A. A. E. HANSEN.

MARKING ATTACHMENT FOR TYPEWRITING MACHINES.

APPLICATION FILED SEPT. 13, 1919.

1,368,926. Patented Feb. 15, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

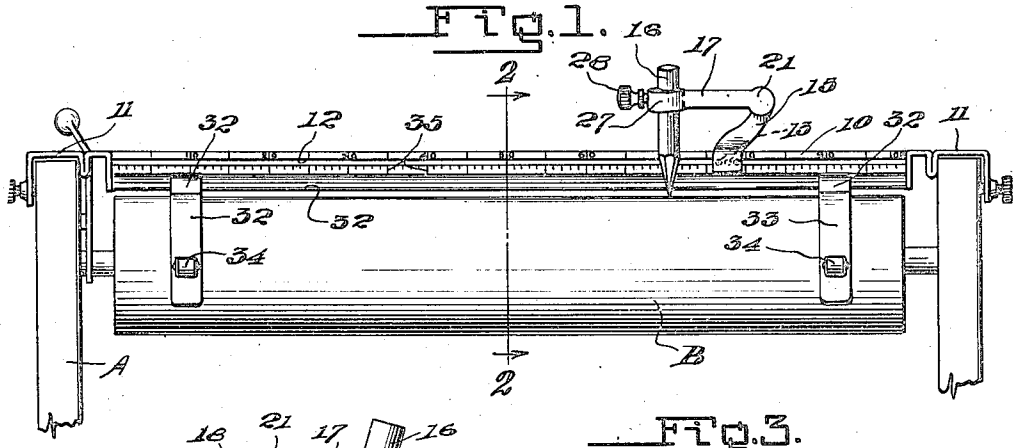


Fig. 2.

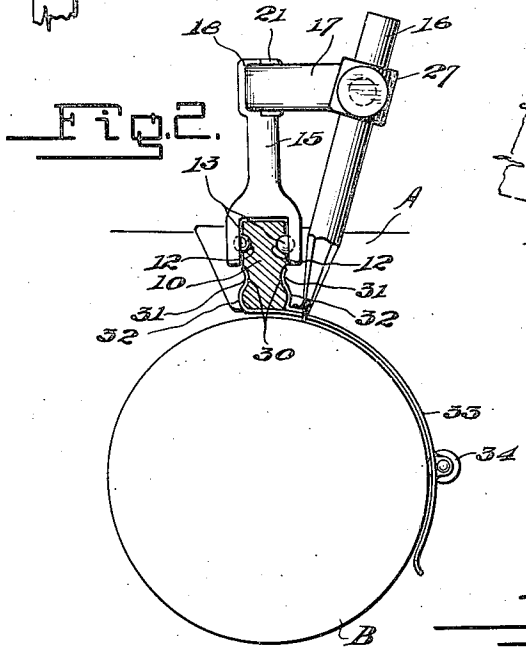


Fig. 3.

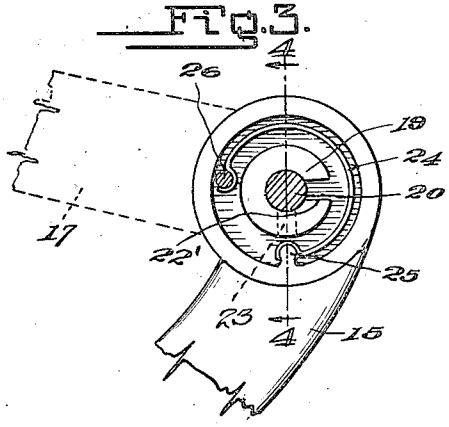
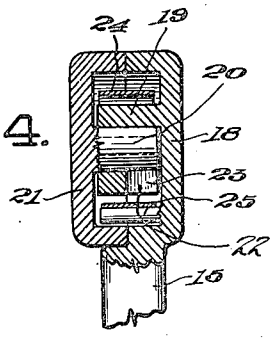


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 6.

