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A.D. 1853 N° 316.

**Rollers used in Machines for Printing
Calicoes, &c.**

LETTERS PATENT to Richard Prosser, Civil Engineer, 18, Broad Street, Birmingham, in the County of Warwick, for the Invention of "IMPROVEMENTS IN THE CONSTRUCTION OF PRINTING ROLLERS USED IN MACHINES FOR PRINTING CALICOES AND OTHER SUBSTANCES."

Scaled the 24th June 1853, and dated the 5th February 1853.

PROVISIONAL SPECIFICATION left by the said Richard Prosser at the Office of the Commissioners of Patents, with his Petition, on the 5th February 1853.

I, RICHARD PROSSER, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN THE CONSTRUCTION OF PRINTING ROLLERS USED IN MACHINES FOR PRINTING CALICOES AND OTHER SUBSTANCES" to be as follows:—

The nature of my improvement consists in the employment of a complete or an elastic discontinuous hoop, Fig. 7, Sheet 1; the length of the printing cylinder (conical inside and outside) *interposed* between the copper (or other metal) printing cylinder and the ordinary

Prosser's Impts. in Rollers used in Machines for Printing Calicoes, &c.

wrought iron conical printing mandril, so as to form one combined printing mandril, to be used in machines for printing calicoes and other substances.

The method of combining the printing cylinder, the complete or elastic hoop, and the printing mandril together, is shewn by Figures 1, 5 to 7, Sheet 1; Figures 3, 4, & 7, being full size.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Richard Prosser in the Great Seal Patent Office, on the 4th August 1853.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, 10
RICHARD PROSSER, of No. 18, Broad Street, Birmingham, in the County of Warwick, Civil Engineer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Fifth day of February, in the year of our Lord One thousand eight hundred and fifty-three, in the six- 15
teenth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Richard Prosser, Her special licence that I, the said Richard Prosser, my executors, administrators, and assigns, or such others as I, the said Richard Prosser, my executors, administrators, and assigns, should at any time agree 20
with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man; an Invention for "IMPROVEMENTS IN THE CONSTRUCTION OF PRINTING ROLLERS USED 25
IN MACHINES FOR PRINTING CALICOES AND OTHER SUBSTANCES," upon the condition (amongst others) that I, the said Richard Prosser, by an instrument in writing under my hand and seal, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to 30
be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

Prosser's Impts. in Rollers used in Machines for Printing Calicoes, &c.

NOW KNOW YE, that I, the said Richard Prosser, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof (that is to say):

5 My Invention consists in the employment of a hoop or cylinder of iron or other metal B, Figures 1, and 3, conical inside and outside, interposed between the copper (or other metal) printing cylinder C, (on which the pattern to be printed is engraved) and the ordinary wrought iron conical printing mandril, so as to form one combined
10 printing roller, to be used in machines for printing calicoes and other substances.

Figure 1, is an elevation (quarter the full size) of the parts forming a complete printing roller; A, being the mandril, which revolves on bearings in the printing machine in the ordinary way; B, the elastic
15 iron hoop, conical inside and outside, by means of which the copper or other engraved cylinder is firmly fixed to the printing mandril in the following manner:—The engraved cylinder C, may be made very thin, as one tenth of an inch; it is passed over the conical hoop B, which
20 end is to be passed over the small end of the conical elastic hoop B, and placed thereon in the required position. The conical mandril A, Figures 1, 3, and 5, is then forced into the conical elastic hoop or cylinder B, and, by expanding the same, the engraved cylinder C, the elastic conical hoop B, and the mandril A, become firmly united
25 together. The key or feather D, prevents the elastic hoop B, turning on the mandril A, and the small key or feather E, prevents the engraved cylinder C, turning round on the elastic hoop B. The hoop B, is made elastic by cutting a groove the entire length of the hoop, and through its entire thickness.

