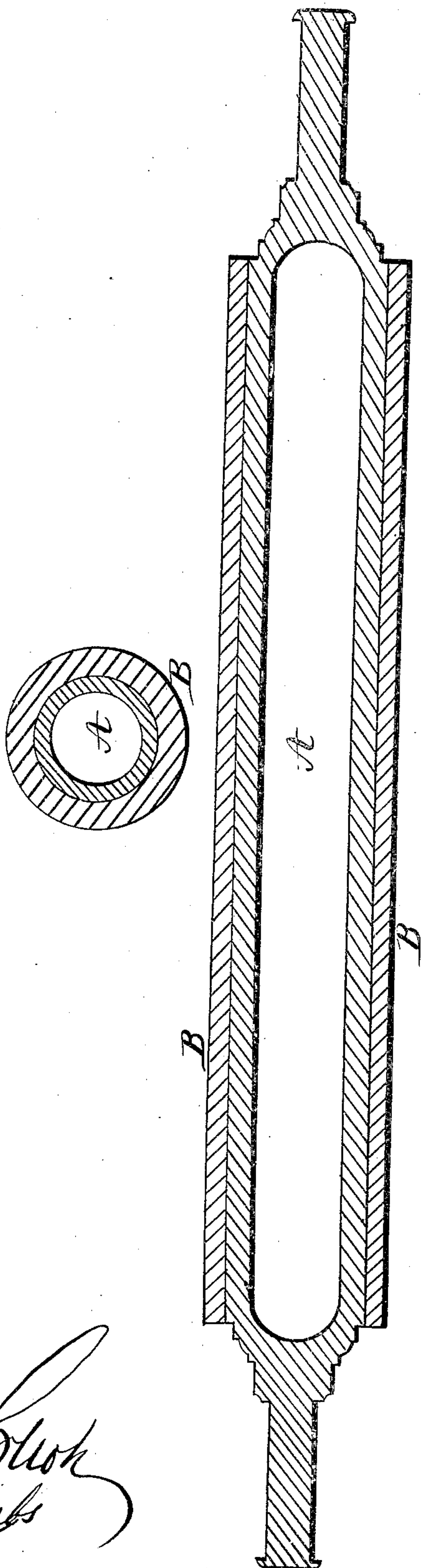


J. M. Dunlop
Sizing Roll.

N^o 44,911.

Patented Nov. 1, 1864.



Witnesses.

J. R. Cook
W. L. Coombs

Inventor.

John M. Dunlop
by his attorney
Frederick Curtis.

UNITED STATES PATENT OFFICE.

JOHN M. DUNLOP, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND,
ASSIGNOR TO HIMSELF AND FREDERICK CURTIS AND FRANCIS CURTIS,
OF NEWTON LOWER FALLS, MASSACHUSETTS.

IMPROVEMENT IN SIZING-ROLLS FOR COTTON MACHINERY.

Specification forming part of Letters Patent No. 44,911, dated November 1, 1864.

To all whom it may concern:

Be it known that I, JOHN M. DUNLOP, of Manchester, in the county of Lancaster, Great Britain, have invented a new and useful Improvement in Sizing-Rolls for Cotton Machinery; and I do hereby declare that the same is fully described and represented in the following specification, and the accompanying drawings, of which—

Figure 1 denotes a longitudinal section, and Fig. 2 a transverse section, of a sizing-roll constructed in accordance with my invention.

In the manufacture of sizing-rolls for cotton machinery many experiments have been made to obtain a material which shall resist the action of the acids in the sizing material, and which will wear with a smooth, even surface, besides being very durable and made at reasonable cost. After many experiments, soapstone rolls are now generally used, but they are constantly wearing rough and uneven on their surface, and are expensive and difficult to make and keep in repair.

My invention is intended to overcome these objections; and it consists in constructing or covering the outer surface of the roll with the substance known as "hard rubber" or vul-

canite. Such rolls have been in constant use in several mills, and are found to be entirely unaffected by acids, and keep a smooth, even surface. They are also very durable, there being no perceptible wear of the rubber, and they can be manufactured at much less cost than any other roll ever used for the purpose.

In the drawings above referred to, A denotes the shaft or body of the roll, it being made of metal or any suitable material, and B the covering or coating of hard rubber, which is secured to the body of the roll in any suitable manner. It may, perhaps, be found, on further experiments, that the entire roll may be made of hard rubber.

What I claim as my invention, and desire to secure by Letters Patent, is—

The improved roll, made as above described—that is, with a metallic or other suitable body or shaft, and an outer covering of vulcanite or hard rubber, or its equivalent, substantially in the manner and for the purposes hereinbefore set forth.

JOHN M. DUNLOP.

Witnesses:

S. B. TUCKER,
M. E. SHOREY.