N. J. & F. J. GAUTHIER.

BLANKET FOR PRINTING PRESS CYLINDERS.

APPLICATION FILED JULY 3, 1914.

1,140,511. Patented May 25, 1915.

Fig. 1.



Fig. 2.

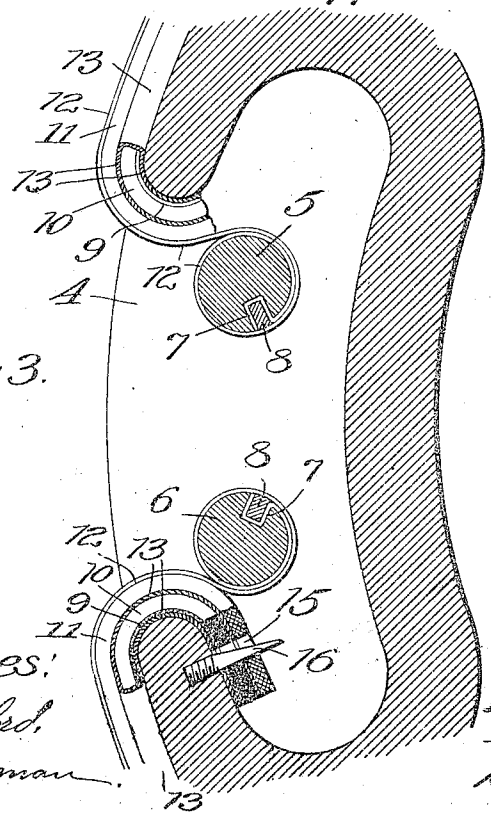


Fig. 3.

Witnesses:
E. E. Gaylord.
Irwin C. Bowman.

Inventors:
Norman J. Gauthier.
Frank J. Gauthier.
Harry K. Talcott.
Attys.

UNITED STATES PATENT OFFICE.

NORMAN J. GAUTHIER, OF BERWYN, AND FRANK J. GAUTHIER, OF CHICAGO, ILLINOIS.

BLANKET FOR PRINTING-PRESS CYLINDERS.

1,140,511. Specification of Letters Patent. Patented May 25, 1915.

Application filed July 3, 1914. Serial No. 848,707.

To all whom it may concern:

Be it known that we, NORMAN J. GAUTHIER and FRANK J. GAUTHIER, citizens of the United States, residing at Berwyn, in the county of Cook and State of Illinois, and at Chicago, in the county of Cook and State of Illinois, respectively, have invented a new and useful Improvement in Blankets for Printing-Press Cylinders, of which the following is a specification.

It is common practice to provide certain of the cylinders of printing presses which oppose the cylinders carrying the type, with a cushioning surface formed in part of a layer of cushioning material of a character subject to impairment by contact with oil, or grease, as, for example, rubber, with a superposed layer of felt, or the like, the paper to be printed passing between the printing and cushioning cylinders.

The cushioning means referred to and commonly termed a blanket, as hitherto constructed, has presented the serious objection of permitting ink, and lubricating oils supplied to the bearings of the press, to penetrate through the layer covering the said layer of cushioning material, and work its way into the layers of the blanket at the ends of the cylinder, the ink and grease in contacting with the said layer of cushioning material causing it to deteriorate and blister, and in some cases the particles of ink massing together on the layer of cushioning material, the result being in all of these cases that the blanket becomes so impaired that it ceases to present the proper uniform cushioning surface required for the making of the proper impressions on the paper to be printed. The disintegration of the said layer of cushioning material by the action of the oils and ink is such that it is soon rendered unfit for use and requires replacement, with consequent interruption to the operation of the press, with relatively great expense.

Our object is to provide a blanket for a printing-press cylinder which will not be subject to impairment as stated, permitting the said layer of cushioning material to be used throughout its natural life. Referring to the accompanying drawing—Figure 1 is a plan view of a blanket for a printing-press cylinder, constructed in accordance with our invention. Fig. 2 is an edge view of the blanket, the edge shown in this figure being one which extends longitudinally of the cylinder; and Fig. 3, a view showing a portion of the cylinder in section with our improved blanket applied thereto, the end of the blanket being shown mainly in elevation.

The cylinder illustrated is of the type known as a double width cylinder used in a press for printing two pages of a newspaper at one operation, though our improved blanket may be used in connection with a single width cylinder, as will be hereinafter explained.

In carrying out our invention, we provide a protecting medium for the layer of cushioning material, as, for example, rubber, or rubber composition, provided in sheet form, of a character which is impervious to ink, oil and grease, positioned over the said layer of cushioning material to protect it against contact with these substances in the operation of the press. The cylinder illustrated is of a well-known type provided in its periphery, to extend longitudinally thereof throughout almost its entire length, with a recess 4 in which reels 5 and 6, provided with any suitable operating means for turning them, are journaled, these reels being provided with longitudinally extending grooves 7, coöperating with clamping bars 8 for clamping the free edges of the outermost covering of the blanket to hold the layers thereof, after being wrapped about the cylinder, in proper position thereon.

