

(No Model.)

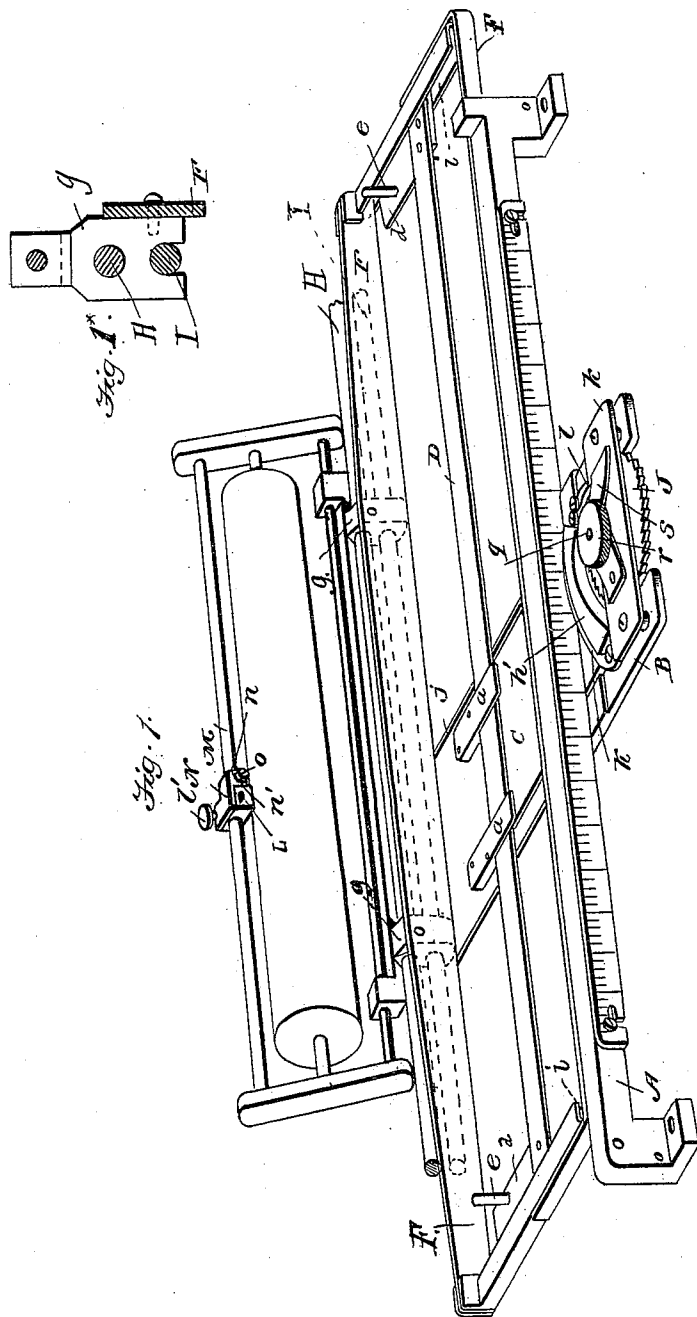
3 Sheets—Sheet 1.

J. H. OSGOOD.

RIBBON AND RIBBON ATTACHMENT FOR TYPE WRITING MACHINES.

No. 467,191.

Patented Jan. 19, 1892.



Witnesses

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(No Model.)

