D. M. LEMON.

ERASING MACHINE.

APPLICATION FILED JULY 7, 1911.

1,077,146.

Patented Oct. 28, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

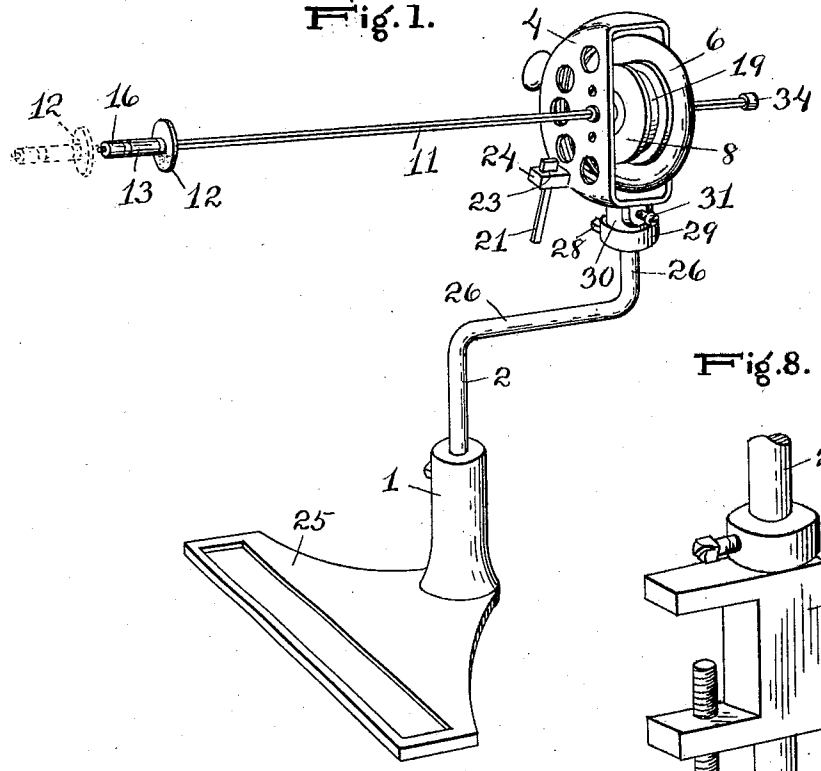


Fig. 8.

Fig. 3.

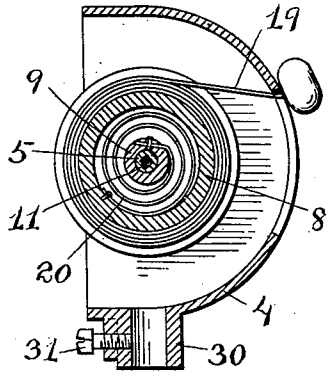


Fig. 4.

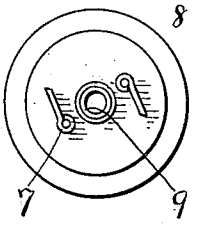
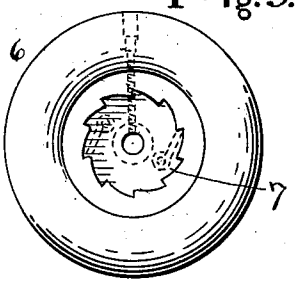


Fig. 5.



Witnesses

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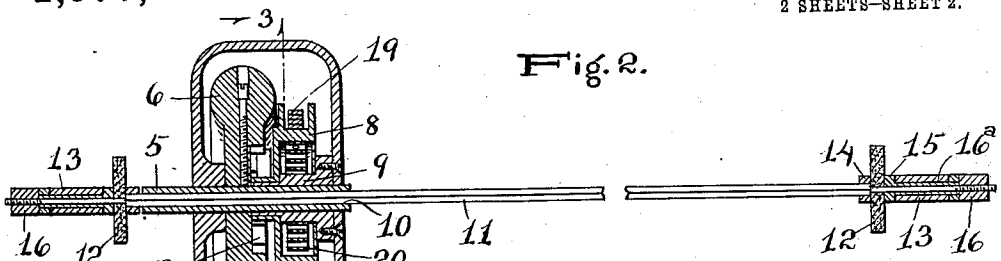
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2 SHEETS—SHEET 2.

Fig. 2.