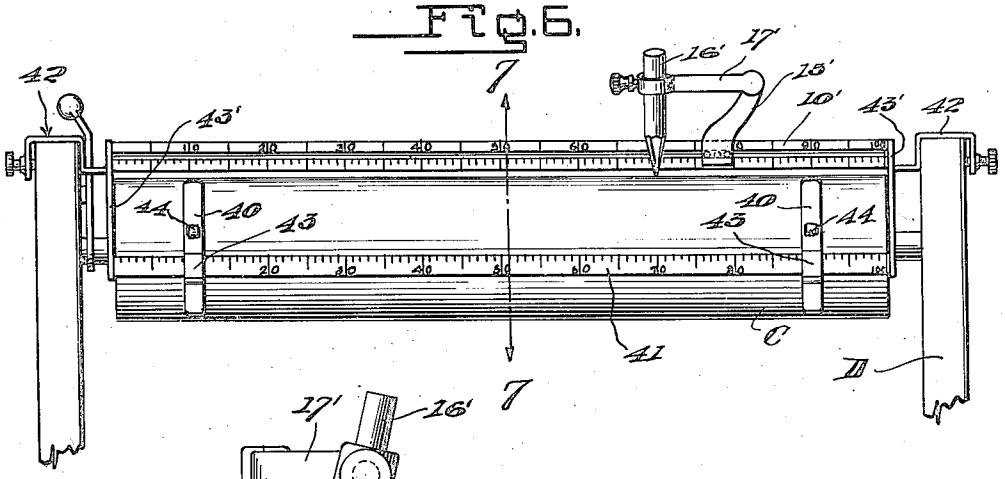


Fig. 7.

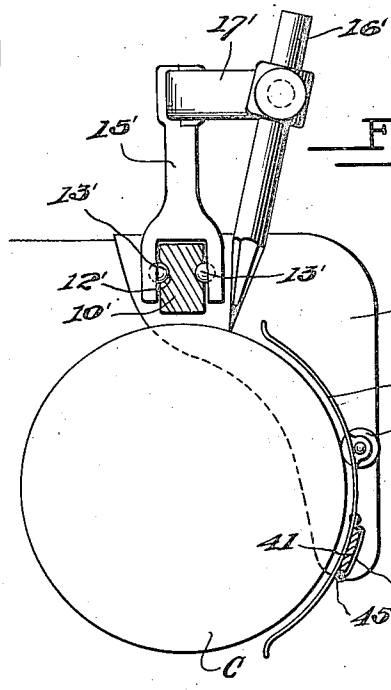
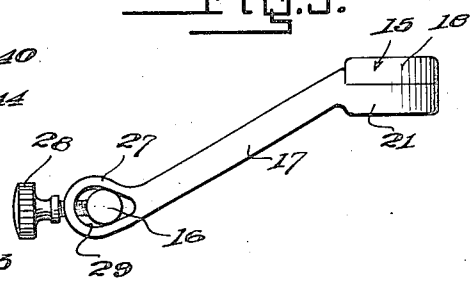


Fig. 5.



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MARKING ATTACHMENT FOR TYPEWRITING-MACHINES.

1,368,926. Specification of Letters Patent. Patented Feb. 15, 1921.

Application filed September 13, 1919. Serial No. 323,547.

To all whom it may concern:

Be it known that I, ALFRED A. E. HANSEN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Marking Attachments for Typewriting-Machines, of which the following is a specification.

This invention relates to a marking or ruling attachment for typewriting machines, and an object of the invention is to provide an attachment for typewriting machines by means of which any part of the subject matter being written by the typewriting machine may be quickly and easily underscored with a continuous line eliminating the necessity of the repeated operation of the underscoring character key of the typewriting machine, and also an attachment by means of which the paper which is placed over the platen of the typewriting machine may be ruled both laterally and longitudinally as desired.

Another object of this invention is to provide a marking attachment for typewriting machines embodying a graduated scale, which adjustably carries a stylus or marker carrying arm for longitudinal movement thereover to permit the positioning of the marker at any desired predetermined position along the length of the platen of the typewriting machine and also to provide a structure of this nature which may be built into typewriting machines or easily and conveniently attached to typewriting machines of approved types by any person having any knowledge whatsoever of a typewriting machine.

