

UNITED STATES PATENT OFFICE.

JOSEPH H. OSGOOD, OF PEABODY, MASSACHUSETTS.

PRINTER'S INKING-ROLLER.

SPECIFICATION forming part of Letters Patent No. 725,356, dated April 14, 1903.

Application filed October 31, 1901. Serial No. 80,706. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. OSGOOD, a citizen of the United States, residing at Peabody, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Printers' Inking-Rollers; 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.

The object of my invention is, among other things, to improve printing-rollers and fit them more perfectly for their work, more especially for the distribution of the ink upon the type or other forms which are to be printed from, and to render the surface of the roller less liable to be injured or affected by any agents except such as would destroy the substances of the roller itself.

My invention consists, as hereinafter set forth, in taking ordinary printing-rollers, the body of which is made of the usual or well-known materials, and submitting the surface of the rollers to a treatment with what is known as "formaldehyde."

I have found the best preparation of formaldehyde for use in my invention to be a ten to twenty per cent. solution of this agent in the strong alcohol of the *United States Pharmacopœia*—that is, of course, using the alcohol made from grain. Wood-alcohol of the same strength may be substituted for that made from grain; but I find it is not so easy in its application, and therefore I prefer alcohol made from grain. The best method of its application to the rollers I find to be as follows: A dry clean sponge is moistened with the formaldehyde, or preferably with the above-named solution prepared as above indicated, and then it is rubbed lightly and thoroughly over the whole surface of the roller. The roller is then allowed to stand for a short time—say thirty minutes—when it may be put into the printing-press and used as usual. This treatment of the surface of the roller not only toughens this surface beyond that of the ordinary and usual surface, so that the roller is not so easily torn or broken in its move-

ments over the type or other form that may be printed from it, but it makes it, in fact, practically a new and better roller than has hitherto been produced. The formaldehyde alters the character of the face or surface of the roller by producing with such surface a compound with the glue or gelatin ingredients of which the roller is mainly made and such as cannot be obtained by any other known process.

The ordinary seasoning of printing-rollers by exposure to the air does not and cannot produce the surface resulting from my process. I take these ordinary rollers and by treating them with formaldehyde convert the face of the roller to an insoluble compound completely unaffected by any agent that does not destroy the substance of the roller itself. At the same time my treatment does not in any way affect the surface of the roller for the purposes for which it is used—indeed, under many conditions it improves its working qualities. This treatment also to some extent increases the "tack" or "suction" of the roller, as it is technically termed—that is, the property of taking up and carrying printers' ink readily.

My invention is applicable to printers' rollers in general, and which, as is well known, are made from glue or gelatin combined with glycerin or with saccharine matter or other material.

My invention, therefore, does not consist in the use of the well-known constituents of printers' rollers. It consists in the treatment of such rollers upon their surface with the material and in the method as set forth whereby in addition to their usual qualities the rollers can when thus treated the better distribute the ink upon the type or other forms to be printed from, have a capacity for doing better work, have a tougher surface and greater durability, and with less liability to become torn or broken.

I claim—

1. The improved method of treating the ordinary inking-rollers, consisting in coating the periphery of the same with formaldehyde whereby the surface of the roller is made

tougher and more durable, and all without impairing the elastic or other practical qualities of the roller.

2. The improved method of treating ordinary printers' inking-rollers, consisting in coating the periphery of the same with formaldehyde in solution with alcohol whereby the surface of the roller is made tougher and

more durable and all without impairing the elastic or other qualities of the roller.

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

JOSEPH H. OSGOOD.

Witnesses:

HENRY O. OSGOOD,

F. E. EMBREE.