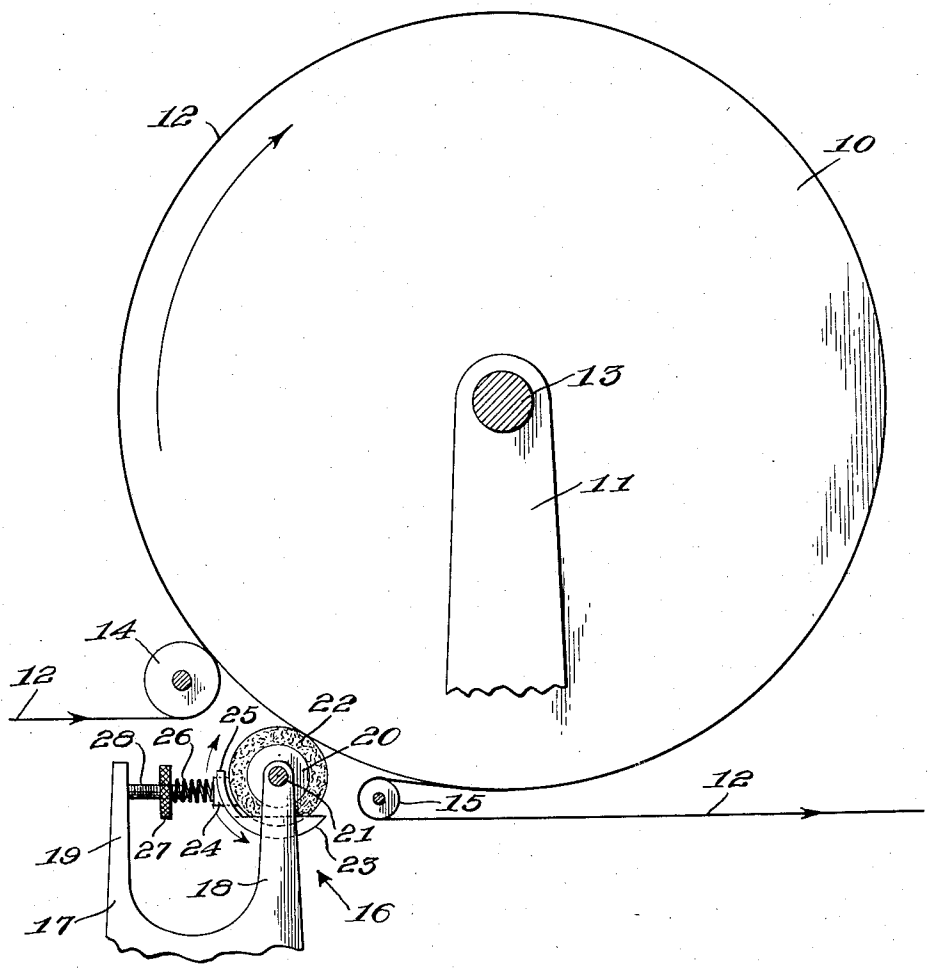
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MEANS FOR MAINTAINING A CAST COATING CYLINDER IN A CLEAN AND POLISHED CONDITION

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MEANS FOR MAINTAINING A CAST COATING CYLINDER IN A CLEAN AND POLISHED CONDITION

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1 Claim. (Cl. 34—85)

This invention relates to means for maintaining a cast coating cylinder in a clean and polished condition.

In the cast coating of paper, coating material is applied to one surface of a continuously moving web thereof and which web, subsequent to the application of the coating thereto, is extended around a heated cast coating cylinder. The web of paper is pressed against the surface of the cylinder while same is still wet, and while in this plastic condition the heated cylinder surface dries the paper which is released from the surface with a finish similar to that of the surface of the cylinder.

The finish of the cast coated paper is wholly dependent upon the surface of the cylinder which is initially highly finished for imparting a similar finish to the coated paper surface.

From the above, it is apparent that if the initially highly finished surface of the cylinder is impaired, such as by the adherence of foreign matter thereto, the finished cast coated surface of the web of paper will be correspondingly impaired.

The necessity of maintaining the cast coating cylinder clean has long been recognized and it has heretofore been the general practice to stop the machine and clean the cylinder surface by sundry means when it has been found that an interior paper finish was being cast coated thereby.

Such prior practice resulted in considerable loss of cast coating time as well as attendant inconveniences in the cleaning of the cylinder. Furthermore, it has not heretofore been possible to accurately ascertain the need of cleaning prior to the observance of improperly cast coated paper which has passed over the cylinder.