30 Figure 1, is an elevation of the compound mandril, drawn to a scale of one fourth the full size.

Figure 5, an end view of the same.

Figure 3, is drawn full size.

I have described the engraved cylinder C, as being conical inside,
35 but it may be parallel inside, in which case the elastic hoop B, must

Prosser's Inqts. in Rollers used in Machines for Printing Calicoes, &c.

also be parallel outside; but I prefer their being conical, because the thin engraved cylinder can be more easily taken off the elastic hoop, and another replaced thereon.

In witness whereof, I, the said Richard Prosser, have herunto set my hand and seal, this Third day of August, in the year of our Lord One thousand eight hundred and fifty-three.

RICHARD PROSSER. (L.S.)

Witness,

WILLIAM BROOKES,
73, Chancery Lane.

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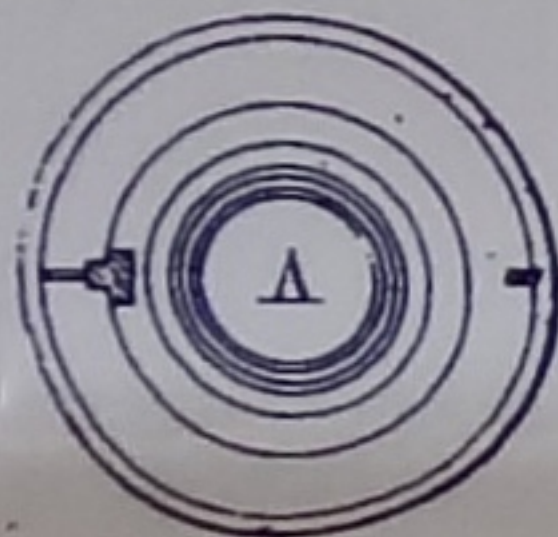
LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1853.

A. D. 1853. FEB. 5. N^o 316.

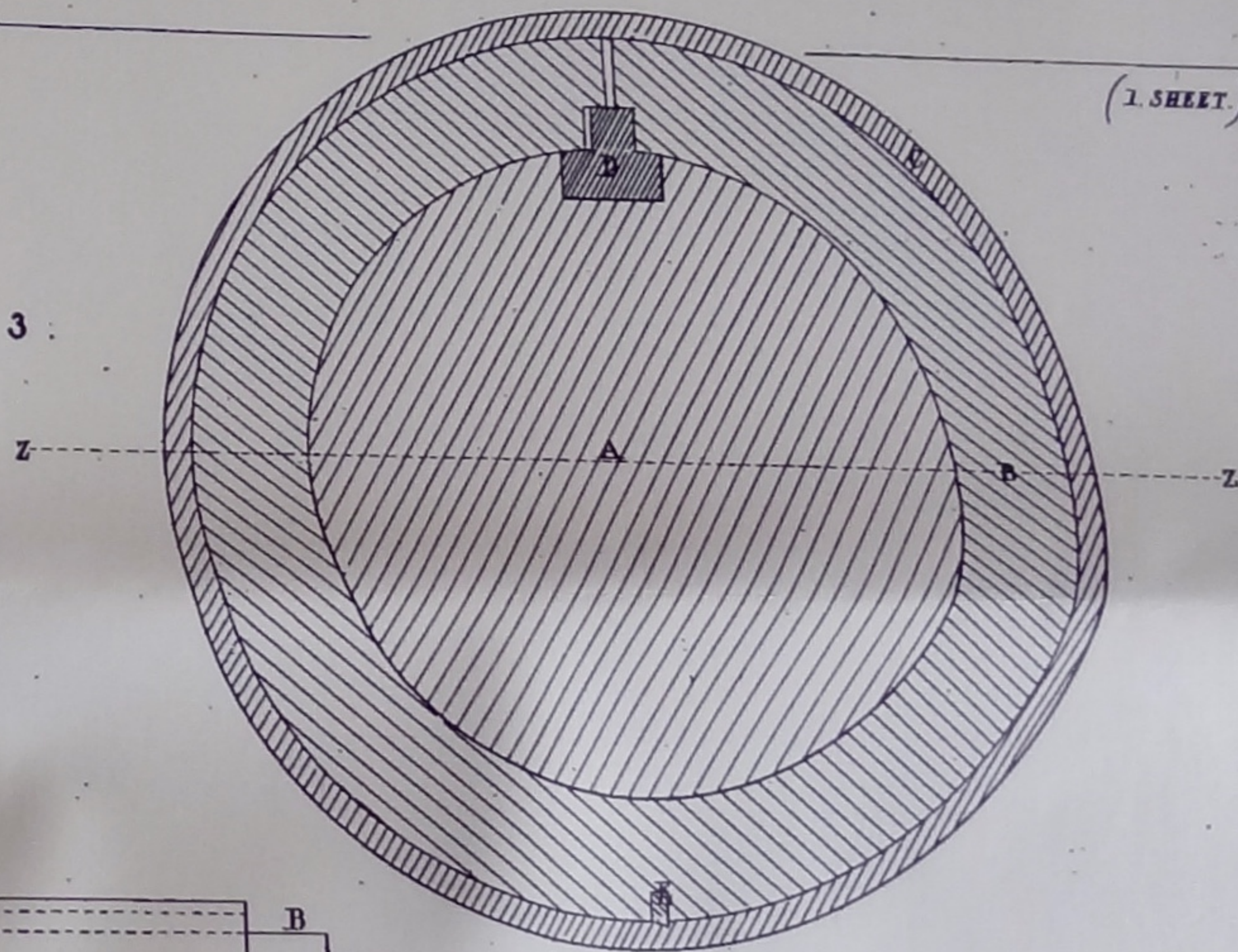
PROSSERS SPECIFICATION.