More specifically, the invention comprehends the provision of a marking attachment for typewriting machines including a graduated scale having means associated therewith for attaching it to a typewriting machine, which scale is provided with an upper and a lower set of recesses along its opposite sides serving as means to facilitate the attachment of the marking device, such as a jencil, pen, ruling pen, or stylus to the scale, and also to facilitate the attachment of paper guides to the scale, which paper guides are preferably constructed of spring steel and have portions for frictionally engaging the graduated scale, to permit movement of the paper guides over the scale, and also to permit the paper guides to be detached from the attachment if desired.

Other objects of the invention will appear in the following detailed description taken in connection with the accompanying drawings, forming a part of this specification, and in which drawings:

Figure 1 is a front elevation of the improved marking attachment showing the same applied to a typewriting machine.

Fig. 2 is a cross section taken on the line 2—2 of Fig. 1.

Fig. 3 is a detail view partly in section of the marker carrying arm.

Fig. 4 is a cross section taken on the line 4—4 of Fig. 3.

Fig. 5 is a top plan of the pencil or marker carrying arm.

Fig. 6 is a front elevation of a modified form of the marking attachment of the typewriting machine, and

Fig. 7 is a cross section taken on the line 7—7 of Fig. 6.

Referring more particularly to the drawings, the marking attachment for typewriting machines includes a graduated scale 10, which may be built into the typewriting machine if desired, or which may be attached to the frame A of any suitable type of typewriting machines in any suitable manner, such as by clamp structure 11, the specific construction of which might be varied to fit various approved makes of typewriting machines. This graduated scale 10 is provided with a pair of longitudinally extending ways or recesses 12, in opposite sides near its upper edges, which ways or recesses receive therein bearing balls 13, carried by the lower forked end of the supporting standard 15, for permitting free, and unimpeded sliding movement of the standard 15 longitudinally over the scale or graduated guide 10. This standard 15 curves toward one end of the scale 10, as clearly shown in Fig. 1 of the drawings to permit the movement of the pencil, pen or analogous marking device 16 to the extreme edge of the paper, which is passed over the platen of the typewriting machine. The pencil or other marking device 16 is carried by an arm 17 which is pivotally connected to the upper end of the standard 15. The head 18 formed upon the upper end of the standard 15 has a centrally disposed circular flange 19 formed thereon which forms a bearing

for the pin 20 carried centrally by the head 21, which is formed upon the arm 17. The ring 19 is provided with a cut out portion 22, therein, which is adapted to receive a lug 23 carried by the pin 20, through a side opening 22′ in the ring 19, for locking the standard 15 and arm 17 in predetermined adjusted positions. A flat spring 24 is mounted within the hollow space between the facing sides of the heads 18 and 21 at one end of which spring 24 engages lug 25 carried by the head 18, while the opposite end of the spring engages against a pin 26 carried by the head 21, the said pin tending to urge the arm 17 into such position with respect to the standard 15 that the lugs 23 will be engaged in the cut out portion 22.

The arm 17 has an angularly disposed socket 27 carried by its outer end, which socket has a marker receiving opening extending therethrough, through which the pencil or other marker 16 extends. A thumb screw 28 is carried by the socket 27 for engagement with the marker 16 to bind it against the inclined sides of the opening 29 in the socket to securely hold the marker in place.

The opening 29 has its side converging toward the arm 17 as clearly shown in Fig. 5 of the drawings, to adapt it for receiving various sized markers, and these inclined sides together with the thumb screw 28 will hold any marker which may be received through the opening in firm engagement with the socket and also with the arm 17.

