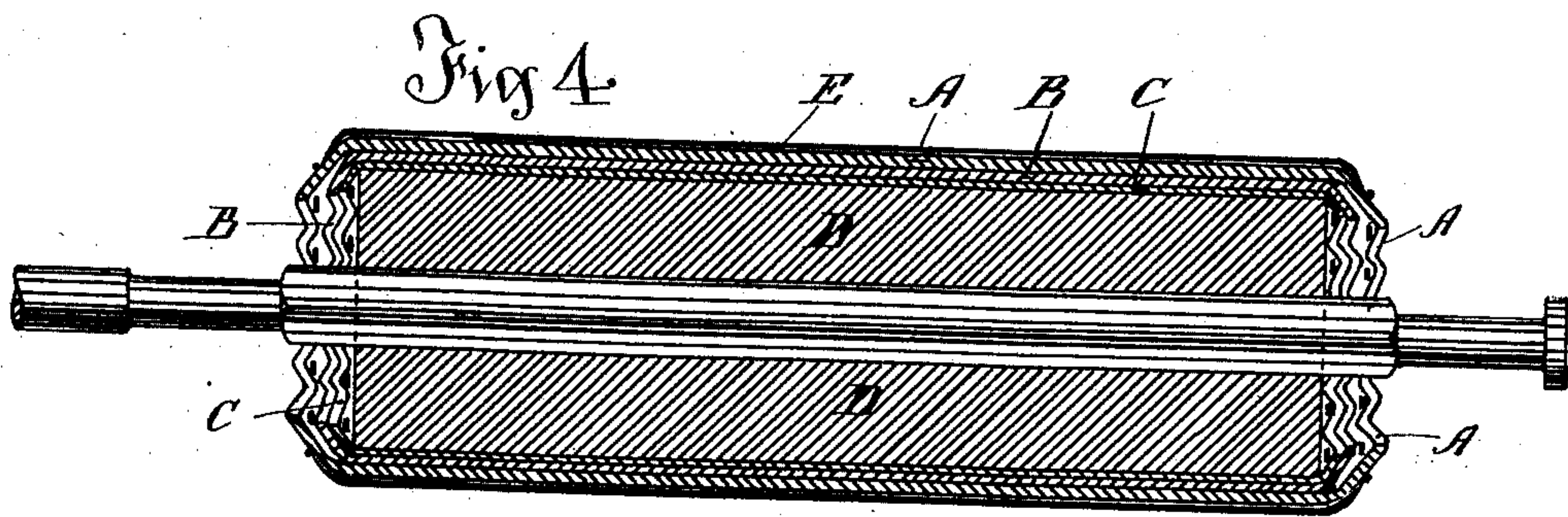
