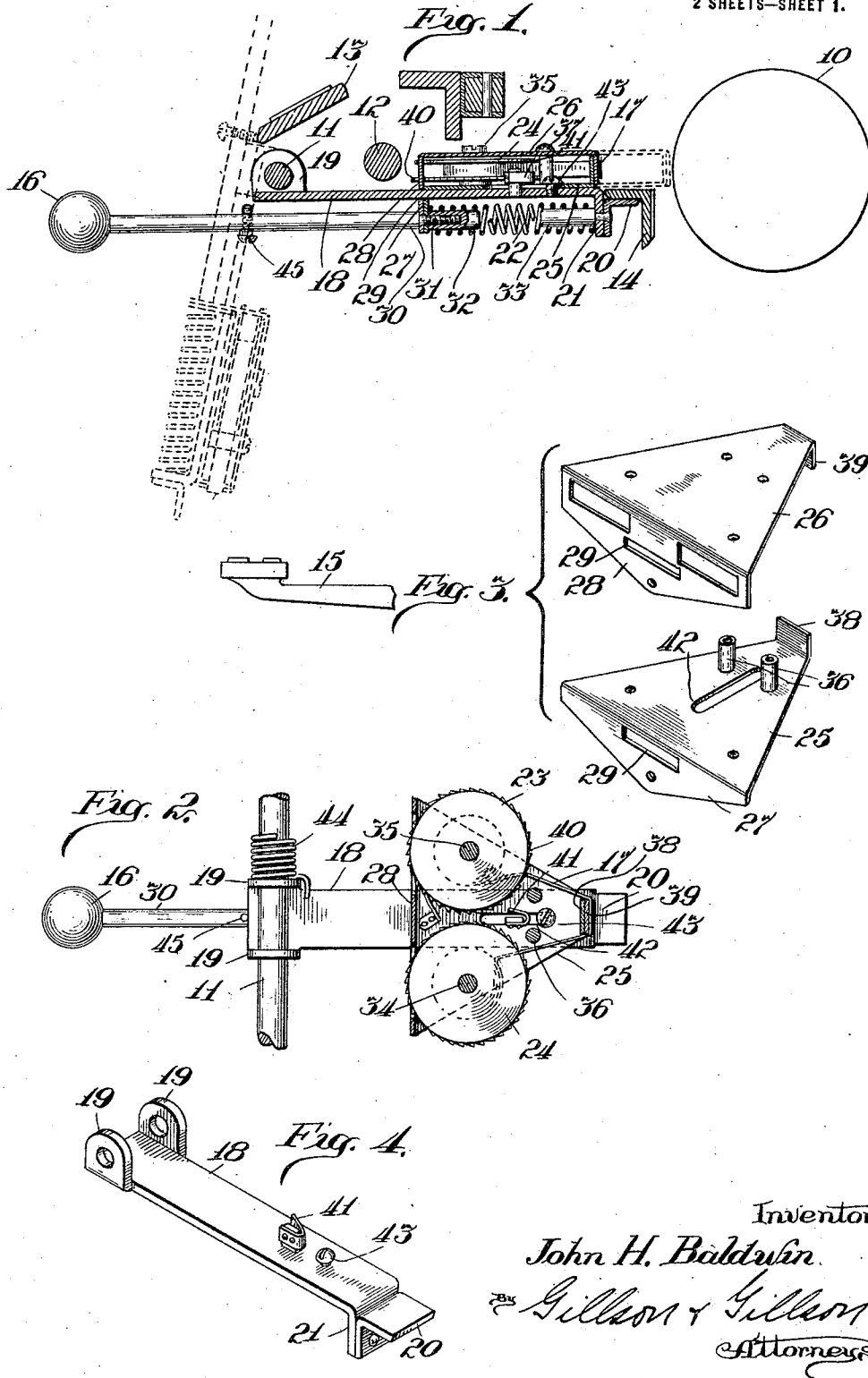


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ERASING ATTACHMENT FOR TYPEWRITERS.
APPLICATION FILED AUG. 14, 1918. RENEWED SEPT. 26, 1921.

1,415,293.

Patented May 9, 1922.