FIG. 5.



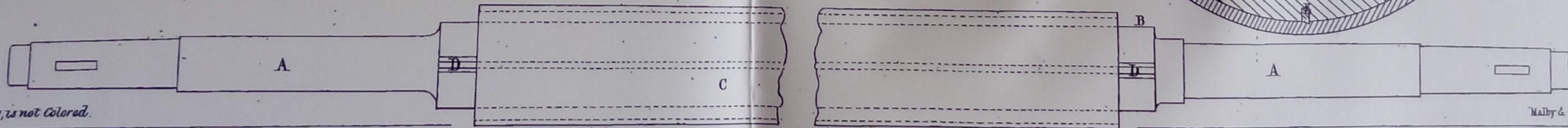
- A. Ordinary printing mandril
- B. Elastic iron hoop
- C. Copper or other metal printing roller
- D. Key to prevent B turning round upon A.
- E. Feather to prevent C turning round upon B.

FIG. 3.



(1. SHEET.)

FIG. 1.



The filed Drawing, is not Colored.

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Printers to the Queen's most Excellent Majesty. 1853.

FIG. 1.

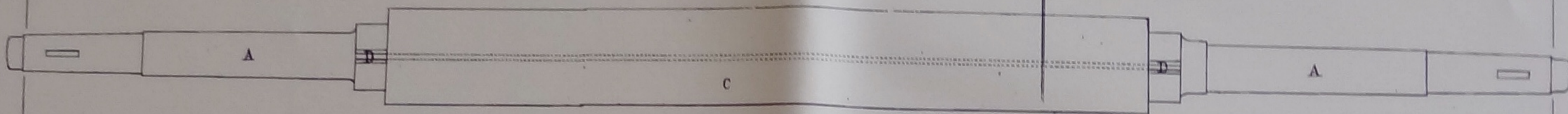


FIG. 2.



FIG. 4.

