

C. G. OBERLEY,
 APPARATUS FOR USE IN PAPER MAKING MACHINES.
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1,237,374.

Patented Aug. 21, 1917.

Fig. 1.

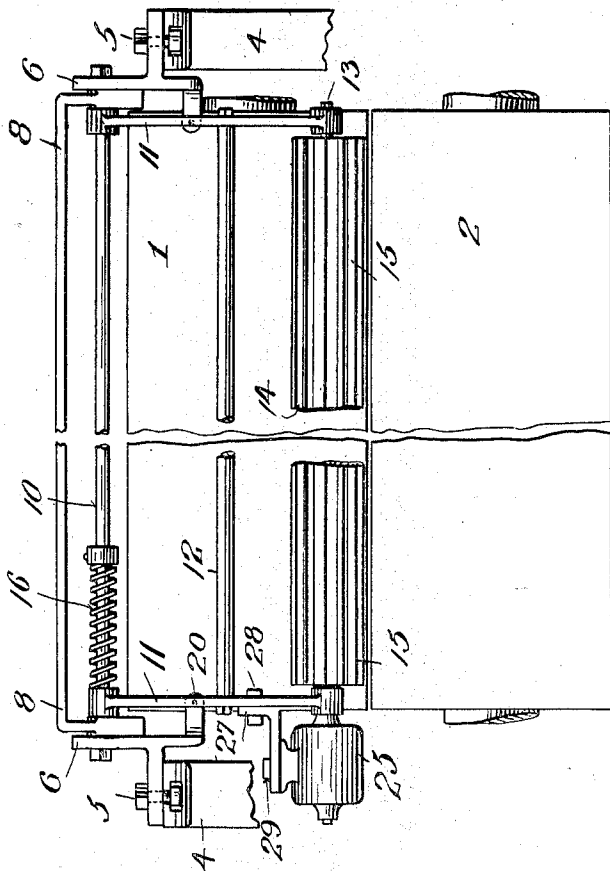
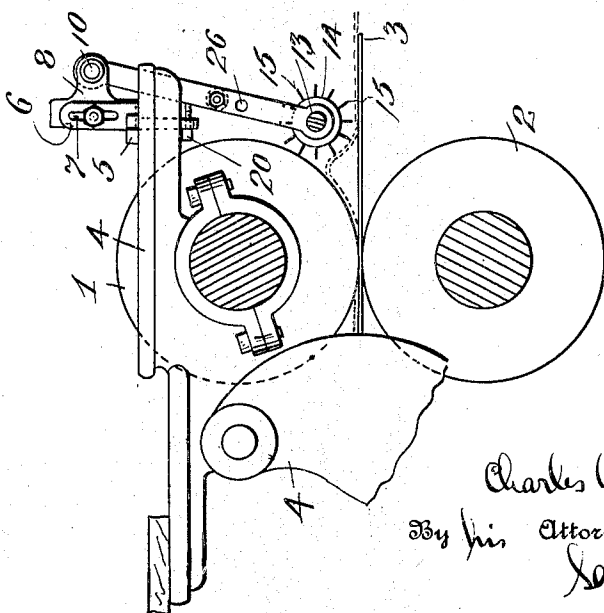


Fig. 2.



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APPARATUS FOR USE IN PAPER-MAKING MACHINES.

1,237,374.

Specification of Letters Patent. Patented Aug. 21, 1917.

Application filed February 16, 1916. Serial No. 78,603.

To all whom it may concern:

Be it known that I, CHARLES G. OBERLEY, a citizen of the United States, residing at Munising, county of Alger, State of Michigan, have made a certain new and useful Invention in Apparatus for Use in Paper-Making Machines, of which the following is a specification.

This invention relates to apparatus for use in paper making machines.

The object of the invention is to provide apparatus which is simple and efficient to prevent paper from adhering to the press or smoothing rolls of paper making machines.

Further objects of the invention will appear more fully hereinafter.

The invention consists substantially in the construction, combination, location and relative arrangement of parts, all as will be more fully hereinafter set forth, as shown by the accompanying drawing, and finally pointed out in the appended claims.

Referring to the drawing:—

Figure 1 is a view in front elevation of a pair of press or smoothing rolls of a paper making machine and showing my invention as applied thereto.

Fig. 2 is a view in side elevation of the same.

The same part is designated by the same reference numeral wherever it occurs in both views.

In the usual type of paper making machines, the paper passes on a wire web or felt between press or smoothing rolls in the course of its manufacture. The paper is damp, and in consequence there is a tendency of the same to stick or adhere to the roll, usually the upper one. The disadvantages of this are obvious. There is great waste and the paper is apt to become torn. To overcome these disadvantages and to provide means which are simple, but efficient, to prevent the paper from adhering to the roll which comes in contact therewith, my present invention is directed.

