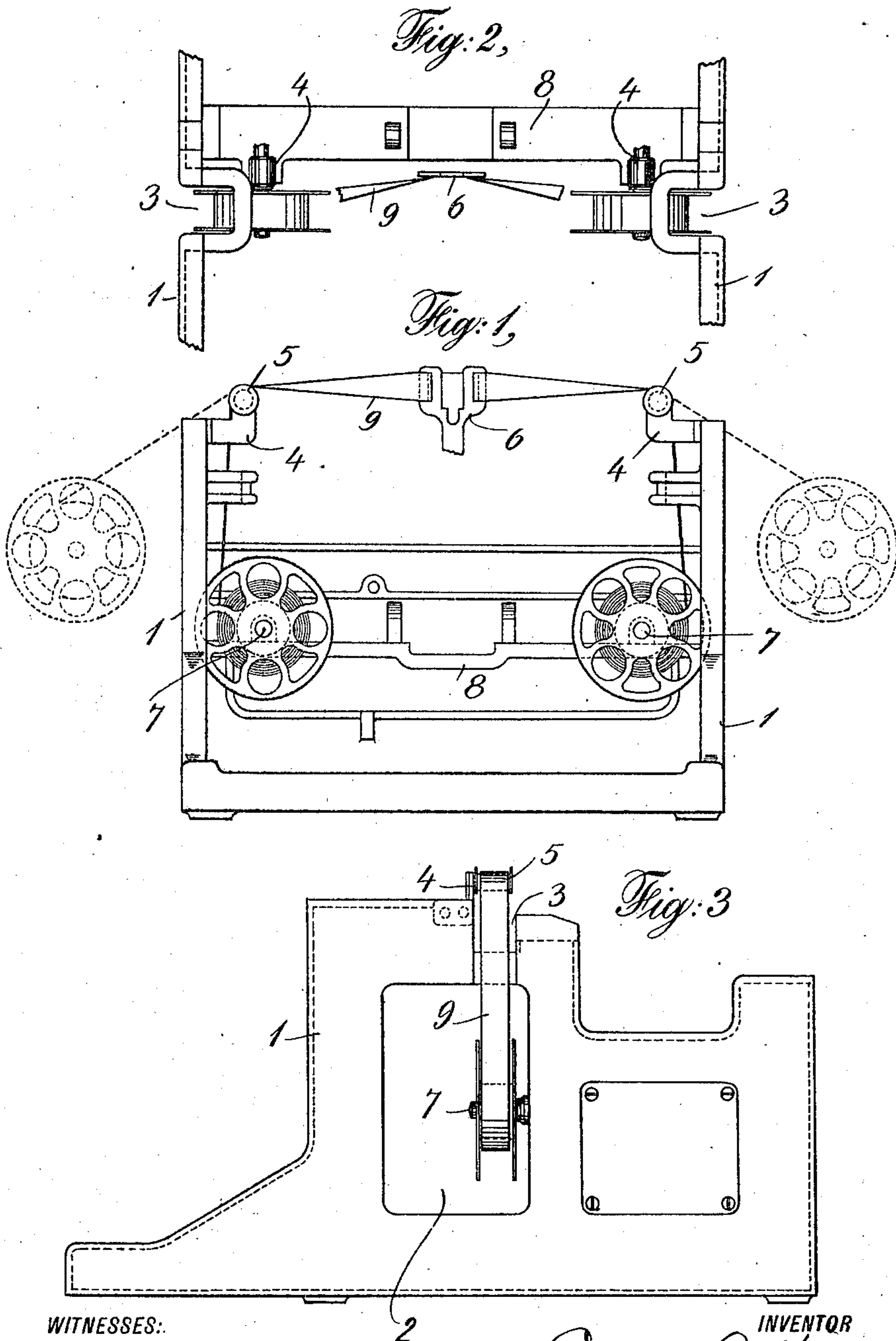


E. B. HESS.
TYPE WRITING MACHINE.
APPLICATION FILED AUG. 18, 1909.

974,883.

Patented Nov. 8, 1910.



WITNESSES:
D. F. Brandall
B. F. Watkins

INVENTOR
Edward B. Hess
BY
Edward C. Davidson
ATTORNEY

UNITED STATES PATENT OFFICE.

EDWARD B. HESS, OF NEW YORK, N. Y., ASSIGNOR TO ROYAL TYPEWRITER COMPANY,
OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

974,883.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed August 18, 1909. Serial No. 513,371.

To all whom it may concern:

Be it known that I, EDWARD B. HESS, a citizen of the United States of America, residing in the borough of Manhattan, city, county, and State of New York, have invented a certain Improvement in Type-Writing Machines, of which the following is a specification.

This invention relates to the arrangement of the ribbon bobbins of a front strike typewriting machine. Its purpose is to mount and arrange the bobbins and ribbon in a way to afford convenient removal from and replacement of the bobbins and ribbon in the machine.

In the accompanying drawing: Figure 1 is a front elevation: Fig. 2, a plan view: and Fig. 3, a side elevation.

The side plates 1 of the frame of the machine are each formed with an open panel 2 from which extend vertical open recesses or grooves 3. Located above each groove 3 on a bracket 4 secured to the inner face of the side plate, at one side of the groove 3, is a horizontally disposed guiding surface on roller 5 over which the ribbon passes to the ordinary ribbon vibrator 6. The ribbon bobbins that may be conveniently inserted into the machine through the open panels 2 are removably mounted upon stud bearings 7 carried by any appropriate part of the frame in this instance by a transverse plate 8 extending between the side plates of the machine. The ribbon passes from the outer circumference of the bobbins vertically through the open recesses 3 and over the guide surfaces on rollers 5 to the ribbon bobbin. By disengaging the bobbins from the stud shafts 7 the bobbins may be withdrawn laterally as indicated in dotted lines in Fig. 1 and, by merely disen-

gaging the ribbon from the vibrator, both bobbins and the ribbon are entirely free from the machine. In this way, their removal and replacement may be accomplished with great facility and without disturbing any other parts of the mechanism. The open panels 2 may, if desired, be closed by hinged or sliding doors.

I claim:

1. A typewriting machine comprising side plates having, respectively, openings therein adapted for the insertion and removal of ribbon bobbins and, extending upwardly from said openings, open recesses, ribbon guides located above said recesses, a ribbon vibrator intermediate the ribbon guides, and horizontal bearings for the ribbon bobbins at each side of the machine located within the side plates and accessible through said openings therein, whereby when the ribbon bobbins are mounted upon said bearings the ribbon passes vertically from the bobbins through the open recesses and over the guides to the ribbon vibrator.

2. A typewriting machine comprising side plates with openings therein and open recesses extending vertically from said openings and bearings for the ribbon bobbins located within each side plate and accessible through the openings therein for the insertion and removal of ribbon bobbins, ribbon guides carried by the frame of the machine and located above said open recesses and a vertically movable ribbon vibrator located intermediate the ribbon guides.

In testimony whereof, I have hereunto subscribed my name.

EDWARD B. HESS.

Witnesses:

LEWIS C. MYERS,
A. J. SHERIDAN.