hammond typewriters it was found necessary to provide the shuttle-shield with ribbon guides so as to secure the tensioning of the ribbon during the impress. In practice, however, it was found that these ribbon-guides of the shuttle-shield were encountered by the shuttle during the striking of the hammer, whereby the shuttle-shield became twisted or injured and the ribbon was consequently not impressed in the correct manner.

The object of this invention is to do away with the shuttle-shield guides and provide an ordinary shuttle-shield, and at the same time provide for the proper tensioning of the ribbon during its movement from one spool to the other.

A further object of the invention is to provide the simultaneous disengagement movement of the control devices and the automatic engagement and movement of the same. For this purpose my invention consists of means for tensioning the ribbon of a Hammond typewriter, and means for disengaging the controlling means.

The invention consists further in the controlling means which continually press on the ribbon unless brought into disengagement position.

In the accompanying drawings, Figure 1 shows a plan-view of the invention as applied to an improved form of the Hammond typewriter, Fig. 2 is a front-elevation of the same, Fig. 3 is a plan-view of the parts shown in Fig. 1 with part of the members removed in order to show the controlling devices and the devices for moving the same, Fig. 4 is a detailed view of the means for pressing the controlling devices against the ribbon, Fig. 5 is a detailed enlarged view, taken on line 5-5 of Fig. 4, and Fig. 6 is also a detailed view, taken on line 6-6 of Fig. 3.

Similar letters of reference indicate corresponding parts throughout the drawings.

Referring more particularly to the drawings, the anvil 10, the shuttle 11, the hammer 12, and the ribbon-spool 13 are of the ordinary construction and arrangement. The ribbon passes from the spools between the shuttle and hammer by way of guide-fingers 14 and 15 arranged in pairs on arms 16, which are suitably secured to the frame-part 17 of the typewriter. The shuttle-shield 18 is carried in the usual manner by a frame 19 comprising arms of curved form to surround the anvil 10, being united at the front of the machine and pivoted by a bracket 20 on the rim or frame 21 surrounding the anvil. The shield-frame 19 is bent at its front part to form a manipulating finger 19'. The shuttle-shield is provided with an opening or openings in which the hammer 12 strikes, as is well known. Lugs or fingers 25 are provided on the arm 16 which serve to elevate the ribbon to permit writing in another color, the frame being held thereunder in the position as shown in Fig. 1. These parts operate in the manner as known heretofore.

In order to insure the proper tensioning of the ribbon during its unwinding from its full wound position during the operation of the typewriter, controlling devices 30 are provided, one for each spool of ribbon.

The device consists of a lever pivoted at 31 to the frame 21, and provided with an extension 32 near the end of which a friction roller 33 is supported by brackets 34, bent from the lever 32. A handle 35 forms an extension to the lever 32. These parts are clearly shown in Figs 1, 2 and 3.

Fig. 2 shows how the lever 32 is bent at 32' in order to bring the roll between the holding parts 13' of the spools 13. The devices 30 are spring-actuated by means of a spring 37 which surrounds a pin 38 which is upset at 39 and screw-threaded at 40, engaging by its screw-threads a socket 41 below which is a washer 42 also screw-threaded to engage the screw-threads of the pin 38. This flange 42 is provided with a recess which is engaged by one end 37' of the spring 37 and the frame 21 through which the pin 38 passes, is provided with a slot or recess 21' which is engaged by the other end of the spring 37. By means of