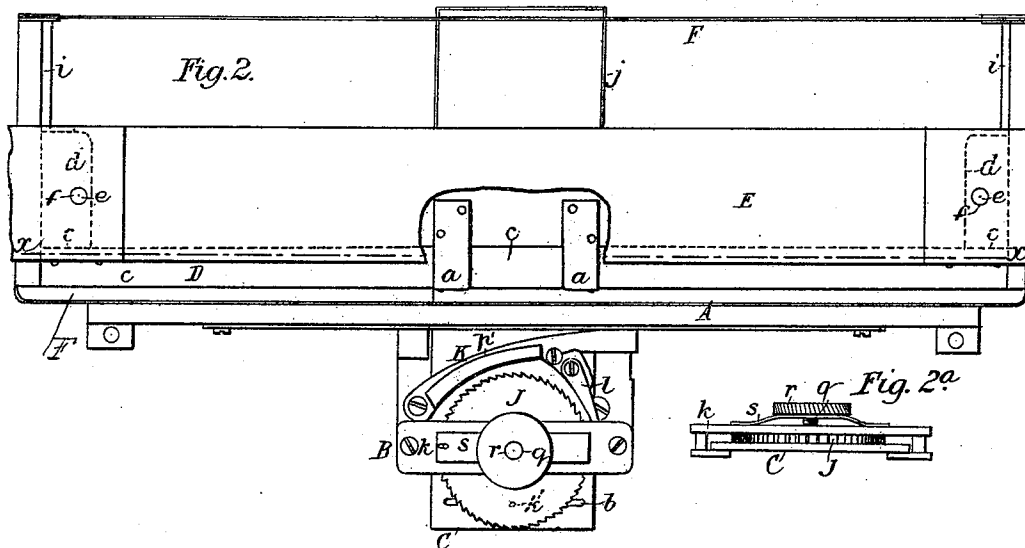
3 Sheets—Sheet 2.

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RIBBON AND RIBBON ATTACHMENT FOR TYPE WRITING MACHINES.

No. 467,191.

Patented Jan. 19, 1892.



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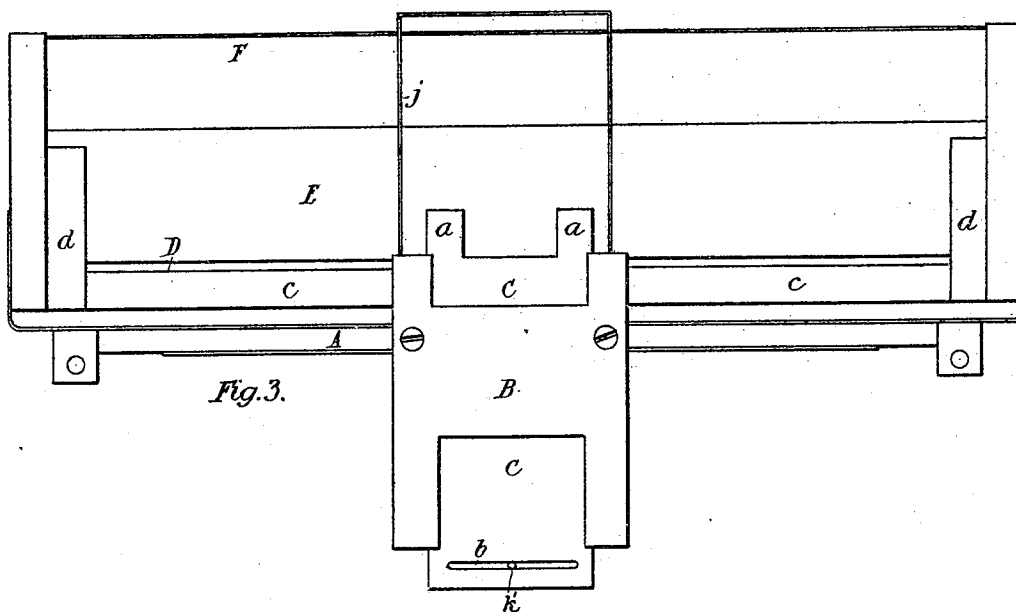


Fig. 3.

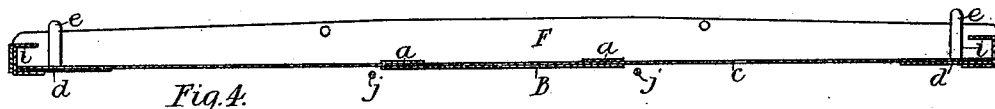


Fig. 4.

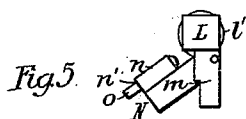


Fig. 5.