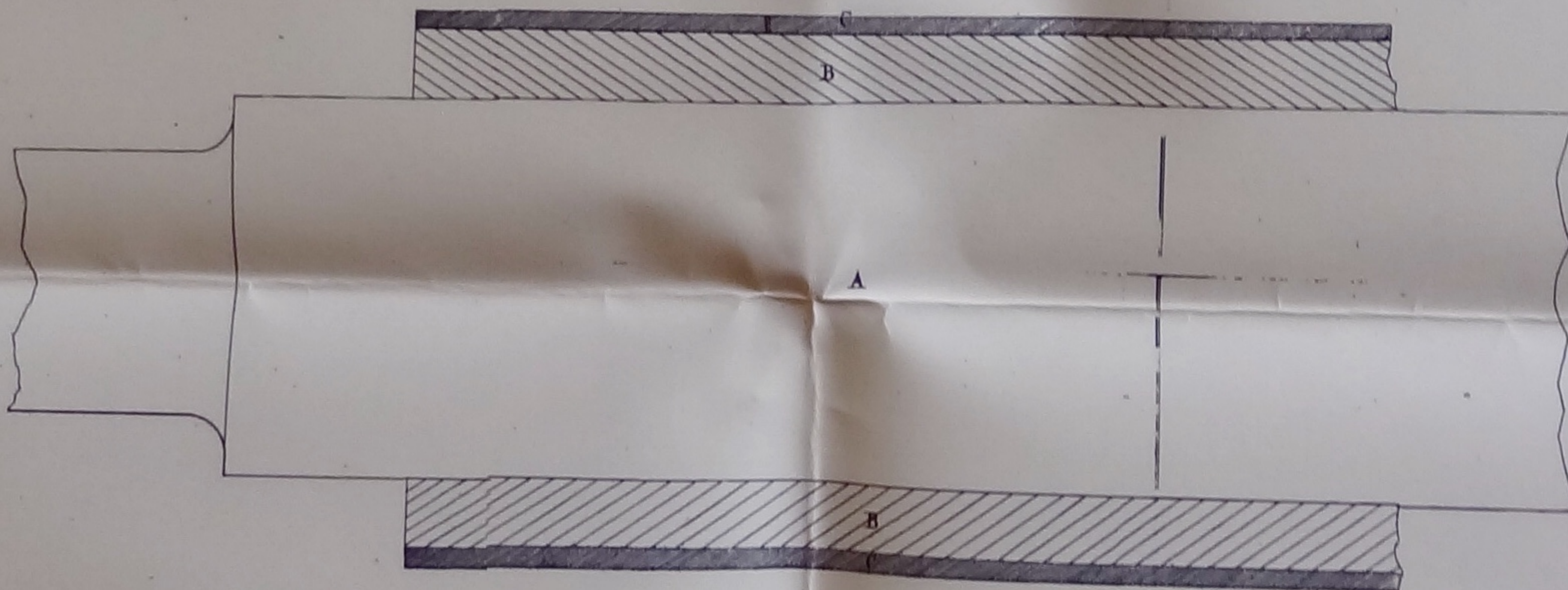


FIG. 7.