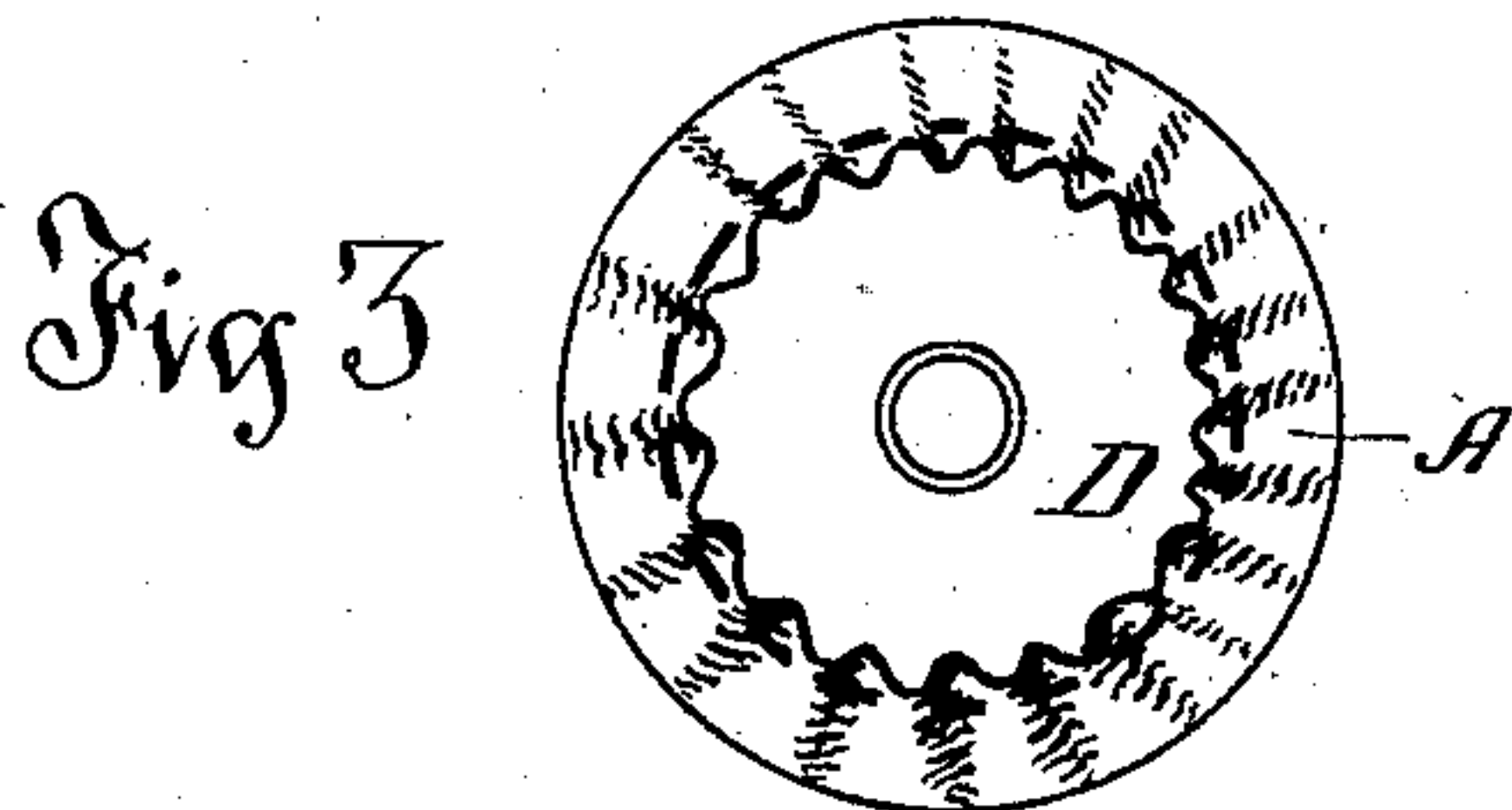
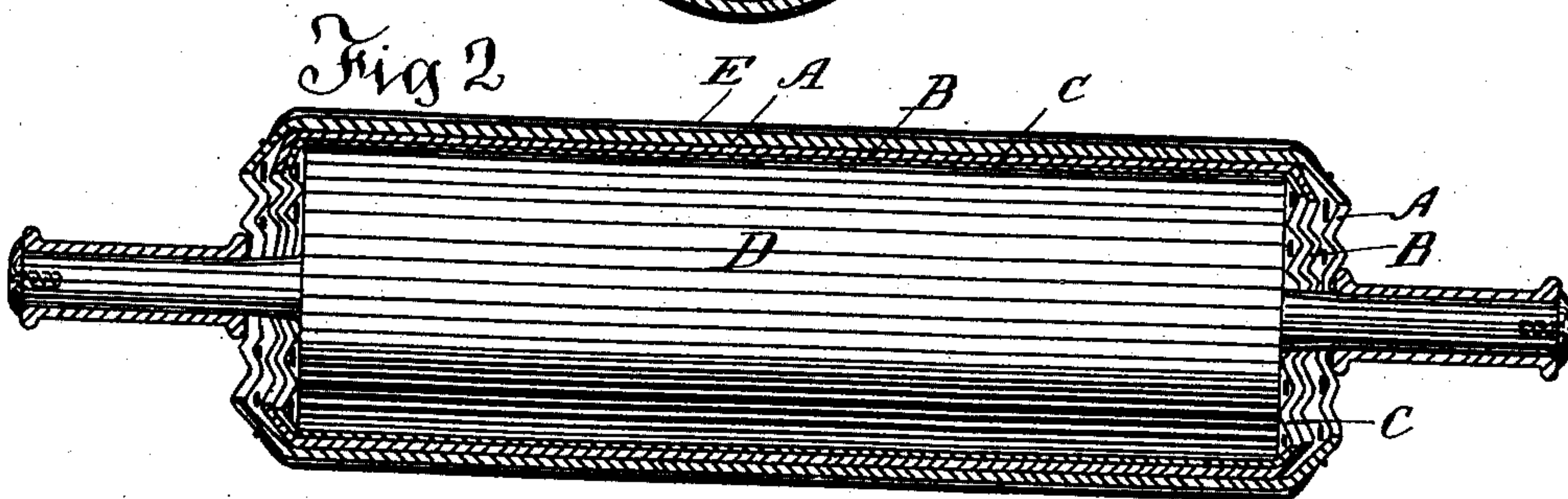