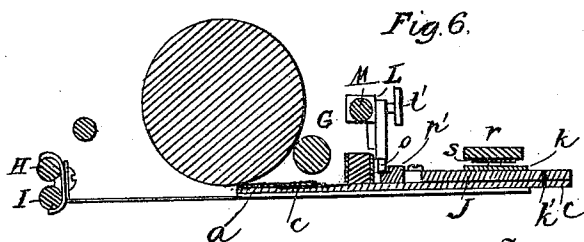


Fig. 6.

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UNITED STATES PATENT OFFICE.

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RIBBON AND RIBBON ATTACHMENT FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 467,191, dated January 19, 1892.

Application filed July 19, 1887. Serial No. 244,746. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. OSGOOD, of Peabody, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Ribbons and Ribbon Attachments for Type-Writing Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to furnish a ribbon for type-writing machines which may be readily removed or replaced, and also to furnish a carrying device for said ribbon which will allow the same to present a new surface to every type as it is struck by the key.

In the accompanying drawings, Figure 1 shows my invention as applied to the type-writer known as the "Caligraph," with the paper-carriage thrown back, so as to more clearly show the ribbon and its carriage; Fig. 1*, a detail. Fig. 2 shows the invention in plan. Fig. 2* is an elevation of the frame B, showing the ratchet-wheel, thumb-screw, and spring. Fig. 3 shows a bottom view. Fig. 4 is a longitudinal section through line *x x* of Fig. 2, the ribbon being removed. Fig. 5 is a detail. Fig. 6 is a cross-section showing the relation of the parts.

Similar letters represent like portions of all the figures.

A is the horizontal frame or bar for supporting the front of the paper-carriage, and which is common to all Caligraphs, and which is secured to the frame of the type-writing machine across the top of the circle of type-levers. Secured centrally to the bar A and extending horizontally in front of the same is a small metal frame or support B. This may be attached to A by screws or in any other appropriate manner. A flat plate C rests upon the support B, and is adapted to slide between guideways of said support and below the bar A at right angles to the latter. This plate C has two spring-clips *a a* at one end and a transverse slot *b* at its other end, for purposes hereinafter to be described.

F is the ribbon-carriage, of rectangular form, the vertical back plate of which is secured to the ordinary sliding yokes *g g* of the paper-carriage G by screws or rivets, as shown in Fig. 1*, and the front plate of said ribbon-carriage F extends back of the bar A and rests upon the plate B, as shown in Fig. 1. The ends of the carriage F are provided with grooves *i i*, as also clearly shown in said figure. The ribbon-carriage F being secured to the yokes *g g* of the paper-carriage G, whenever said paper-carriage and yokes slide one way or the other on the rods H I the ribbon-carriage F will also slide in the same direction and will consequently have a movement longitudinal with the machine.

D is the frame or shuttle for holding and carrying the ribbon. It is formed of a long flat strip of metal *c* and the cross-strips *d d* at its ends, each of which has projecting upward from it a pin *e*. The ribbon E² has a piece of paper or card-board secured at each end, in which are holes *f f* for fitting over the pins *e e*. The strip *c* of the ribbon-shuttle D is adapted to pass under the clips *a a*, while the cross-strips *d d* are adapted to rest in the transverse grooves *i i* in each end of the carriage F. A loop-wire *j* is attached to the inner end of the plate B to support the center of the ribbon. A toothed wheel or ratchet J is journaled to the upper plate *k* of the frame B, and has a crank-pin *k'*, projecting from its under side, which is adapted to work in the slot *b* of the plate C. A spring-lever K is pivoted to the frame B, and to this lever is pivoted a spring-pawl *l*, which is adapted to engage with the toothed wheel J. L is a sliding sleeve, which is adapted to be adjustably secured by a thumb-screw *l'* to the front rod M, near the center of the paper-carriage. This sleeve has a right-angled arm *m*, to which is loosely pivoted the dog N for operating the lever K. This dog has a projecting part *n*, through which is a longitudinal hole *n'*, and in this hole a pin *o* is loosely hung. The dog N can only swing in one direction—to the right—from the sleeve L, as the projecting part *n* resting against the right edge of the arm *m* forms a stop to prevent the latter from being swung to the left. The object of having the pin *o* loosely hung is to allow it to give and rise so as to ride over the lever K, for if