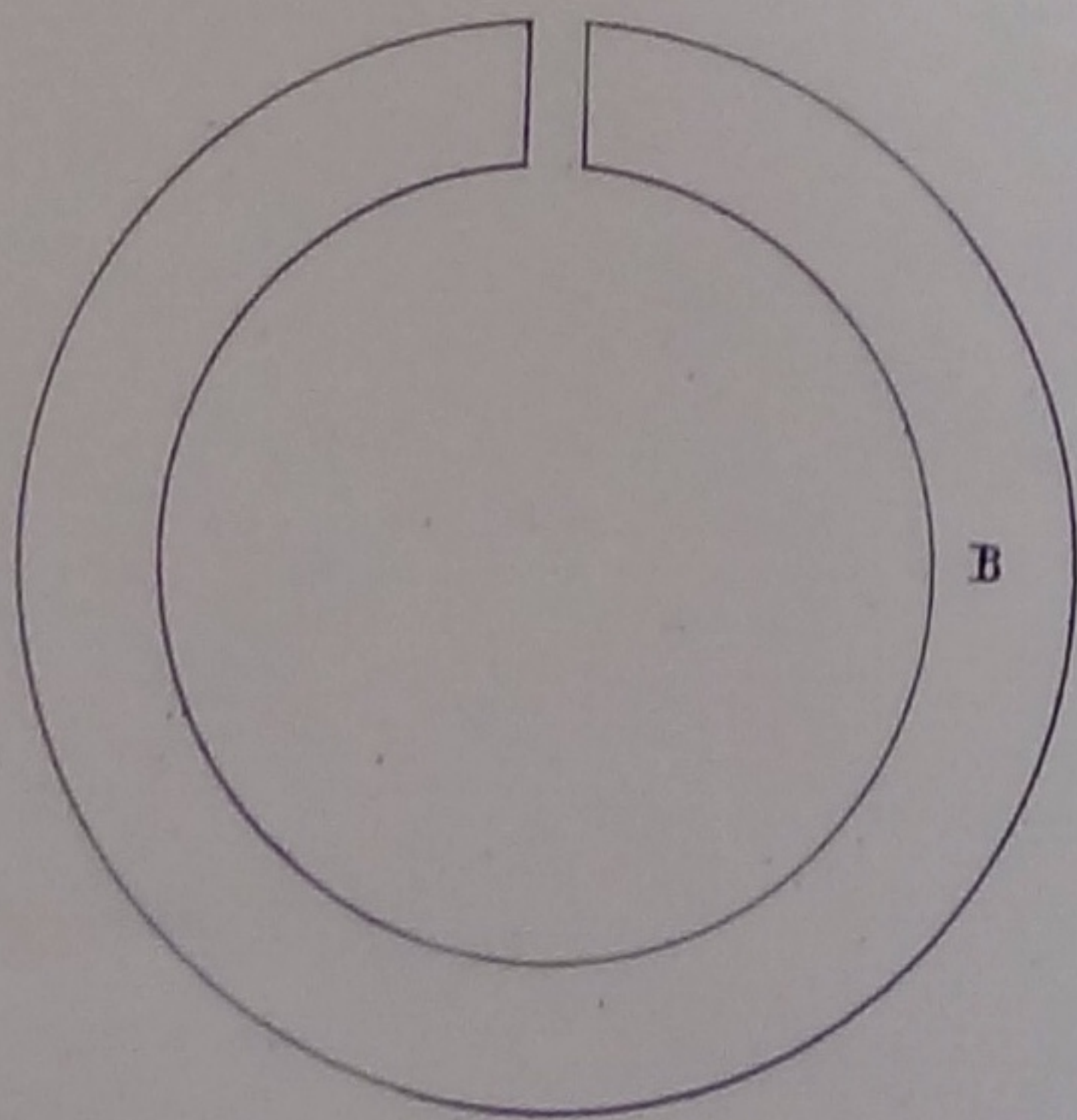


FIG. 5.

