No. 832,215. PATENTED OCT. 2, 1906.

H. F. SHELDON.

CLAMP FOR HOLDING COVERINGS ON ROLLS.

APPLICATION FILED DEC. 6, 1905.

Fig. 1.

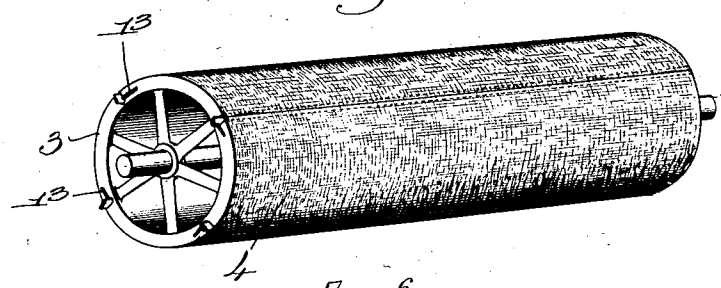


Fig. 2.

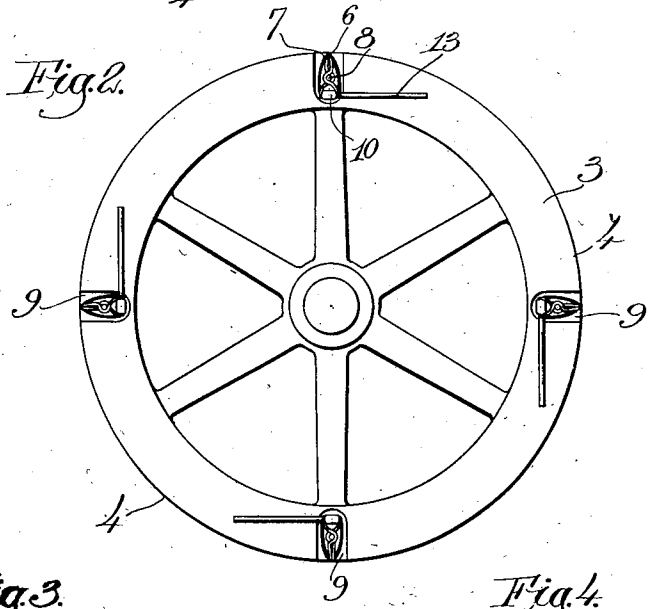


Fig. 3.

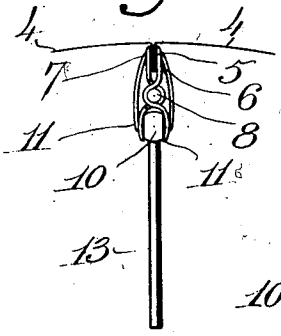


Fig. 4.

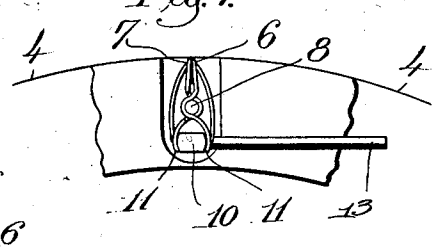
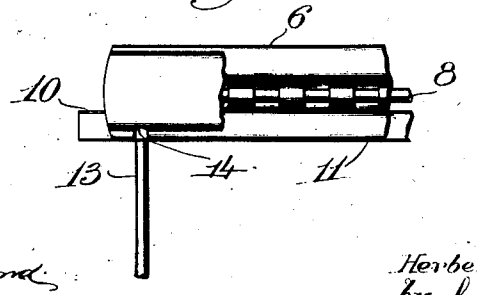


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CLAMP FOR HOLDING COVERINGS ON ROLLS.

No. 832,215. Specification of Letters Patent. Patented Oct. 2, 1906.

Application filed December 6, 1905. Serial No. 290,516.

To all whom it may concern:

Be it known that I, HERBERT F. SHELDON, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Clamps for Holding Coverings on Rolls, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention has for its object to provide a novel clamp for holding a covering on a roll, and it is of such a nature that it may be used for holding the wire gauze on a cylinder or dandy-roll of a paper-making machine or for holding a covering having an abrasive surface on a polishing or buffing roll or for holding any kind of a covering on any other kind of a roll.

My device is entirely separate from the roll with which it is used and comprises two clamping-jaws, which are received within a longitudinal groove formed in the surface of the roll, and between which jaws the inturned edges of the covering may be inserted, and means within said groove and located between the jaws for closing the latter onto the inturned edges of the covering. In the preferred embodiment of my invention these jaws extend the full length of the roll and are closed together by means of a clamping-rod which is received between the inner edges of the jaws and which is cam-shaped in cross-section. The jaws are pivoted together between their inner edges and the clamping edges, so that by turning the rod in one direction or the other the jaws are swung about their pivotal points to bring the clamping edges together.

I will describe first one embodiment of my invention and then point out the novel features thereof in the appended claims.

