

UNITED STATES PATENT OFFICE.

JAMES R. GALLAGHER, OF BUENA VISTA, NEW JERSEY.

RENEWING PROCESS FOR PRINTING-RIBBONS.

No. 895,248.

Specification of Letters Patent.

Patented Aug. 4, 1908.

Application filed August 13, 1907. Serial No. 383,293.

To all whom it may concern:

Be it known that I, JAMES R. GALLAGHER, a citizen of the United States, residing at Buena Vista, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Renewing Processes for Printing-Ribbons, of which the following is a specification.

My invention relates to the process of renewing printing ribbons such as are used in typewriting machines and similar devices and the object of my invention is to renew and render fit for use printing ribbons which have become dry.

All typewriter inks are made on the basis of two principles, the first of grinding the color into the oil and the second (and much cheaper) of making a solution, by dissolving the color in alcohol, and then adding mineral oil with some glycerin, to the color solution, this latter is used very largely if not exclusively, in the manufacture of the lower priced type writer ribbons.

In the typewriting ribbons and other printing ribbons now in use, the contact with the atmosphere tends to dry the ribbon so that its life is comparatively short and by means of my process, ribbons which have become dry, may be renewed from time to time and their life is greatly lengthened. I accomplish this object by providing a bath of oil which I prefer to compose of a suitable vegetable oil, preferably castor oil about fifty six ounces (56), a suitable fish oil preferably sperm oil about thirty two (32) ounces, a suitable animal oil preferably lard oil about twenty four (24) ounces, a suitable mineral oil any lubricating petroleum oil about eight (8) ounces to which I add glycerin about four (4) ounces and essential oil preferably almond oil about four (4) ounces, making one hundred and twenty eight ounces (128) or one (1) gallon. These constituents are thoroughly mixed by agitation and a suitable quantity of the composition is placed in a receptacle.

In use, the old ribbon that has become so dry that no impression can be had therefrom, is passed first through a small bath of the combination oil, and thence carried along between rollers to squeeze out all the unnecessary surplus (to prevent blurring) to be again rewound on to a spool, thereby making almost if not completely a new ribbon par-

ticularly so, if the ribbon has been made with mineral oil. The dry ribbon has become so, because the oil used in manufacture has dried out, leaving behind in the mesh of the ribbon nearly all of the color that was originally put in the manufacture, and all that is required, is that the oil be restored and the color liberated, and as experiments of months have proved this to be a positive fact, there can be no further question on this point.

The foregoing has already partly explained the "effect of the treatment", to which may be added, that, the latent color that is originally put into a ribbon can never be completely extracted, particularly so of those manufactured with no mineral oil and therefore the life of a ribbon depends, when immersed in the renewing oil, entirely upon the touch of the operator, as the first immersion will last for at least six months. The treatment therefore resolves itself into the fact of renewing an old typewriter ribbon indefinitely, because when it shall again have become dry, it can possibly stand the second and even a third immersion if the ribbon has not been worn into holes, from the pounding of the operator.

Having thus described my invention, what I claim is:

1. The process of renewing a printing ribbon by passing it through a bath of oil acting as a vehicle which softens and spreads the coloring matter latent in the ribbon mesh.

2. The process of passing a ribbon containing pigment through a bath composed of castor oil, sperm oil, lard oil, lubricating petroleum oil, glycerin and essential oil and then removing the surplus oil substantially as herein described.

3. The process of renewing a printing ribbon by passing it through a suitable bath composed of vegetable oil, fish oil, animal oil and mineral oil and then removing the surplus oil therefrom, substantially as herein described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this sixth day of August 1907.

JAMES R. GALLAGHER.

Witnesses:

JUSTIN C. GALLAND,
BERTHA M. PECK.