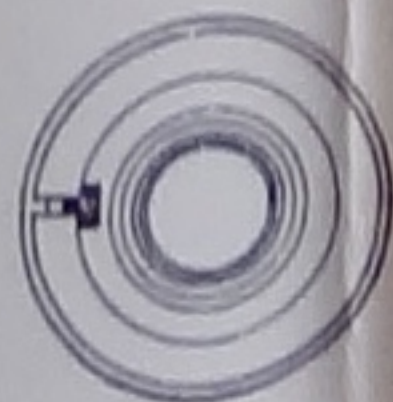
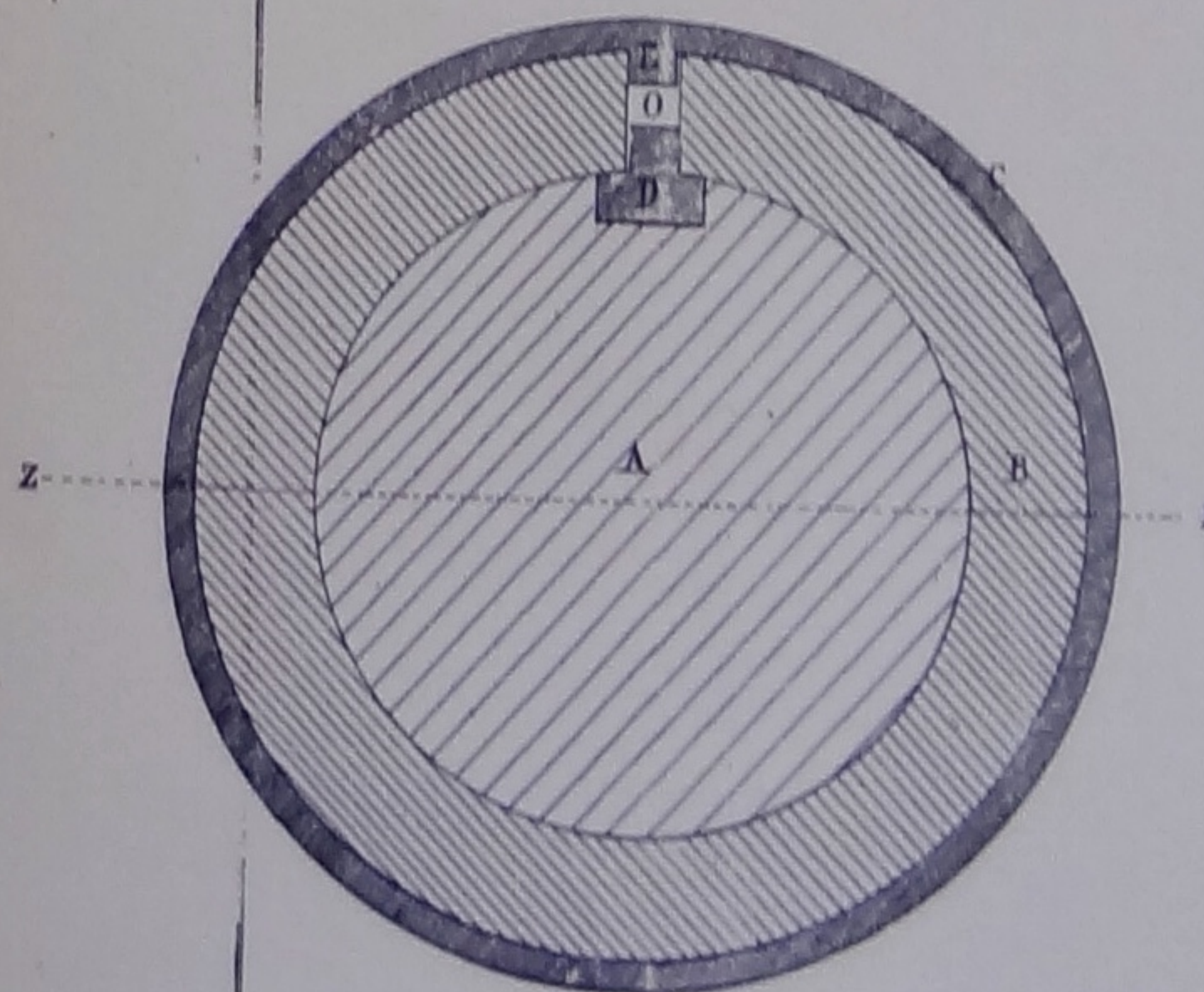


FIG. 6.



FIG. 3.



- A Ordinary printing mandrel.
- B Elastic iron hoop.
- C Copper or other metal printing roller.
- D Key to prevent B turning round upon A.
- E Feather to prevent C turning round upon B.

The filed Drawing is not Colored.

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