It is accordingly a primary object of this invention to provide means for constantly subjecting the surface of a cast coating cylinder to a cleaning action while a web of paper is being cast coated thereby.

A further object of the invention is the provision of novel means for constantly subjecting the surface of a cast coating cylinder to a cleaning action and to a polishing action simultaneously therewith.

Other objects and advantages of the invention will become apparent in the course of the following detailed description, taken in connection with the accompanying drawing, wherein—

The single figure of the drawing is a broken end elevational view of a cast coating cylinder and the cylinder cleaning means embodied in the present invention.

Referring in detail to the drawing, the cast coating cylinder is designated at **10** and same is rotatably supported in end bearings **11** (only one of which is shown) in accordance with prevailing practice. At this point it is to be observed that the cleaning means is equally applicable to a metallic belt.

The cylinder is rotatable in the direction of the arrow and such cylinder has a highly finished surface for imparting a similar cast surface on a web of paper **12** which

extends around the major portion of such surface in firm contact therewith.

The web of paper **12** has its cylinder engaging surface provided with a coating which may be applied by any of the prevailing means for such purpose.

The paper web **12** is guided into engagement with the cylinder **10** at one side of the axis **13** thereof by means of a roller **14**, and a second roller **15** is provided for directing the cast coated web away from the cylinder to a suitable winding drum, the paper web traveling in the direction of the arrows thereon.

In the cast coating operation, the highly finished surface of the cylinder **10** provides a facsimile cast surface on the coated side of the paper web **12**, and it is imperative that the surface of the cylinder be maintained perfectly clean if a uniform cast coating on the paper be obtained, as is desired.

The present invention comprises a cast coating cylinder surface cleaning means and same is designated in its entirety at **16**, and which means is disposed intermediate the rollers **14** and **15**. The cleaning means comprises a suitable support **17** adjacent each end of the cylinder **10** and each support is provided with a vertical roll journalling arm **18** and a second vertical arm **19** for a purpose later to appear.

A cylinder cleaning roll or brush **20** has its opposite ends rotatably journaled in the arms **18** as indicated at **21**, and the roll or brush is rotated either clockwise or counter-clockwise as indicated by the arrows.

The roll **20** is provided with a cylinder engageable peripheral portion **22** which is of a fibrous nature and which is preferably felt. The said peripheral portion **22** may, however, be a cylindrical brush.

Disposed beneath the roll **20** is a pan **23** which is suitably secured to the supports **17**, and which is adapted to contain a liquid and a cleaning powder into which the fibrous portion of the roll or brush **20** dips and transmits same onto the surface of the cylinder for maintaining same clean.

The cylinder surface is not only constantly maintained clean but same is constantly maintained in a polished condition by the following means.

A bar of wax **24** is disposed lengthwise of the roll **20** and same is slidably supported by extensions **25** on the pan **23** with one wall thereof engaged with the fibrous surface of the roll or brush **20**.

The wax bar **24** is yieldably urged into contact with the roll by means of springs **26**, corresponding ends of which engage the bar and the opposite ends of which engage nuts **27** which are threadedly engaged with studs **28** projecting from arms **19**.

From the above, it will be seen that a portion of the cylinder surface is always exposed intermediate the paper web directing rollers **14** and **15** and that the cleaning and polishing roll or brush **20** is constantly engaged therewith, whereby the cylinder surface is always maintained in a clean and polished condition and that the cleaning and polishing is effected during the cast coating operation of the cylinder.

Having set forth my invention in accordance with a preferred structural embodiment thereof, what I claim and desire to secure by U. S. Letters Patent is:

Means for constantly cleaning and polishing the working surface of a cast cylinder during operation thereof on a web of paper initially engaging said surface on a line parallel to the axis of said cylinder and disengaging the surface on a second line parallel to and in spaced relation to the first line; comprising supporting means adjacent each end of said cylinder and including a pair of vertically disposed arms, a cylinder surface cleaning roll rotatably journalled in one of said arms at each end of

the cylinder and having a fibrous peripheral working surface, a cleaning solution supporting pan disposed beneath said roll and having its opposite ends secured to said last arms, extensions supported by said pan and providing a guide for a bar of wax, and a horizontally disposed coil spring disposed adjacent each end of said roll with corresponding ends thereof engageable with said bar of wax for urging same into contact with said roll surface, and spring compression adjusting means supported by the others of said arms.

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