The form of blanket illustrated comprises a strip of fabric 9, as, for example, duck, coated with a layer 10 of cushioning material, such as soft rubber or rubber composition, a superposed layer of felt 11 and an outer covering of muslin 12, with a protecting envelop 13 for the layer 10, formed of a material which is impervious to oil, grease, and ink, and sufficiently pliable not to interfere with the cushioning action of the layer 10, the material which we prefer to use being formed of comparatively thin sheets of zinc, preferably about six thousandths of an inch in thickness, the envelop 13 extending over the layer 10 and underneath the backing 9, and closed at the ends of the cylinder. In a double width cylinder, we prefer to form the protecting covering 13 by using two sheets of material and folding them into the form shown to receive the opposite edges of the layers 9 and 10, the edges of the sheets thus folded either meeting, or spaced a slight distance apart inter-

mediate the ends of the cylinder as illustrated at 14. The covering 13 for the layer 10 will thus extend over the latter practically throughout the extent of this layer and will pass around the edges of the layers 9 and 10 at the ends of the cylinder, thus preventing ink which may penetrate through the felt layer 11, or grease which may attack the blanket at the ends of the cylinder, from coming in contact with the layer 10.

As is usual practice, one end of the blanket is inserted into the recess 4 and hooked at apertures 15 therein over pins 16 in the recess, the muslin strip at this end of the blanket being clamped in the groove 7 in the reel 6, by the bar 8, and a portion of the covering 12 wrapped about the reel 6 by rotating it, both the reels 5 and 6 in practice being provided with ratchet means preventing them from turning backwardly. The blanket is then wrapped around the cylinder and the free end of the blanket tucked into the recess 4 with the end of the strip 12 at this end of the blanket, clamped to the reel 5 as described of the other end of the covering 12, and upon rotating the reel 5 drawn in taut condition over the underlying layers of the blanket, thus serving to hold the blanket in proper position on the cylinder of which it forms the cushioning surface. Where the cylinder to be provided with a blanket is what is known as a single width cylinder, it is desirable that the protecting strip extending over the layer 10 be continuous from end to end of the blanket, and, in practice, we prefer to form this protecting covering of a sheet of material of such width that it may be folded upon itself as explained of the sections forming the covering 13 and extend entirely across the blanket, the free edges of the covering 13 being soldered to seal this end of the protecting covering 13.

It is preferred, in practice, to firmly attach to the covering 13 the portion of the blanket which is located therebetween, and this may be done by using any suitable adhesive.

It will be understood from the foregoing that the layer 10 of cushioning material will be thoroughly protected against access thereto of deleterious substances, by means which will not impair the efficiency of the blanket as a suitable cushioning medium.

Another advantage which results from the use of our invention is that a much lower grade of rubber, when used either above, or in combination with other materials, to form the layer 10, may be used than is required in those cases where no protecting medium for the layer is provided.

While we have illustrated and described a particular embodiment of our invention, we do not wish to be understood as intending to limit it thereto as the same may be variously modified and altered without departing from the spirit of our invention.

What we claim as new and desire to secure by Letters Patent is—

1. A blanket for a printing-press cylinder formed with a layer of cushioning material subject to impairment by contact with oil, or grease, with impervious sheet material of a character not subject to the deleterious action of oil or grease superposed on the cushioning layer and incasing the edges thereof at the ends of the cylinder, for the purpose set forth.

2. A blanket for a printing-press cylinder formed with a layer of cushioning material subject to impairment by contact with oil, or grease, with impervious sheet material of a character not subject to the deleterious action of oil or grease incasing said cushioning layer against contact with deleterious substances contacting with the blanket at its circumference or at its end.

3. A blanket for a printing-press cylinder formed with a layer of cushioning material subject to impairment by contact with oil, or grease, with sheet-material of a character not subject to the deleterious action of oil or grease extending entirely, or substantially entirely, over both surfaces of said cushioning layer and incasing the latter at the ends of the cylinder, for the purpose set forth.

4. A blanket for a printing-press cylinder formed with a layer of cushioning material subject to impairment by contact with oil, or grease, with pliable sheet-metal superposed on said cushioning layer and protecting it against the action of deleterious substances contacting with the blanket.

5. A blanket for a printing-press cylinder formed with a layer of cushioning material subject to impairment by contact with oil, or grease, with pliable sheet-metal superposed on said cushioning layer and incasing the edges thereof at the ends of the cylinder, for the purpose set forth.

6. A blanket for a printing-press cylinder formed with a layer of cushioning material subject to impairment by contact with oil, or grease, with folded sheets of impervious material underlying and overlying said cushioning layer at its opposite edges, with the folded edges of the sheets lying at the edges of said cushioning layer at the ends of the cylinder, for the purpose set forth.

NORMAN J. GAUTHIER.
FRANK J. GAUTHIER.

In presence of—
WILLIAM B. DAVIES,
CATHARINE B. JACOBS.