it were rigid and the carriage were dropped so that the pin would fall on the lever K, which it is often likely to do, the lever would soon be broken. By having the pin loosely hung, if it should strike or fall on the lever, (by the dropping of the carriage,) it will give and rise and not injure the lever. When the paper-carriage is turned down and is in position for operation and the lever K is about to be operated by the dog N by sliding the paper-carriage to the right, the front side of the dog N or the rod O will pass between the upper curved part *p'* of the lever K and the bar A. The ratchet or toothed wheel J may be hung to the frame B by a spring adjustment by simply having its journal *q* screw-threaded and held in place by a nut *r*, and having a bow tension-spring *s* inserted between said nut and the frame B.

The operation of my invention is as follows: The ribbon E having been placed in position with the holes *ff* over the pins *ee* of the shuttle D, the machine is operated as usual by striking the keys. As the main or paper carriage moves to the left (which it does when the keys are struck) it carries with it the ribbon-carriage F, thus presenting a fresh surface of the ribbon in the direction of its length for every blow of the type. When the line of writing is completed, the carriage is moved to the right to begin a new line, and during this movement to the right the dog N and its pin *o* will press against the lever K and thus operate the pawl *l* and the toothed wheel J, which latter by its crank-pin *h'* and the slot *b* gives the plate C and ribbon-shuttle D a motion from the front to the back or from the back to the front of the type-writer. This operation brings a fresh surface of the ribbon in the direction of its width for the action of the type. When the carriage is moved to the left, the dog and its pin being loosely hung will yield as soon as they strike against the lever K and will consequently not operate it. By means of these two motions, lengthwise and transverse, the whole surface of the ribbon is finally brought between the type and the platen.

The essential difference between the present system and my invention is that in the latter a shuttle movement with a short ribbon automatically moved and quickly and easily replaced is substituted for a long ribbon running upon reels and without automatic motion.

I claim—

1. The combination of the paper-carriage,

the inking-ribbon, and a frame for supporting said ribbon, said frame and ribbon being adapted to travel in the same direction as the carriage during its lengthwise movement, and mechanism adapted to be operated by said carriage in said movement to automatically shift the ribbon transversely to the same, all as set forth.

2. An inking-ribbon for a type-writing machine, consisting of a short strip having its ends stiffened and adapted to be attached to the movable ribbon-shuttle and to be used and operated substantially in the manner described.

3. In a type-writing machine, the combination of the short-strip inking-ribbon having stiffened ends with the ribbon shuttle or carrier having the strip C and means near its ends for supporting or holding in place the ribbon-strip.

4. The combination of the ribbon-carriage having guideways at its ends with the ribbon-shuttle, which is adapted to rest upon said carriage and move along said guideways.

5. The sliding plate having the clips *aa*, in combination with the ribbon-shuttle, substantially as shown and described.

6. The combination of the ribbon-shuttle with the sliding plate having the clips *aa* and the slot *b*, and with a crank-pin for operating in said slot and for moving the ribbon-shuttle, all substantially as shown and described.

7. In combination, a toothed wheel or ratchet, a pawl for operating the same, a crank-pin extending from the under side of said wheel, a plate having the slot *b* and the attached clips, and the ribbon-shuttle, all substantially as described, and operating as set forth.

8. In combination with the lever K, the dog N, loosely hung upon the sleeve L, having the projecting part *n* and the loose vertical pin *o*, all substantially as described, and operating as set forth.

9. The combination of the paper-carriage, the dog secured to the same, the lever and pawl, the toothed wheel or ratchet having the crank-pin, the plate having the slot *b* and clips, and the ribbon-shuttle, all substantially as described, and operating as set forth.

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