No. 612,910. Patented Oct. 25, 1898.

J. J. MORAN & S. E. SMITH.

CORE FOR PAPER ROLLS.

(No Model.) (Application filed Oct. 1, 1897.)

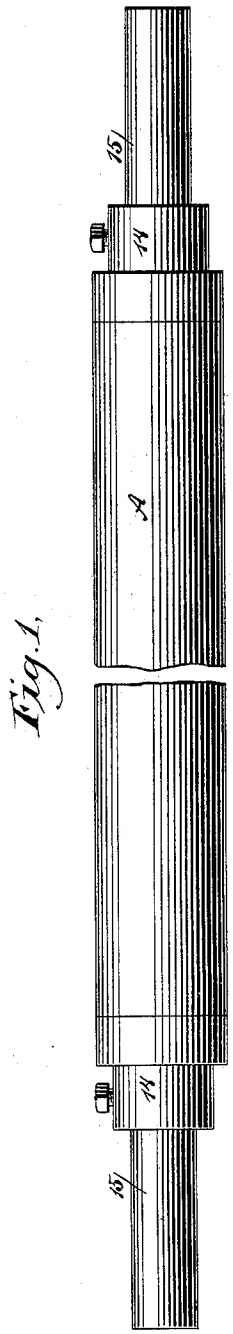


Fig. 1.

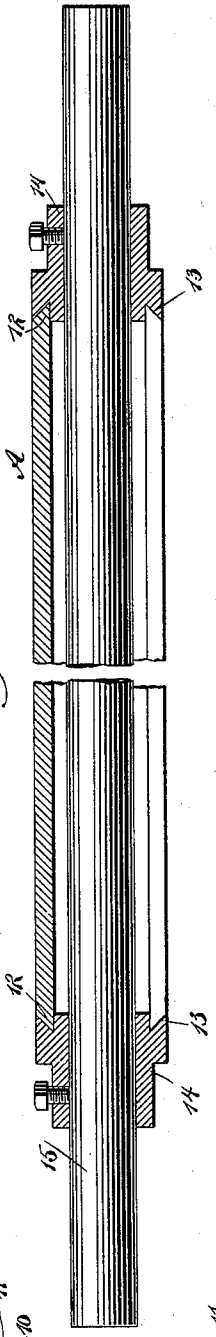


Fig. 2.

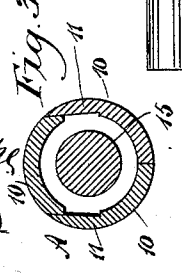


Fig. 3.

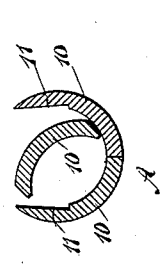


Fig. 4.

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CORE FOR PAPER-ROLLS.

SPECIFICATION forming part of Letters Patent No. 612,910, dated October 25, 1898.

Application filed October 1, 1897. Serial No. 653,751. (No model.)

To all whom it may concern:

Be it known that we, JOHN J. MORAN and SIDNEY E. SMITH, of New York, (Brooklyn,) in the county of Kings and State of New York, have invented a new and Improved Core for Paper-Rolls, of which the following is a full, clear, and exact description.

The invention relates to cores for rolled paper, especially paper that is rolled or otherwise arranged in cylindrical form at the mill and which is intended to be used in a printing-press.

The object of the invention is to provide a core which is collapsible or capable of being removed from the roll of paper after it has been wound, thereby avoiding the necessity of shipping cores in the rolls and returning the cores to the mill after the paper has been used, and also obviating the expense of providing the number of cores sufficient to supply the needs of the mill while other cores are in transit or held at the printing-office.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improved core secured upon a shaft. Fig. 2 is a longitudinal section through the core, the shaft being in side elevation. Fig. 3 is a transverse section through the core and the shaft shown in Figs. 1 and 2. Fig. 4 is a transverse section through the core, illustrating one of its members disconnected from the others and the core in condition to collapse.

A represents a core made of any suitable material. The core is constructed in longitudinal sections 10, three of which are illustrated as comprising the core. Two opposing sections of the core are provided upon their inner faces with corresponding longitudinal recesses 11, extending from end to end, and the side walls of the said recesses 11, as illustrated in Figs. 3 and 4, are inclined from the edges of the sections in which they are made in an outwardly direction, so that the space between the side walls of the recesses 11 is narrower at the edges of the sections than at the inner end portions of the said walls. The third section of the core may therefore be tightly wedged between the walls of the recesses 11 at the outer edges of the sections in which the recesses are made, the introduced section in connection with the other sections giving a circular form to the core and serving to hold the recessed portions in position. When the introduced section is driven inward and reaches the wide space between the recessed portions, the introduced section will drop from engagement with the recessed sections, as shown in Fig. 4, permitting the said sections to fold one upon the other and admitting of the core being readily withdrawn from the roll of paper.

The end portions of the core-sections are beveled, as shown at 12 in Fig. 2, and the beveled edges of the core are adapted to enter corresponding tapering recesses 13 made in sleeves 14, which sleeves are adapted to be secured by set-screws or otherwise on a shaft 15. The shaft 15 is adapted to be placed in a paper-winding machine in such manner that paper may be wound upon the collapsible core. After the roll of paper has attained a predetermined size the sleeves 14 are removed and the introduced section of the core is driven inward, as above stated, permitting the core to collapse, so that it may be withdrawn from the said roll of paper.

When the core has been withdrawn from the roll of paper, a plug of proper shape is introduced in the ends of the opening in the roll from which the core was taken. When the roll of paper reaches the printing-office, these plugs are removed and the paper is mounted upon a suitable holder or shaft adapted to be placed in the printing-press.

It is obvious that under this construction of core the expensive method now in use in the shipment and handling of rolled paper for printing purposes will be entirely avoided, it being simply necessary that a sufficient number of cores suited to the use of the mill shall be retained at said mill, the rolls of paper being shipped to their destination without cores and then mounted upon suitable spindles or shafts, so as to permit of the rolls of paper being mounted in a press expedi-

tiously, conveniently, and economically and without any injury to the edges of the paper.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A core for forming paper-rolls, comprising longitudinal bars, one bar having its edges sloping so that the planes diverge toward the center, the bars adjacent this bar having corresponding sloping edges, the whole uniting to form a cylinder with smooth outer surfaces, and end collars having notches adapted to receive the ends of these bars, substantially as described.

2. A core for forming paper-rolls, comprising a cylindrical shell formed of longitudinal bars, one of which is a key-bar adapted to be moved toward the center to collapse the shell, and heads engaging the ends of the bars to hold them in position, substantially as described.

3. A core for forming paper-rolls, comprising a cylindrical shell formed of longitudinal bars, one of which is a key-bar adapted to be moved toward the center to collapse the shell, the ends of said bars being beveled or reduced to a smaller diameter than the body of the cylinder, heads having corresponding grooves adapted to receive the ends of said bars, and means for adjustably securing one of said heads upon a shaft, substantially as described.

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