No. 848,855. PATENTED APR. 2, 1907.

E. RILEY.

CORE FOR ROLLS.

APPLICATION FILED JUNE 22, 1906.

Fig. 1.

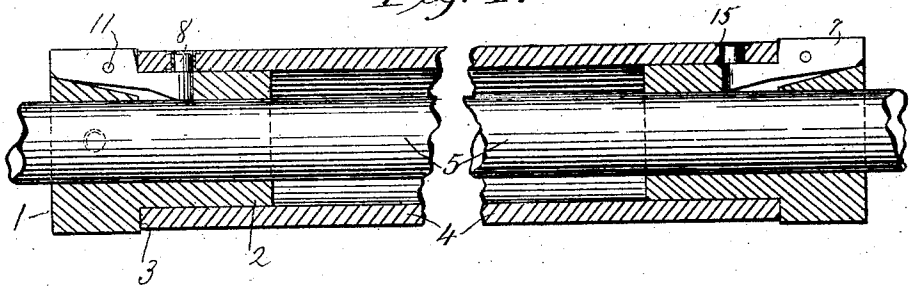


Fig. 2.

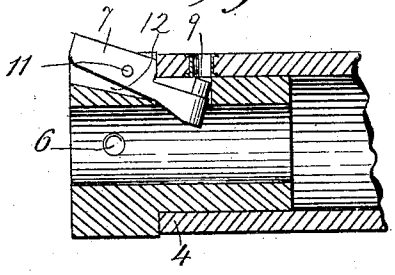


Fig. 5.

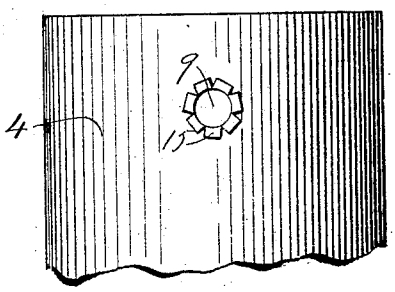


Fig. 3.

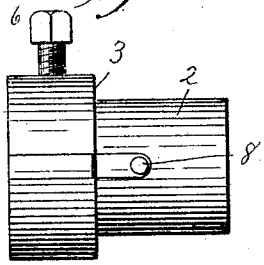
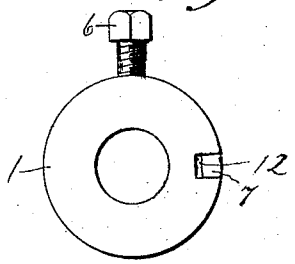


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CORE FOR ROLLS.

No. 848,855. Specification of Letters Patent. Patented April 2, 1907.

Application filed June 22, 1906. Serial No. 322,958.

To all whom it may concern:

Be it known that I, EDWIN RILEY, a citizen of the United States, residing at Livermore Falls, in the county of Androscoggin and State of Maine, have invented new and useful Improvements in Cores for Rolls, of which the following is a specification.

My invention relates to rollers by means of which paper may be conveniently rolled on a core, and consists, essentially, in the combination of a core, of heads fitting the core, and of means whereby the core is locked to the heads and the heads locked on a rotating shaft while the paper is being rolled or unrolled.

The essential features are the hollow core, which may be formed by winding successive layers of paper on a suitable mandrel and applying cement or glue to unite the layers. To the end of the core are fitted metallic heads or chucks provided with latches or other equivalent projections to engage the ends of the core. The heads may be provided with set-screws or other means whereby the assembled parts are locked. When the core has received its roll of paper of desired or standard size, the shaft and heads are withdrawn and the core is shipped with the roll.

Heretofore cores of iron pipe have been extensively used; but they are objectionable on account of their weight, cost, and other reasons. Paper cores have been used, but no satisfactory means has heretofore been devised, to my knowledge, for securing them on the shaft. Conical locking-pieces have been forced into the hollow ends, collars have been clamped against the ends, and the shafts have been made expansible and collapsible; but these means either injured the softer paper core or were insecure or complicated and expensive.

A desirable form of my invention is shown in the drawings herewith, in which the reference-numerals of the specification indicate the corresponding parts in all the figures.

Figures 1 and 2 are longitudinal sections, respectively, with and without the shaft. Figs. 3 and 4 are respectively a plan and an end elevation of one head or chuck. Fig. 5 is an enlarged plan of the end of the core to show the reinforcing bushing.