this spring and the arrangement just described, the normal action is to press the friction rollers against the ribbon of the spools. Furthermore, the action of the device just described is such that when the devices 30 are intended to be placed into their inoperative position as during the changing of the ribbon, then they are moved into the position, as shown in dotted lines marked B in the right-hand side of Fig. 3, and by the friction between the projection 30¹ and lever 32 by reason of the pressure of the spring maintained in that position. In order to simultaneously move the devices into disengagement position, a connecting device or bridge 43 is provided which has its ends 44 adapted to press against extensions 45 of the lever 32. The bridge is provided with an extension 46, as shown in Fig. 3, which is provided with a guide-slot 47, engaged by a guide-pin 47¹, the end of which extension is provided with a manipulating knob 48. An insert 46¹ is held against the frame 21 by the screw 47¹ and serves to limit the movement of the extension 46. By the inward push on the knob 48, as shown in Fig. 6, the ends 44 of the bridge 43 engage the extensions 45 of the levers 32, and thereby move the extensions 45 inwardly and the friction rollers 33 away from the ribbon 49, which passes from one spool to the other. Thus when it is desired to disengage the friction rollers 33 from the ribbon, the extension 46 is operated by the knob 48 and the bridge presses the inward end of the levers 32 so as to bring about the disengagement of the friction rollers. When it is desired to place the friction rollers in an entirely inoperative position, they are moved by hand over the projection 30¹ into the innermost dotted position B, shown in the right-hand side of Fig. 3. When the friction rollers 33 press on the ribbon during its winding on one spool and unwinding from the other, the resistance caused by the pressure of the roller serves to hold that part of the ribbon between the arm and shuttle in tension and even position.

My improved device therefore serves to secure the efficient holding of the ribbon and improves the impress on the paper, as the ribbon is in good and even shape. Furthermore, the ordinary shuttle-shield may be used which has not the ribbon-guides and therefore the conflict of the ribbon-guide with the shuttle, when the hammer strikes, is obviated.

The operation of my improved device is as follows: When the machine is used the devices 30 are pressed against the ribbon by means of their springs and thereby the ribbon is held in taut position during its winding on one spool and unwinding from the other. When, however, the ribbon-spools

have to be removed from the machine for the purpose of putting on a new ribbon, then the devices 30 are moved to their inoperative position shown by B and maintained in that position. If, however, slight changes or shifting of the ribbon have to be made, then the knob 48 is moved and pressed inwardly so as to cause the bridge to engage the extensions of the devices 30, and disengage the friction rollers from the ribbons, and permit thereby the ready adjustment of the same.

My invention therefore consists in the arrangement of the tension devices which consist of a pivoted lever-arm spring-actuated at one end and provided with a friction roller at the other. And the invention consists further in the coöperation of the two devices with a sliding-bridge to move the devices simultaneously away from the ribbon, and the invention consists more particularly in the specific device which is pivoted at one end and spring-actuated at that end in a manner to press the roller supported by the lever arm against the ribbon and to be maintained in a certain position when the tension of the spring is overcome and when the friction roller is away from the ribbon.

I do not limit myself to the construction herein described, as various changes in the construction may be made without departing from the spirit and scope of the invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a typewriter, a tension device, comprising a pivoted lever having a friction-roller at one side of the pivot and an extension at the other side of the pivot, a sliding piece adapted to engage the extension and move the tension device out of engagement and against the action of the spring and maintain it in that position.

2. In a typewriter, the combination of pivoted tension devices each having an extension at one end and a friction-roller at the other end, a bridge adapted to engage the extensions of the tension devices, a guide-slot on the bridge, and a manipulating knob for the bridge.

3. In a typewriter, the combination of tension devices, each comprising a pivoted lever with a friction roller at one end and an extension at the other end, and a tension spring for pressing the friction roller normally in one direction, a projection for holding the lever when pressed against the projection maintaining the lever in a fixed position, and a sliding bridge for engaging the ends of the extensions for holding the levers in a fixed position against the pressure of the spring.

4. In a typewriter, the combination, of a
fixed projection and a pivoted lever having
a friction roller at one end and pressed
normally in one direction, the said lever
5 being adapted to engage the projection and
to be held thereby when moved over the
projection.

In testimony, that I claim the foregoing
as my invention, I have signed my name in
presence of two subscribing witnesses.

RICHARD A. SPURGIN.

Witnesses:

JOHN MURTAGH,
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