The graduated scale or bar 10 is provided with a second opposed pair of longitudinally extending recesses 30, which are provided to receive the curved end 31 of the attaching clip 32, of the paper guides 33. These paper guides are preferably constructed of spring steel and one of the attaching clips 32 is formed integrally therewith while the other is attached thereto, as clearly shown in Fig. 2 of the drawings. The resiliency of these attaching clips 32 will cause limited frictional engagement between the attaching strips and the scale 10 sufficient to hold the paper guides 33 in adjusted positions longitudinally along the scale 10 and will also permit the ready attachment of the paper guides or the ready attachment to or detachment from the scale as desired. The paper guides 33 are arcuate, they being scribed upon the same common center with the platen B of the typewriter machine, and having their inner faces spaced slightly from the outer surface of the platen B by means of the usual type of roller 34; the said guides curving to guide their paper over the platen and hold it in engagement with the platen, as is necessary in the proper operation of typewriting machines, and which is also necessary to insure the proper operation of the marking attachment, in that the paper must be held firmly against the platen B to insure regular lines upon the paper by the marker 16.

The standard 15 and arm 17, are shaped so that the pencil or other marker 16 will be positioned to properly engage paper passing over the platen B to permit either lateral or longitudinal ruling of the paper, the lateral ruling being permitted by the sliding of the standard 15 along the scale 10 while the longitudinal ruling of the paper may be made at any desired or predetermined place upon the paper by adjusting the standard 15 longitudinally on the scale, the said adjustment being facilitated by the graduations 35 of the scale, and as the paper is wrapped over the platen B, the marker 16 will rule it.

Figs. 6 and 7 illustrate a modified form of the invention showing the marking attachment adapted for attachment to a typewriting machine of the Underwood, Royal, and Monarch types, in which modified form the paper guides 40 are carried by the lower scale 41, which form a part of the attachment. In this type of typewriting machines the usual paper guides extend over the platen from the rear, when it will be necessary to remove them prior to attaching the improved marking attachment to the machine. The improved marking attachment is attached to the typewriter frame D by clamp structures 42, analogous to the clamps 11 and the second or forward lower scale 41 is connected to the upper scale 10′ by suitable connecting bars 43′, in such manner that the scale 41 will be positioned over the platen C, forwardly of and below the scale 10′, which latter scale carries a marker supporting standard 15′, arm 17′, and a marker 16′. This marker supporting structure is similar in construction to the preferred form illustrated in Figs. 1 to 5 of the drawings. However, the scale or graduated bar 10′ is free from the lower set of longitudinally extending grooves as shown in the preferred form, it being merely provided with the upper opposed pair of longitudinally extending recesses 12′ which receive therein bearing balls 13′, carried by the lower forked end of the standard 15′ to facilitate the longitudinal movement of the marker structure over the platen.

The paper guides 40 are provided with suitable resilient clamping portions 43 which engage over the scale 41, frictionally engaging the scale, sufficiently to maintain the paper guides in various adjusted positions upon the scale and in such manner as to permit the longitudinal movement of the paper guides thereover. The lower portions 45 of the resilient clamps 43 are left open so as to allow the paper guides 40 to be attached to or detached from the scale 41, by merely pulling the paper guides up-

wardly. The usual form of roller 44 is carried by the paper guides 40 for properly spacing them from the platen C.

It is to be understood that the foregoing description and drawings, describe and illustrate the fundamental principle of the invention, and that changes in details, such as would be necessary to render the device applicable for attachment to various types of typewriting machines can be made, along the methods first treated for each particular type of typewriting machines, without departing from the spirit of this invention, and provided such changes or alterations are comprehended within the scope of what is claimed.

I claim:

1. In a marking attachment for typewriting machines, the combination of a graduated scale, means for removably securing said scale to a typewriting machine in proximity to the platen thereof, a marker holder adjustably carried by said scale, and paper guides removably and adjustably carried by said scale.

2. In a marking attachment for typewriting machines, the combination of a graduated scale, means for securing said scale to a typewriting machine in proximity to the platen thereof, a marker holder comprising a carrying standard adjustably carried by said scale, a marker carrying arm pivoted to said standard, and a marker detachably carried by said pivoted arm.