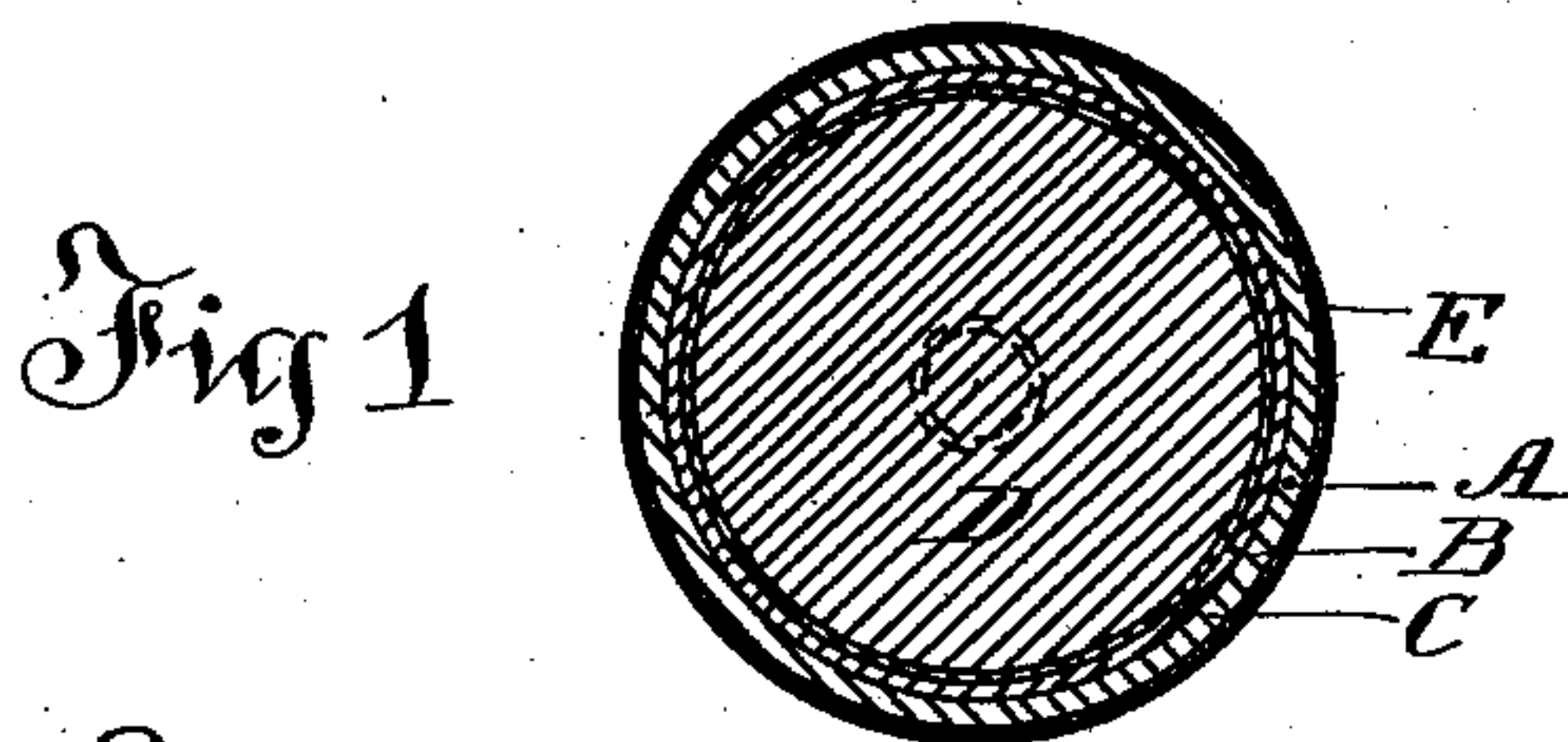