2 SHEETS—SHEET 1.

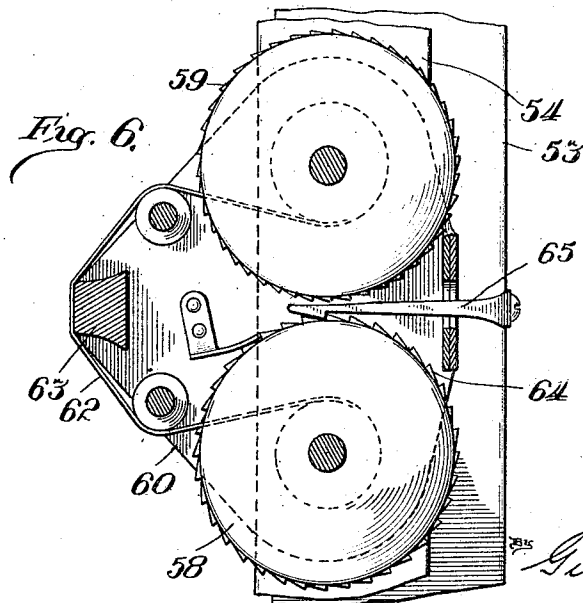
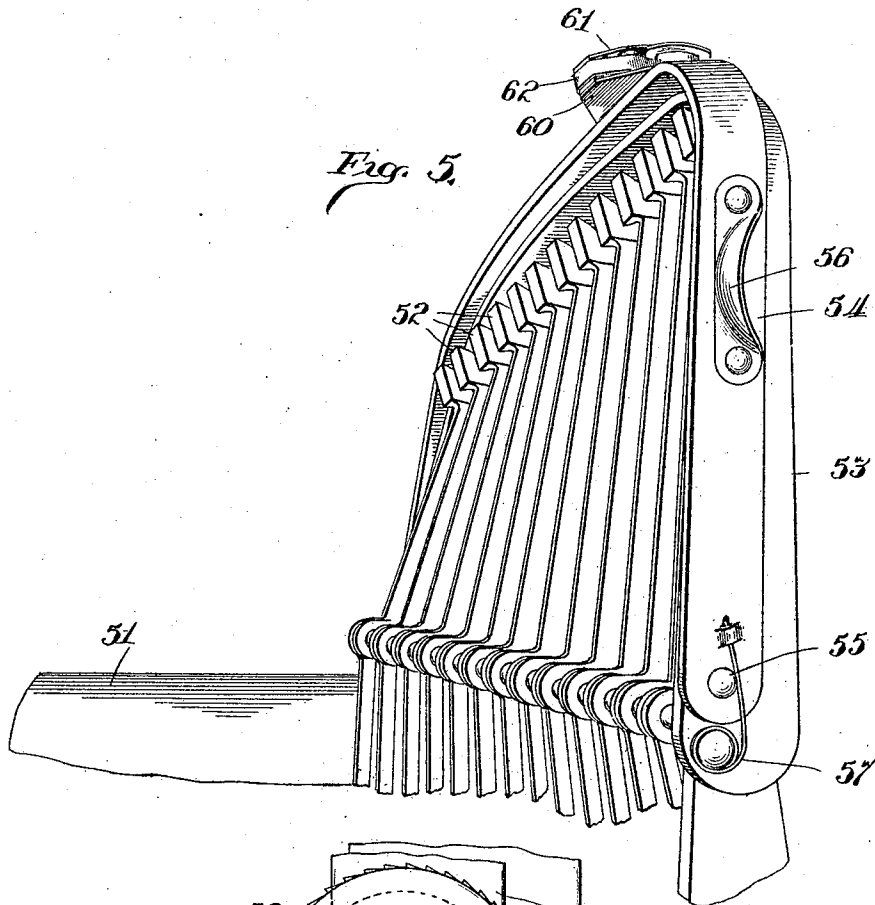


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UNITED STATES PATENT OFFICE.

JOHN H. BALDWIN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE BALDWIN ERASER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ERASING ATTACHMENT FOR TYPEWRITERS.

1,415,293.

Specification of Letters Patent.

Patented May 9, 1922.

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To all whom it may concern:

Be it known that I, JOHN H. BALDWIN, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Erasing Attachments for Typewriters, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to erasing devices for typewriters and has for its principal object to provide improved apparatus for erasing typewritten matter in accordance with the method disclosed in Patent No. 1,222,592 issued to me April 17, 1917. While satisfactory erasures of typewritten matter are accomplished by stripping off the surface particles of the paper with an adhesive tape, it is obviously desirable that this may be done without removing the paper from the typewriting machine and the operation requires that the tape be projected against the paper with a considerable degree of force. The invention accordingly contemplates forms of apparatus which may be applied to typewriting machines of well known construction, as attachments, and which may be effectively used thereon without injury to the typewriting machine.

In the accompanying drawings;—

Fig. 1 is a central longitudinal sectional view showing one form of apparatus provided by the invention and details of a well known make of typewriting machine.

Fig. 2 is a plan view of the apparatus illustrated in Fig. 1, some of the parts being shown in section,

Figs. 3 and 4 are perspective views showing some of the details of the apparatus illustrated in Figs. 1 and 2, separated from other parts,

Fig. 5 is a detail perspective view of another well known make of typewriting machine with a modified form of the apparatus applied thereto as an attachment, and

Fig. 6 is a plan sectional view of the form of attachment illustrated in Fig. 5, a detail of the typewriting machine being also shown.