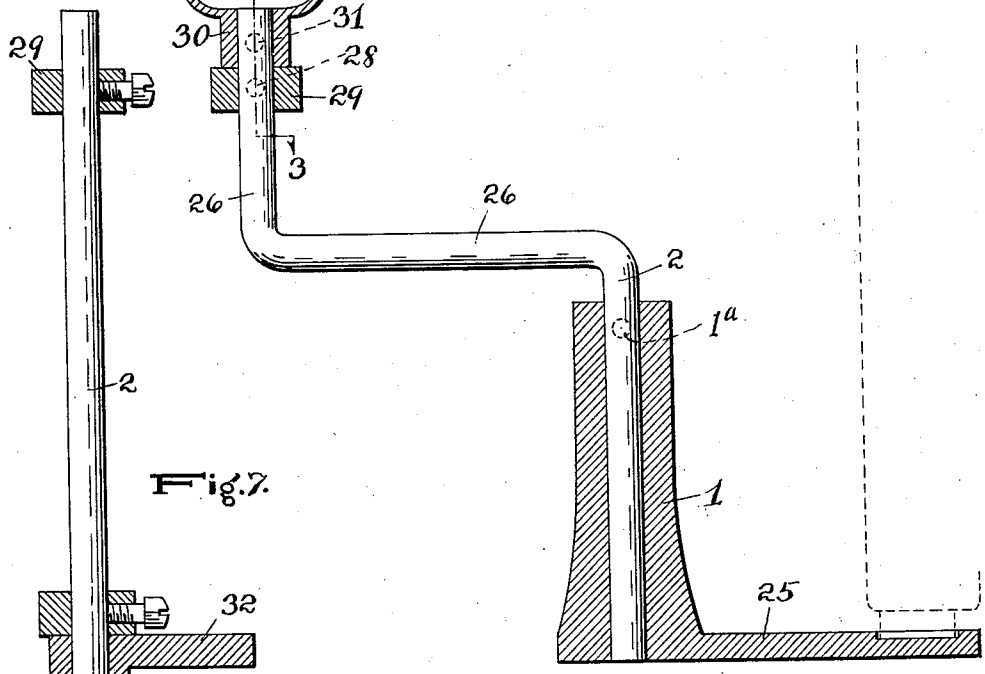


Fig. 7.

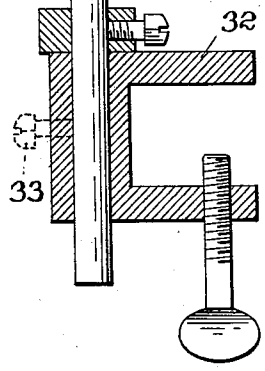
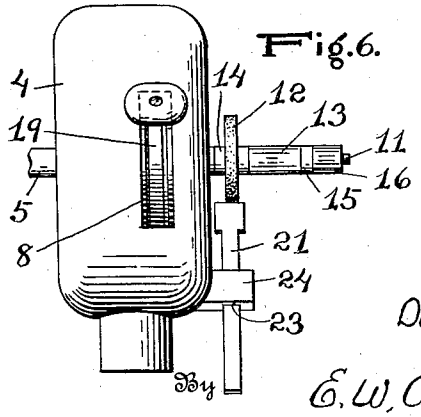


Fig. 6.



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ERASING-MACHINE.

1,077,146. Specification of Letters Patent. Patented Oct. 28, 1913.

Application filed July 7, 1911. Serial No. 637,374.

To all whom it may concern:

Be it known that I, DON M. LEMON, a citizen of the United States, resident of Boston, in the county of Suffolk and State of Massachusetts, have made a certain new and useful Invention in Erasing-Machines; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of the invention. Fig. 2 is a central vertical longitudinal section of the same, showing an eraser wheel at each end of the slidable rod. Fig. 3 is a section on the line 3—3, Fig. 2. Fig. 4 is a detail face view of the loose wheel showing also the inner end of the sleeve upon which it is mounted, both parts being removed from the incasement. Fig. 5 is a detail face view of the fast or fly wheel removed from the incasement. Fig. 6 is a detail side view of the incasement, showing the cleaner for the erasing wheel, as in use. Fig. 7 is a central vertical longitudinal section of the clamp for engagement with the edge of a table, showing the standard in engagement therewith. Fig. 8 is a detail perspective view of this clamp, with the standard in engagement therewith and partly broken away.

The invention has relation to erasing machines designed to facilitate the erasure of characters or marks, and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the numeral 1 designates a support adapted to be fixed against movement upon a table or the like, and carrying a standard 2 upon the upper end of which is rotatably mounted an incasement or hood 4. Journaled within this incasement is a shaft 5, having a fast wheel 6, which is preferably a fly wheel and is provided with a ratchet and pawl connection 7 with a wheel 8, loosely mounted to turn freely, preferably upon a sleeve 9, surrounding said shaft.

