No. 894,815. PATENTED AUG. 4, 1908.

W. F. CLARKE.

TYPE WRITER RIBBON FOR USE IN LITHOGRAPHING.

APPLICATION FILED JUNE 17, 1907.

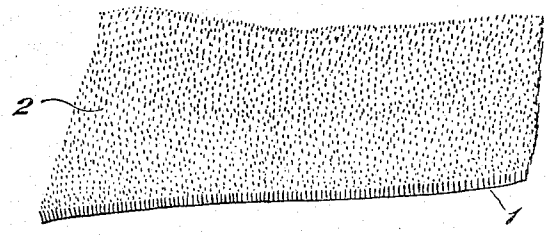


Fig. 1

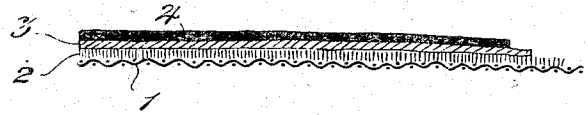


Fig. 2

Witnesses
R. C. Claflin
G. C. Burner.

Inventor
William F. Clarke
By Edson Bros,
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM F. CLARKE, OF LOUISVILLE, KENTUCKY.

TYPE-WRITER RIBBON FOR USE IN LITHOGRAPHING.

No. 894,815. Specification of Letters Patent. Patented Aug. 4, 1908.

Application filed June 17, 1907. Serial No. 379,505.

To all whom it may concern:

Be it known that I, WILLIAM F. CLARKE, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Type-Writer Ribbons for Use in Lithographing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to lithographic printing and particularly to transferring direct from the type-written page to stone, zinc or other metals or materials, for the purpose of producing printing plates for the lithographic or type printing press.

The object of the invention is to simplify the process now generally in use whereby the work may be done cheaper and much more expeditiously with better results.

One of the processes in general use for making imitation type-written letters consists in setting up type in the ordinary way, using a peculiar ink known as transfer ink instead of ordinary printers' ink and taking the impression on a specially prepared paper called transfer paper. From this impression a transfer is made to the stone and after chemical treatment said stone is ready for the lithographic press. The well-known photo-lithographic process consists in photographing a type-written letter on the stone, treating this stone photograph chemically and thus rendering it capable of being printed from in the lithographic printing machine. As distinguished from these processes, mine consists in preparing a copy on a type-writer by the use of a specially prepared ribbon and transfer paper. This copy may be transferred directly to the stone, eliminating the setting up of the type as in the first process or photographing it as in the photolithographic process.

In the accompanying drawing: Figure 1 is a perspective view on an enlarged scale of a piece of satin or nap faced ribbon such as I employ, and Fig. 2 is a sectional view showing the coatings of silicate of soda and ink which are applied to the napped surface of the ribbon.

My method of preparing the ribbon for use on the type-writer is as follows:—I use a fine grade of silk ribbon 1 which has one satin or napped side 2. This satin side is first coated as at 3 with a ten per cent. (stronger or weaker as occasion requires) solution of silicate of soda (soluble glass) which is applied with a brush, pad or woolen cloth. When this coating is dry, there is placed over it an inky coating 4 which is prepared substantially in the following manner:—Four parts of tallow, twenty-four parts of wax, twenty-six parts of castile soap and two parts of shellac are melted together and when cool form a semi-hard mass which is dissolved in ether or alcohol. To this mixture is added a solution of alkanet root or lamp black, or other coloring matter. When this second coating is dry enough to permit the ribbon to be handled, it is ready for use. The copy made on the typewriter from this ribbon may be transferred direct to the stone which is treated chemically in the same manner as in the old processes.

The object in coating the ribbon with silicate of soda is to prevent the second coating from penetrating to the reverse side of the ribbon where it would clog the type of the typewriter. In addition to this, the liquid glass forms a smooth surface which readily releases a portion of the film formed by the second or fatty coating which easily adheres to the paper as the letters are struck on the typewriter. Any of the known transfer papers may be used on the typewriter for preparing the copy with my new ribbon.

It should be understood that either surface printing or relief printing may be done by transferring from my ribbon, the difference being in the treatment of the printing surface after the transfer has been made. As is well known in the art of lithography, stone, zinc and aluminium are used for surface printing by chemical action while zinc is used for relief printing and takes up the ink mechanically. Said zinc plates are brought to high relief by continued action thereon.

My ribbon will not clog the type of a typewriter and will not stick together when rolled on the spools, but will pass freely through the machine without smearing any part of it or the paper on which the writing is done. It will not stick to or soil the fingers of the operator while it is being placed in the typewriter. The preparation will not rub off while handling but will leave the ribbon when struck by the type. The chemical nature of said preparation is such that when

transferred to stone it will be absorbed without spreading and will stand the chemical treatment which the lithographic process requires. If the ribbons are used a few days after they are prepared or are kept in tight boxes until they are used, the results will be found to be very satisfactory.

The satin or nap surface of the ribbon produces a smoother and more even impression on the transfer paper than is obtained when an ordinary typewriter ribbon is used. The smooth but absorbent nap surface readily takes and holds the thin coating of silicate of soda leaving the ribbon sufficiently pliable for use on the typewriter and furthermore overcomes the broken or "white line" effect and the reproduction of the texture of the ribbon on the face of the letters when they are struck on the transfer paper. While an ordinary ribbon may be overloaded with transfer ink so that the texture will not be seen in the impression, in that case the body of ink is so great that it spreads when transferred and the letters fill up and run together.

I claim:

1. A typewriter ribbon, for the purpose specified, coated with silicate of soda and over it a coating of transfer ink.

2. A type-writer ribbon for the purpose specified, comprising a silk ribbon, having a nap on one side, said nap side being coated with transfer ink.

3. A typewriter ribbon for the purpose specified, comprising a silk ribbon, having a nap on one side, said nap side being coated first with silicate of soda and then with transfer ink.

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

WILLIAM F. CLARKE.

Witnesses:
JUNIUS C. KLEIN,
R. W. DELPH.