Referring to the form of construction illustrated in Figs. 1 to 4 inclusive, the typewriter platen is represented at 10 and some of the transverse frame members of the typewriting machine are indicated at 11, 12, 13 and 14. A detail of one of the type bars appears at

15. The erasing attachment provided by the invention is swingingly mounted upon one of the transverse frame members as 11 of the typewriter centrally in front of the platen, 10. In this form of construction the erasing attachment is preferably provided with a knob or handle 16 for its operation. When the device is to be used this knob is first employed for swinging the attachment into a horizontal position in front of the platen, after which a sharp inthrust upon the knob or handle serves for projecting the adhesive tape, as 17, toward the platen.

The operative parts of the erasing attachment are illustrated as being carried by a swinging support 18 upon which they are slidably mounted. The swinging support 18 is preferably formed at one end with apertured lugs 19 (Fig. 4). In mounting the device upon the typewriter the frame member 11 is extended through the apertures of the lugs 19. The other end of the support 18 is formed with contact shoulder 20 for engagement with the underside of the frame member 14 when the attachment has been brought to a horizontal position in front of the platen. This end of the support 18 is also formed with a down-turned portion 21 which provides an abutment for the forward end of a return spring 22.

The adhesive tape 17 is carried by winding and supply spools 23, 24. As shown, both of these spools are rotatably mounted between a pair of connected plates 25, 26. The connected plates 25, 26, form a case which slides upon the swinging support 18 and to which the knob or handle 16 is connected. For this purpose the two plates 25, 26, have overlapping flanges 27, 28, both of which are slotted, as at 29, to permit the passage of the support 18 through the same. A push rod 30 is connected to the flanges 27, 28, below the support 18 and the knob or handle 16 is mounted upon the end of this push rod. The flanges 27, 28, also provide an abutment for the rear end of the return spring 22. As shown, a reduced and threaded end portion 31 of the push rod 30 is extended through the flanges 27, 28, for receiving a cap 32 which enters the adjacent end of the return spring 22 to prevent its displacement. Similarly a stud 33 is secured to the down-turned portion 21 of the support 18 for entering the other end of the return spring 22.

Preferably a plurality of spacing studs

36, extend between the plates 25, 26, for connecting the plates. As shown, the studs 36, are fixed upon the lower plate 25 while the upper plate 26 is connected to the studs 5 by cap screws, as 37. Other studs 34, 35, extend through and between the plates 25, 26, to serve as journals for the winding and supply spools 23, 24. These last mentioned studs are preferably removable to permit replacement of the spools. Upon removal of the studs 34, 35, the spools may be withdrawn from between the plates. The plates 25, 26 also have overlapping flanges 38, 39, which provide a firm contact portion over the spools 23, 24, for projection against the platen 10. To insure the presentation of a fresh portion of the tape 17 toward the platen 10 at each stroke of the handle 16, the winding spool 24 is formed with ratchet teeth, as 40, upon its periphery and a spring pawl 41 is mounted upon the support 18 for co-operation with these ratchet teeth during the intrusts of the handle. As shown, the spring pawl 41 enters the space between the plates 25, 26, through a slotted opening 42 in the plate 25. A headed stud 43 is also carried by the support 18 and passes through the slot 42 to prevent upward displacement of the plate 25 at its forward end. While the pawl 41 cooperates only with the ratchet teeth 40 upon the winding spool 24, the two spools 23, 24, are preferably of like construction to permit of the supply spool 23 being transferred to the stud 35 for use as a winding spool when the supply of tape wound thereon has become exhausted. The supply spool 23 is accordingly also shown as being formed with ratchet teeth 40 upon its periphery.

It is, of course, required that the swinging support 18 and the parts mounted thereon should normally assume such a position as not to interfere with the movement of the type bars, as 15, toward the platen 10. For this purpose a spring 44 is coiled about the typewriter frame member and reacts upon the support 18 for swinging it to the position illustrated by dotted lines in Fig. 1. When this arrangement is employed a set screw 45 is mounted in the push rod 30 for engagement with the typewriter frame member 13 to limit the swinging movement of the support 18 by the spring 44.

Referring now to the form of construction illustrated in Figs. 5 and 6, the platen of another well known make of typewriter is represented at 51 and some of the type bars are shown at 52. In this form of typewriter the type bars 52 normally occupy a substantially upright position below a stationary frame member which takes the form of an upright yoke strap 53. In applying the erasing attachment to this style of typewriter, a swinging support 54 which

also takes the form of a yoke strap is provided and this support is pivotally secured to the typewriter frame member 53, as at 55, (Fig. 5). A handle 56 is formed on the swinging support 55 for engagement with the fingers to move the support downwardly over the platen 51 while a spring 57 reacts between the typewriter frame member 53 and the support 54 to normally hold the latter in its upright position.