(No Model.)

F. E. LANG.
PRINTER'S INK ROLLER.

No. 387,647.

Patented Aug. 14, 1888.



Witnesses.
A. Melhuish
J. D. Mac.

Inventor.
Friedrich E. Lang
by *W. H. Haddan*
his Attorney.

UNITED STATES PATENT OFFICE.

FRIEDRICH EDUARD LANG, OF ANGER, NEAR LEIPSIC, SAXONY, GERMANY.

PRINTER'S INK-ROLLER.

SPECIFICATION forming part of Letters Patent No. 387,647, dated August 14, 1888.

Application filed September 26, 1887. Serial No. 250,748. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH EDUARD LANG, a subject of the King of Saxony, and a resident of Anger, near Leipsic, Saxony, Germany, have invented a new and useful Improvement in Printers' Ink-Rollers, of which the following is a specification.

This invention consists in an improved roller for transferring ink or color to designs, type, &c., in printing-presses, and more especially for use in lithographic and zincographic printing. For this purpose leather cylinders have generally been used. These, however, have several drawbacks. For instance, the leather surface generally lacks evenness, owing to the inequalities produced in graining the leather, so that the transfer of ink or color to the design is deficient and unequal. Thus it is found that only about half the cylinders prepared are equal to the purpose. Again, the leather expands in use, so that it becomes loose on its support and the rollers lose their solidity. The leather, furthermore, is liable to take up water from the lithographic stone or the like during the process, and thereupon to become smooth and slide over the designs, &c., thereby tending to smudge the same or impair the outlines. The leather cylinder is also generally stuffed or backed with flannel, and the latter sucks up any ink or color that may permeate the leather, becoming hard and thus depriving the roller of its elasticity. Composition rollers are also used.

Reference being made to the accompanying drawings, Figure 1 is a cross-section, Fig. 2 a longitudinal section, and Fig. 3 an end view, of a printer's ink hand-roller made according to my invention. Fig. 4 is a longitudinal section of a machine-roller.

The improved cylinder or roller is formed of or with a surface, A, of specially-prepared felt, as hereinafter described.

The improved felt cylinder is intended to remove the aforesaid inconveniences. It sur-

passes the leather in durability, and also in grain or surface. The felt cylinder does not expand like leather and is not altered by impregnation with color. Furthermore, the action of water on the felt does not cause it to slide over the design to the detriment of the latter. The improved cylinder is, moreover, provided with an impermeable layer, B, between the felt outer casing and the backing C, of flannel or the like, where such backing is used. The ink therefore cannot pass to impregnate such backing, and the latter therefore lasts longer than would otherwise be the case.

The improved roller consists of a roller or cylinder, D, of wood or metal, the same being, if desired, covered with flannel C and the protecting-layer B aforesaid, and over this the prepared felt A, or, in place thereof, with prepared felt only.

The backing C, where such is used, may be of flannel or cloth wound about the roller D, the protecting-layer B being of oil-silk, oil-cloth, or waterproofed fabric of convenient nature.

The felt layer A is saturated with a mixture composed of substantially equal parts of refined beef-tallow, copal-lac, and varnish, the said substances having been well mixed and stirred in an equal quantity of turpentine-oil.

The roller when dry is ground and smoothed. E represents the ink thereon.

I claim as my invention—

An ink or color roller for printing, having a surface composed of felt saturated with a mixture of beef-tallow, copal-lac, varnish, and turpentine-oil.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRIEDRICH EDUARD LANG.

Witnesses:

EDMUND ZACHS,
MAX MATTHÄI.