

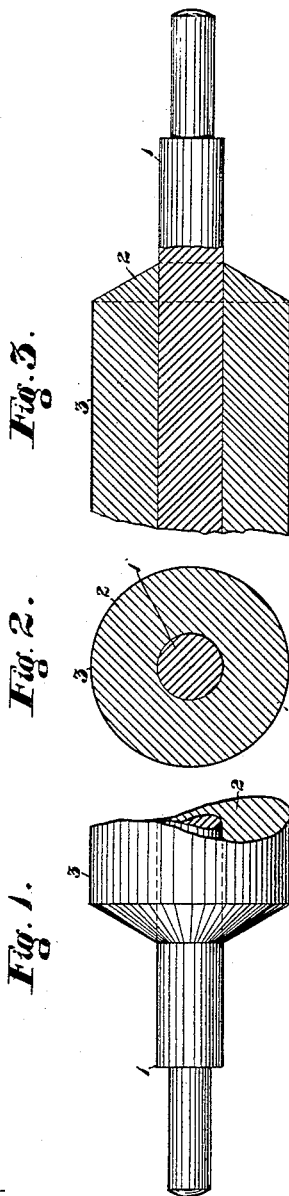
(No Model.)

J. T. HAWKINS.

OFF-SET ROLLER FOR PERFECTING PRINTING MACHINES.

No. 418,980

Patented Jan. 7, 1890.



Witnesses.

*B. H. Davis.*  
*Francis P. Kelley.*

Inventor.

*John T. Hawkins*

by

*R. M. Voorhies*

Attorney.

# UNITED STATES PATENT OFFICE.

JOHN T. HAWKINS, OF TAUNTON, MASSACHUSETTS.

## OFFSET-ROLLER FOR PERFECTING PRINTING-MACHINES.

**SPECIFICATION** forming part of Letters Patent No. 418,980, dated January 7, 1890.

Application filed March 28, 1889. Serial No. 305,195. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN T. HAWKINS, of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Offset-Rollers for Perfecting Printing-Machines, which invention is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is to provide an elastic roller which may be run in contact with the freshly first-printed sides of the sheets or web of paper or in contact with an impression-cylinder in a perfecting printing-machine, which roller shall have an easily-renewable non-absorbent outer covering of such character as will readily take up superfluous ink from the sheets or web of paper or from the surface of the impression-cylinder, and be capable of being cleaned by rolling or rubbing contact of an absorbent roller or wiper therewith.

The invention will first be described in detail and then particularly set forth in the claim.

In the accompanying drawings, Figure 1 shows a partial outside view, Fig. 2 a transverse section, and Fig. 3 a longitudinal section, of the roller.

In said figures the several parts are indicated by reference-numbers, as follows:

The core 1 is made of metal in the usual way, and the coating 2 is of india-rubber or any suitable elastic substance that will not shrink with age. For the non-absorbent surface the outer film or coating 3 is preferably constituted of a mixture of printing-ink, lithographic varnish, and a suitable drier, thoroughly dried before being used, or any equivalent composition which will be impervious to, but readily take ink from, a printed sheet, and which can be readily cleaned by a rubbing action. In such a case an india-rubber-surfaced roller would be permeable to or dissolved by oily substances—such as printing-

ink—and the non-absorbent outer coating is therefore provided to protect the rubber or other elastic body of the roller from such destructive action of the ink, as well as to be adhesive to the ink.

It is desirable in many cases that such rollers as are above described shall be positively driven by gearing, so as to have insured a uniform surface velocity with that of the sheets or web of paper or that of the impression-cylinder in contact with which they may run; and if the roller be made of glue and molasses, or glue and glycerine or such other compound as is generally used for the inking form-rollers of printing-machines, which is impermeable to printing-ink, but shrinks considerably with age, this uniformity of surface velocity cannot be preserved if the roller be positively driven by gearing, because of the variations in diameter of the shrinkable compound.

I am aware that an offset-roller composed of glue and molasses or an equivalent composition running in contact with an impression-cylinder of a printing-machine is not new, as such is fully described in Patent No. 227,157, granted May 4, 1880, and such I do not claim; but

As of my invention I claim—

An offset-roller for printing-machines, composed of a central core, as 1, an elastic non-shrinkable first coating, as 2, and an outer renewable non-absorbent covering of a compound varnish, consisting, preferably, of printing-ink, lithographic varnish, and a suitable drier, whereby superfluous ink adhering to said varnish-covering may be readily removed therefrom by an absorbent roller or wiper, substantially as set forth.

JOHN T. HAWKINS.

Witnesses:

J. F. HALEY,  
ALBERT J. PARK.