In the drawings, Figure 1 is a perspective view of a roll having my invention applied thereto. Fig. 2 is an enlarged end view of the roll. Fig. 3 is an enlarged cross-sectional view of the clamping-jaws, showing them open. Fig. 4 is a similar view showing the clamping-jaws closed, and Fig. 5 is a side view of a portion of the jaws.

3 designates a roll of any suitable character to which my invention is applied. This roll may be either the cylinder of a paper-making machine or a buffing-roll or any other roll to which it is desired to apply an outer covering. The covering is designated by 4. It is held to the roll by having its inturned edges 5 clamped between the jaws of my improved clamping device. This clamping device comprises two clamping-jaws 6 and 7, which are herein shown as pivoted together, as at 8, and which are received within a groove 9, extending longitudinally of the roll. The clamping-jaws are closed together by means of a cam member, which is herein shown as a rod 10, extending longitudinally of the clamping-jaws and received between the inner edge 11 thereof. This rod is oblong in cross-section, as seen best in Figs. 3 and 4, so that when it is in the position shown in Fig. 3 the inner edges of the jaws may move together, thereby opening the jaws to receive the inturned edges 5 of the covering 4. The jaws are closed together, thereby to clamp the covering to the roll by giving the rod 10 a one-quarter turn, as shown in Fig. 4. This turning of the rod 10 may be accomplished in any suitable way, but preferably said rod is provided at one end with a projection or handle 13, by means of which it may be turned.

The rod 10 is loosely carried by the clamping-jaws, and it may be removed entirely therefrom by withdrawing it longitudinally thereof. When the rod 10 is turned to close the jaws together, the handle 13 thereof enters in one of two notches 14, and thereby locks said rod from longitudinal movement.

I propose to make the clamping-jaws 6 and 7 and the cam for closing them entirely separate from the roll 6. (Shown in Figs. 3 and 5.) The clamping-jaws are loosely received in the groove 9 and may be readily removed from the groove or replaced therein. If, therefore, any clamping-jaw becomes injured or broken, a pair of jaws may be removed from the groove in which they are received and a separate pair inserted therein without the necessity of discarding the entire roll, as would be the case if the clamping-jaws were an integral part of the roll. Another feature of my invention which I regard as important is that the clamping edges of the clamping-jaws come flush with the surface of the roll, and therefore when they are closed against the inturned

edges of the covering the portion of the covering which spans the recess or groove 9 forms a continuation of the cylindrical surface of the roll.

If the covering for the rolls, whether it be in the nature of a wire mesh for a cylinder of a paper-making machine or the sandpaper or emery covering of a buffing-cylinder, is all made in one piece, then it will be necessary to provide the roll with one groove 9 only and one clamping member located within said groove, and the two inturned edges of the covering 4 will be clamped between the clamping-jaws, as above described.

It is sometimes preferable to make the covering in several sections, and in this case a plurality of clamping members will be employed each located within a groove in the roll and each operating to clamp the adjacent edges of the adjacent sections of the covering.

In Fig. 2 I have shown the covering 2 of the roll in four sections and to properly clamp these sections to the roll it is necessary to provide four clamping members each located in a groove 9.

The drawings illustrate and the specification describes one embodiment only of my invention.

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

1. A roll or cylinder provided with a longitudinal groove, combined with a pair of clamping-jaws removably located within said groove, and means within the groove to close the jaws together.

2. A roll or cylinder provided with a longitudinal groove, a pair of pivoted clamping-jaws separate from the roll and located within said groove, and means to close the jaws together.

3. A roll or cylinder provided with a longitudinal groove and a pair of clamping-jaws pivoted together and located within said groove, the gripping edges of said jaws being flush with the surface of the roll.

4. A roll or cylinder provided with a longitudinal groove, a pair of clamping-jaws in said groove, said clamping-jaws being pivoted together between their inner edges and their clamping edges, and a cam member confined between the jaws for clamping them together.

5. A roll or cylinder provided with a longitudinal groove, a pair of clamping-jaws in said groove, said clamping-jaws being pivoted together between their inner edges and their clamping edges, and a rod oblong in cross-section located between the inner edges of the jaws for closing them together.

6. A roll or cylinder provided with a longitudinal groove, a pair of clamping-jaws in said groove, said clamping-jaws being pivoted together between their inner edges and their clamping edges, and a rod oblong in cross-section located between the inner edges of the jaws for closing them together, said rod being removable from the jaws.

7. A roll or cylinder provided with a longitudinal groove, a pair of clamping-jaws pivoted together and loosely received within said groove, and a cam member confined between the jaws for clamping them together said clamping-jaws and cam member being independent from the roll.

8. A roll or cylinder provided on its periphery with a longitudinal groove and a pair of clamping-jaws separate from the cylinder and located within the groove, the gripping edges of said jaws being flush with the surface of the roll.

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

HERBERT F. SHELDON.

Witnesses:
LOUIS C. SMITH,
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