In this instance the winding and supply spools, as 58 and 59, are rotatably mounted between a pair of plates 60, 61, which are fixed upon the swinging support 54. As shown, that part of the tape, as 62, which extends between the spools passes over a hammer block 63. The hammer block 63 is rigidly held between the plates 60 and 61 at their forward edges and provides the contact surface against which the tape is supported when it is projected toward the platen for making an erasure. The winding and supply spools 58 and 59 are also formed with ratchet teeth 64 upon their peripheries and a stationary pawl 65 co-operates with the ratchet teeth upon the winding spool 58 for advancing the tape over the hammer block 63 at each forward movement of the swinging support 54. As shown, the pawl 65 is attached to the typewriter frame member 53 and extends between the plates 60 and 61 when the swinging support 54 occupies its upright position.

Either form of the apparatus illustrated in the drawings may be employed to effect the erasure of a typewritten character immediately after the character has been written. As the adhesive tape is found to have a substantial affinity for the ink, particularly when fresh, erasures of improperly written characters are thereby effected with but little effort as it is not then required that the projection of the tape against the paper should be accomplished with sufficient force to produce a perceptible removal of the surface fibres of the paper, the adhesion being then substantially confined to the ink alone.

I claim as my invention:

1. The combination with a typewriter frame and platen, of a spool carrying frame swingingly mounted upon the typewriter frame for movement toward the platen and having a contact surface for cooperation therewith, and winding and supply spools rotatably mounted in the spool carrying frame for feeding an adhesive tape over the said contact surface.

2. The combination with a typewriter frame and platen, a relatively movable spool carrying frame and pawl mounted upon the typewriter frame, the spool carrying frame being movable toward the platen and having a contact surface for cooperation therewith, and winding and supply spools rotatably

mounted in the spool carrying frame for feeding an adhesive tape over the said contact surface, one of the said spools being formed with ratchet teeth for cooperation with the said pawl upon relative movement of the spool carrying frame and pawl.

3. The combination with a typewriter frame and platen, of a spool carrying frame swingingly mounted upon the typewriter frame for movement toward the platen and having a contact surface for cooperation therewith, a pawl fixed upon the typewriter frame, and winding and supply spools rotatably mounted in the spool carrying frame for feeding an adhesive tape over the said contact surface, one of the said spools being formed with ratchet teeth for cooperation with the said pawl upon movement of the spool carrying frame.

4. The combination with a typewriter platen and the typewriter frame comprising a stationary bar extending in front of the platen, of a plate swingingly mounted on the bar and normally depending therefrom, a spool carrying frame slidably mounted on the plate, the said spool carrying frame being formed with a contact surface for cooperation with the platen, a pawl fixed upon the plate, and winding and supply spools rotatably mounted in the spool carrying frame for feeding an adhesive tape over the said contact surface, one of the said spools being formed with ratchet teeth for cooperation with the said pawl during sliding movement of the spool carrying frame on the plate.

5. The combination with a typewriter platen and the typewriter frame comprising a stationary bar extending in front of the platen, of a plate swingingly mounted on the bar and normally depending therefrom, a spool carrying frame slidably mounted on the plate, the said spool carrying frame be-

ing formed with a contact surface for cooperation with the platen, spools mounted in the spool carrying frame for feeding an adhesive tape over the said contact surface and a handle carried by the spool carrying frame operable to swing the plate to a horizontal position in front of the platen and advance the spool carrying frame on the plate.

6. The combination with the cylindrical platen of a typewriter, of an adhesive erasing element, means for forcing the erasing element against the platen and means for withdrawing the erasing element from the platen in a direction perpendicular to the axis of the platen at the place where the said erasing element is forced against the platen.

7. In an erasing device, in combination, a supporting surface against which the paper upon which the erasure is to be made is held, an adhesive erasing element, means for advancing the erasing element toward the supporting surface for contact with the paper at the place where the erasure is to be made while the paper is held against the said supporting surface, and means for withdrawing the erasing element in a direction which is normal to the said supporting surface.

8. In an erasing device, in combination, a supporting surface against which the paper upon which the erasure is to be made is held, an adhesive erasing element, means for advancing the erasing element toward the said supporting surface for contact with the paper at the place where the erasure is to be made while the paper is held against the said supporting surface, and means for effecting a quick movement of the erasing element away from the paper in a direction which is normal to the said supporting surface.

JOHN H. BALDWIN.