The shaft 5 is provided with a longitudinal aperture 10, with which a rod 11 has slidable engagement, in such manner that it will turn with said shaft, which forms a carrier for said rod. It is preferred to have the aperture 10 and the rod 11 of angular cross section, as shown. The rod 11 is made of suitable length for slidable extension to the desired degree, and carries at one end thereof an erasing wheel 12 rotating therewith, a handle piece 13 being loosely mounted upon said shaft whereby the erasing wheel may be readily applied to the work, such application being facilitated by the slidable extension of the rod and the rotatable nature of the incasement within which the rod is mounted. Preferably the shaft is provided with a fast collar or shoulder 14, against which the erasing wheel is pressed to turn with the shaft by a sleeve 15 fitting upon said shaft and a nut 16 having threaded engagement with the shaft end, the sleeve 15 being grooved externally at 16^a and carrying the handle sleeve 13, which is loosely mounted upon the part 15, within the groove thereof.

The wheel 8 has affixed thereto one end of a flexible strap or tape 19, which is automatically wound upon said wheel by a spring connection 20 between the loose wheel 8 and the sleeve 9. This spring connection is preferably helical, fitting within the wheel 8, which is preferably hollow, one end of the spring being connected with the sleeve 9 and the other end thereof to the inner wall of the wheel 8.

When the flexible strap is drawn outward by the operator, which is done by a sudden movement, the loose wheel will be caused to turn upon the sleeve 9, and through the ratchet and pawl connection will turn the fly wheel and the shaft 5, the extensible rod and the eraser turning therewith in a rapid manner. When the strap is released the spring will act to turn the wheel 8 in the reverse direction to automatically rewind the strap thereupon, the fly wheel, the shaft 5, the extensible rod and the eraser continuing to turn in the same direction until their momentum is exhausted. In practice the handle part 13 is grasped by one hand of the operator, who thereby extends the rod to the desired degree and applies the eraser to the matter to be erased, the incasement or hood and the rod turning together upon the standard, in such application, when the handle knob of the strap is grasped by the other hand of the operator and the strap quickly drawn out to rotate the eraser.

A cleaner blade 21 may be slidably mounted in a groove or notch 23 of a lug 24 of the incasement, and is adapted to contact with the edge of the rotating eraser wheel to clean the same when the rod carrying the eraser wheel is pressed to the limit of its movement in one direction. In using the cleaner blade it is pressed upward in engagement with the edge of the wheel, and when released will drop back out of engagement therewith through force of gravity.

It is preferred to mount the support 1 upon a flat plate base 25, which is designed to extend beneath the typewriter at one side thereof, the legs of the typewriter at this side resting upon this base and the weight of the machine serving to fix the position of the support 1. It is also preferred to provide the standard with an elbow or lateral extension 26, upon the free end of which the incasement is mounted, whereby the parts may be swung around in the arc of a circle of which the standard is a center. If desired the incasement may be slidably mounted upon the standard for adjustment vertically and fixed in such adjustment by a set screw 28 of a slidable collar 29 upon which the incasement rests. Or the lower tubular end 30 of the incasement may have a set screw 31 for engagement with the standard. The support 1 may also have a set screw 1^a for engagement with the standard 2, to secure the standard in position as adjusted vertically.

When the invention is to be used to erase matter not carried by a typewriting machine, for instance to erase matter from a ledger, it is adapted to be supported from the edge of a table or the like by the use of a clamp 32, from which the standard is supported. The standard in this case may be provided with a vertically adjustable collar upon which the incasement rests, similar to the collar 29, or the clamp may have a set screw 33 at one side for engagement with the standard. The invention may also be used with the clamp 32 for erasing matter carried by a typewriter. Both ends of the slidable rod may carry an eraser wheel and a loose handle, as shown in Fig. 2 of the drawings, the one for use in erasing ink marks and the other for erasing pencil or other marks. Or a simple stop 34 may be used at one end of said rod. The slidable rod 11, is of slender flexible character, adapted to bend, which may be found of advantage in erasing in some cases.

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

1. In an erasing machine, a support, a rotatable shaft having a journal bearing in said support, and provided with a longitudinal aperture, a rod passing through said aperture and fixed to rotate with said shaft, an eraser wheel upon said rod, and means for rotating said shaft, said rod being relatively long with respect to said shaft and having slidable adjustment in said aperture to project more or less beyond said shaft at either end.

2. In an erasing machine, a support, a standard carried thereby, a casing upon said standard, a shaft having journal bearings in said casing and provided with a longitudinal aperture, a slender straight rod relatively long with respect to said shaft and passing through and having sliding adjustment in said aperture to project more or less beyond the shaft at either end, said rod being fixed to rotate with said shaft and having a shoulder, an eraser wheel upon said rod, a grooved sleeve upon said rod, a nut threaded upon the end of said rod to clamp the eraser wheel between said sleeve and said shoulder, a loose handle sleeve in the groove of the first named sleeve, and means within the casing for rotating said shaft.

In testimony whereof I affix my signature in presence of two witnesses.

DON M. LEMON.

Witnesses:
MARIE H. LOHMAN,
MYRTA E. BUFFUM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."