In the figures, 1 indicates the heads or chucks, having shanks 2 and shoulders 3 to fit the ends of the core 4. The core and heads are preferably tubular to receive the shaft 5. The heads carry set-screws 6, by which they are secured on the shaft, and swinging latches 7, having strong tips 8, which enter holes 9 in the core ends when the parts are assembled to lock the core securely to the heads, so that all the parts are locked securely on the shaft. The latches are hung on pivots 11 in heads to swing in slots 12. When the parts are arranged in position on the shaft, as shown in Fig. 1, these latches are swung upwardly and held in engagement with the core. When the shaft is removed, the latches drop, as shown in Fig. 2, and the heads are free to be withdrawn from the core. The holes 9 in the core are preferably finished and reinforced by thin metal bushings 15, fitted and upset in the holes. (Best shown in Figs. 1 and 5.)

My invention is simple and convenient to operate either in securing the parts on the shaft or detaching them therefrom. It is particularly adapted for metal heads and cores of paper, wood, or other lighter material; but I do not limit myself thereto, for the parts may be made of any suitable material. While it has been devised particularly for rolling and unrolling the large rolls of paper commonly used for newspapers, yet it is evident that it can be used for rolling webs of cloth or other materials.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a means for winding paper, the combination with a shaft of a hollow paper core, of hollow metallic heads or chucks shouldered to fit against ends and having reduced shanks to fit within the ends of the core, latches pivotally supported in slots in the chucks and having tips adapted to enter holes near the ends of the core and set-screws on the chucks to engage with the shaft, said shaft when in position in the core and chucks being adapted to hold the latches up in engagement with the core-holes to lock the core against rotation.

2. In a means for winding wide strips of paper into a roll, the combination of a hollow core made of paper to receive the roll and adapted to be arranged on a rotating shaft, said core being formed with a hole near each end, of metallic reinforcing-eylets fitted to, and upset in, said holes, of metal heads or

chucks fitting the ends of the cores, a set-screw in each head to engage with the shaft, and a latch in a slot in each head and adapted to be swung into engagement with said hole, to lock the core to the heads and on the shaft.

3. In a roller for rolls of paper and similar material, the combination with a tubular core provided with holes arranged a short distance within its ends, of similar heads fitting the ends of the core, and latches pivotally connected to each head and adapted to enter the holes and lock the heads to the core.

4. In a roller for rolls of paper and similar material, the combination with a tubular core, of metallic heads fitting the ends of the core and latches hung on pivots in the heads and adapted to engage with openings in the core.

5. In a roller for rolls of thin material, the combination with a tubular core having holes adjacent to its ends, of tubular heads fitting the ends of the core, and movable locking-pieces supported on the heads and extending within the core, said locking-pieces being adapted to be moved into engagement with said holes by the insertion of the shaft through the heads and the core.

6. In a roller for rolls of thin material, the combination with a tubular core, of heads fitting the ends of the core, and latches hung on pivots in slots in the heads, said latches being adapted to be swung from the interior into engagement with the core.

7. In a means for winding paper, the combination with a shaft adapted to be rotated, of a tubular paper core, tubular metallic heads having outer cylindrical portions substantially equal in diameter to the core and having shanks fitting within the core ends, swinging parts pivotally connected to the heads and adapted to engage with the core, and set-screws on the heads to engage with the shaft, said heads and core, when assembled on the shaft, presenting a substantially smooth exterior, unbroken by projections, except by the set-screws.

8. In a paper-roller, the combination with a tubular core, of similar metallic heads having outer cylindrical portions substantially equal in diameter to the core and having inner cylindrical shanks fitting within the core ends, said shanks being of smaller diameter than said outer portions, said outer portions and said shanks forming shoulders to fit against the core ends, and swinging parts on both heads to engage with openings in the core.

9. In a paper-roller, the combination with a tubular core, having holes near its ends, of tubular heads fitting the ends of the core, latches hung in openings in said heads and having their inner ends extending within the core, and tips on said inner ends arranged substantially at a right angle to the body of the latch, said tips being adapted to engage with said holes.

10. In a roller for rolls of paper and similar material, the combination with a tubular core provided with openings adjacent to its ends, of heads fitting the ends of the core, said heads being tubular to receive a shaft, and of swinging parts hung in the heads, said swinging parts being adapted to swing down into the tubular openings in the core when the parts are separated but to be moved into engagement with the openings to lock the heads to the core, when the parts are arranged on the shaft.

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

EDWIN RILEY.

Witnesses:

JOHN H. MAXWELL,

H. N. GENTHNER.