No. 614,187. Patented Nov. 15, 1898.

J. T. UNDERWOOD.

TYPE WRITER RIBBON.

(Application filed July 14, 1897.)

(No Model.)

Fig. 1.

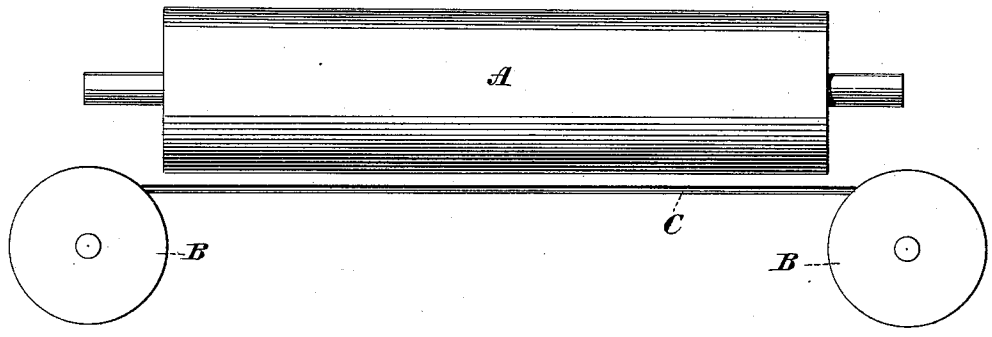


Fig. 2.

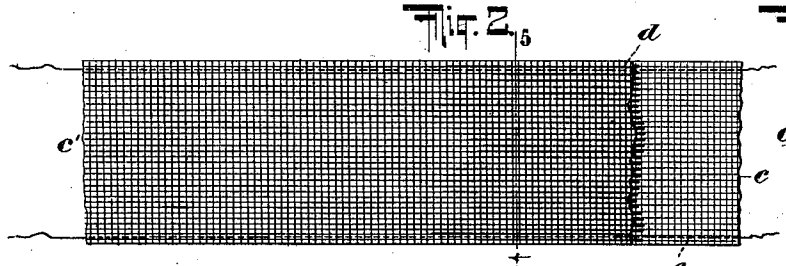


Fig. 3.

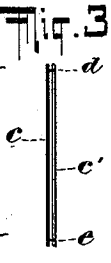
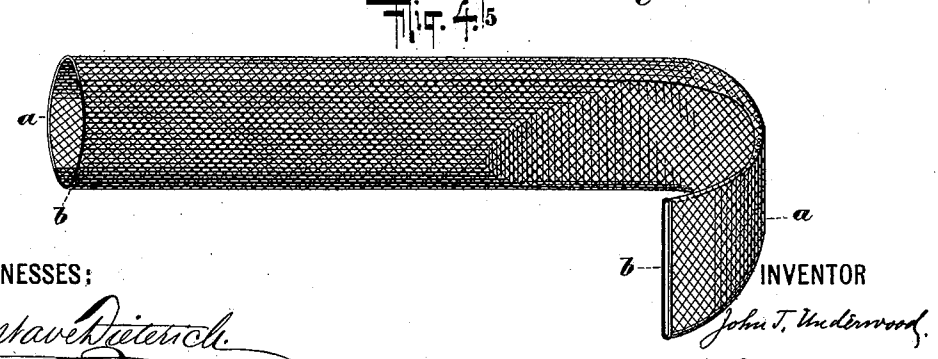


Fig. 4.



WITNESSES:

Gustave Dieterich.

Geo. C. Morse.

INVENTOR

John T. Underwood.

BY Brewer & Brewer

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN T. UNDERWOOD, OF NEW YORK, N. Y.

TYPE-WRITER RIBBON.

SPECIFICATION forming part of Letters Patent No. 614,187, dated November 15, 1898.

Application filed July 14, 1897. Serial No. 644,480. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. UNDERWOOD, a resident of New York, (Brooklyn,) Kings county, State of New York, have invented certain new and useful Improvements in Type-Writer Ribbons, of which the following is a full, clear, and exact description.

My invention relates to type-writer ribbons, and has for its object to produce a ribbon which may be used to print in different colors and which will not readily wear out nor be cut by the types.

To this end my invention consists in the construction of type-writer ribbon hereinafter set forth and claimed.

My invention will be understood by referring to the accompanying drawings, in which—

Figure 1 is a side view of portions of a type-writing machine carrying a ribbon and embodying my invention. Fig. 2 is a fragmentary view of a ribbon embodying my invention. Fig. 3 is a section on line 5 5 of Fig. 2, and Fig. 4 is a detail view of another form of ribbon embodying my invention.

In the drawings, A is a platen of the type-writing machine, B the ribbon-reels, and C the compound ribbon embodying my present invention. This compound ribbon is reversible, and is shown in Fig. 2 as two layers of ribbon *c c'* laid face to face and traveling together. One of the said ribbons *c* is one color—say blue—and the other ribbon *c'* is of a different color—say red—secured to each other in any suitable manner—as, for instance, by the stitching *d e*. In Fig. 4 the ribbon is shown as consisting of a tube flattened, one half or layer of the said tube *a* being of a different color from the other half or layer of the tube *b*. The coloring-matter may be applied to the exposed faces of the ribbons in any suitable manner. This coloring-matter, as will be understood, is a printing-ink which will make a mark upon paper when struck by the types. The ribbons carry the ink upon one side or surface, leaving the sides or surfaces of the ribbons which contact with each other plain or uninked, so that the colors will not strike through when the structure is used.

The mode of using the ribbon will be readily apparent. When it is desired to print blue, the blue ribbon is turned toward the platen. When it is desired to print red, the red layer of ribbon is turned toward the platen.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an article of manufacture a reversible ink-ribbon for type-writers designed to print a plurality of colors, the said reversible ink-ribbon consisting of a plurality of layers of fabric, laid face to face along their entire effective lengths and charged upon their exposed surfaces only, the said layers being charged with ink of different colors upon the said exposed surfaces, substantially as described.

2. As an article of manufacture a reversible ink-ribbon for type-writers, a plurality of layers of fabric, laid face to face along their entire effective lengths and secured together to constitute a two-ply compound fabric structure to print different characteristic colors, the said structure being charged upon opposite faces only with different-colored inks.

3. As an article of manufacture an ink type-writer ribbon for the purpose of printing a plurality of different colors and comprising a plurality of layers of differently-colored ink fabrics secured together at or near their edges by a line of stitches, the exposed layers extending the entire effective length of the ribbon, and having their exposed faces inked so as to print and their unexposed surfaces in such condition as not to print, so that when the ribbon is struck by the types the face exposed to the platen will print its characteristic color while the ink of the ribbon exposed to the types will not strike through the ribbon exposed to the platen.

JOHN T. UNDERWOOD.

Witnesses:
MARY ALICIA PERKINS,
MAURICE BLOCK.