3. In a marking attachment for typewriting machines, the combination of a graduated scale, means for securing said scale to a typewriting machine in proximity to the platen thereof, a supporting standard carried by said scale for longitudinal movement thereof, a marker carrying arm pivoted to said supporting standard, a marker detachably carried by said pivoted arm, and a paper guide removably and adjustably carried by said scale.

4. In a marking attachment for typewriting machines, the combination of a graduated scale, means for detachably connecting said scale to a typewriting machine in proximity to the platen thereof, said scale provided with longitudinally extending recesses in opposite side faces thereof, a supporting standard, bearing balls carried by said supporting standard, and engaging in said longitudinal recesses, a marker carrying arm pivoted to said supporting standard, and a marker detachably carried by said pivoted arm.

5. In a marking attachment for typewriting machines, the combination of a graduated scale, means for detachably connecting said scale to a typewriting machine in proximity to the platen thereof, said scale provided with longitudinally extending recesses in opposite side faces thereof, a supporting arm, bearing balls carried by said supporting standard and engaging in said longitudinal recesses, a marker carrying arm pivoted to said supporting standard, a marker detachably carried by said pivoted arm, means carried by said supporting standard and said pivoted arm for locking them in relative position, and a spring normally urging said arms into locked position.

6. In a marking attachment for typewriting machines the combination of a graduated scale, means for detachably connecting said scale to a typewriting machine in proximity to the platen thereof, said scale provided with longitudinally extending recesses in opposite side faces thereof, a supporting standard bearing balls carried by said supporting standard and engaging in said longitudinal recesses, a marker carrying arm pivoted to said supporting standard, a marker detachably carried by said pivoted arm, means carried by said supporting standard and said pivoted arm for locking them in relative position, a spring normally urging said standard and arm into locked positions, and paper guides detachably and adjustably carried by the marking attachment.

7. In a marking attachment for typewriting machines the combination of a graduated scale, means for removably securing said scale to the typewriting machine in proximity to the platen thereof, a marker adjustably carried by said scale, said scale provided with longitudinally extending recesses in opposite faces thereof, a paper guide, spring lugs carried by said paper guide and having curved portions extending in said recesses detachably and adjustably connecting the paper guides to said scale.

8. In a marking attachment for typewriting machines, the combination, of a graduated scale, means for removably securing said scale to a typewriting machine in proximity to the platen thereof, said scale provided with longitudinally extending grooves in opposite side faces, and near its upper edge, a supporting standard, bearing balls carried by said supporting standard and engaging in said longitudinally extending grooves, a marker detachably carried by said supporting standard, and paper guides removably and adjustably carried by said scale.

9. In a marking attachment for typewriting machines, the combination, of a graduated scale, means for removably securing said scale to a typewriting machine in proximity to the platen thereof, said scale provided with longitudinally extending grooves in opposite side faces thereof, a supporting standard, bearing balls carried by said supporting standard and engaging in said groove, a marker adjustably and removably

carried by said supporting standard, said scale provided with a second pair of longitudinally extending grooves in the opposite side faces thereof, a paper guide, attaching resilient lugs carried by said paper guide and engaging in said second set of grooves for detachably and adjustably connecting the paper guides to said scale.

10. In a marking attachment for typewriting machines, the combination of a graduated scale, said scale provided with longitudinal extending recesses in opposite side faces thereof, a supporting standard, bearing balls carried by said supporting standard and engaging in said longitudinal recesses, a marker carrying arm pivotally connected to said standards, and a marker detachably carried by said pivoted arm.

11. In a marking attachment for typewriting machines, the combination of a graduated scale adapted to be built into the typewriting machine, and positioned in close proximity to the platen thereof, a supporting standard carried by said scale for longitudinal movement thereover, a marker carrying arm pivoted to said supporting standard, a marker detachably carried by said pivoted arm, and a paper guide removably and adjustably carried by said scale.

12. In an attachment for typewriting machines, the combination with a typewriter having a platen, of a graduated scale adjacent said platen, and a marker holder adjustably carried by said scale and curved outwardly toward an end of said platen whereby the marker can reach the remotest end of the platen.

ALFRED A. E. HANSEN.