In the drawing I show the usual press or smoothing rolls in which 1 designates the upper roll which rotates counter-clockwise, and 2 the lower roll which rotates clockwise, and 3, the web or felt which passes between the rolls 1 and 2, all in the usual well known manner. Mounted on the frame 4, of the rolls 1 and 2, and suitably secured thereto,

for example, by bolts 5, are brackets 6, on each end of the upper roll 1, to which are adjustably secured by means of a slot 7, therein a U-shaped arm 8, extending across the width of the rolls, and provided with lugs 9, at their ends in which is journaled a shaft 10, as shown.

Loosely mounted on the shaft 10 at its ends are arms 11 which may be rigidly secured to each other by means of the tie rod 12, if desired, and which at their ends form bearings for a shaft 13, of a rotary cylinder 14, which cylinder is provided with vanes 15, of any suitable strong flexible material, such as rubber, sheet metal or the like. A spring 16 mounted on the shaft 10 operates to normally force the cylinder 14 toward the top roll 1 in the well known manner, the arms 11 being of such length that the cylinder 14, lies normally just above the path of travel of the felt or wire 3, as shown in Fig. 2.

The position of the arms 11 and the cylinder 14 is adjustably regulated with respect to the roll 1 by means of the set screw 20. In practice, the set screw 20 is set so that the ends of the vanes 15, upon rotation of the cylinder 14, are in slight contact with the roll 1, as shown. Thus it will be seen that as the rolls rotate, and the paper passes between them on the wire 3, if the cylinder 14 is rotated at a high speed counter clockwise, the vanes 15 thereof scrape the roller 1 thereby preventing the damp paper from adhering thereto. The action of the air due to the vanes operating substantially as a fan also greatly aids the device in effectively preventing the paper from adhering to the roll.

The cylinder containing the vanes 15, may be rotated in any desirable manner. I show one simple arrangement wherein I provide an electric motor 25, to rotate the shaft 13, which motor may be secured to the arm 11, at 26, by any suitable means, for example, by the bracket and bolts 27, 28, 29. It is obvious, however, that the shaft 13, may be rotated in many other ways and consequently I do not desire to be limited or restricted in this respect. I also do not desire to be limited or restricted to the specific arrangement shown, as many changes in detail will readily occur to those skilled in the art without departing from the broad scope of my invention as defined in the

claims. Therefore, what I claim as new and useful, and of my own invention, and desire to secure by Letters Patent, is,

1. The combination with a press or smoothing roll frame, press or smoothing rolls journaled therein, and a rotatable device provided with longitudinally extending vanes mounted on said frame for supplying a blast of air to and simultaneously scraping one of said rolls.

2. The combination with a press or smoothing roll frame press or smoothing rolls journaled therein, and a rotatable device provided with longitudinally extending vanes mounted on said frame and adjustable relative to said rolls for supplying a blast of air to and simultaneously scraping one of said rolls.

3. The combination with press or smoothing rolls, of a pivotally mounted frame, a rotary device carried by said frame adjacent one of said rolls to prevent the paper passing between said rolls from adhering thereto, and an electric motor also carried by said frame for rotating said rotary device.

4. The combination with press or smoothing rolls, of a pivotally mounted frame, a rotary device carried by said frame and positioned adjacent to and in slight contact with one of said rolls to scrape the same, and an electric motor also carried by said frame for rotating said rotary device.

5. The combination with a press or smoothing roll frame, press or smoothing rolls journaled therein, a bracket also secured to said frame, said bracket forming journals for horizontally extending shaft, arms depend-

ing from said shaft to form journals for a rotary cylinder, vanes on said cylinder, means for normally pressing said cylinder toward said rolls, means for adjustably controlling the normal position of said cylinder with respect to said rolls, and means for rotating said cylinder.

6. The combination with a press or smoothing roll frame, press or smoothing rolls journaled therein, a bracket also secured to said frame, said bracket forming journals for a horizontally extending shaft, arms depending from said shaft to form journals for a rotary cylinder, vanes on said cylinder, means for normally pressing said cylinder toward said rolls, means for adjustably controlling the normal position of said cylinder with respect to said rolls, and means mounted on one of said arms for rotating said cylinder.

7. The combination with a press or smoothing roll frame, press or smoothing rolls journaled therein, a rotary cylinder also journaled in said frame adjacent one of said rolls said cylinders provided with radially extending vanes of the longitudinal length of said cylinder, and means for rotating said cylinder.

In testimony whereof I have hereunto set my hand in the presence of the subscribing witnesses, on this 29th day of January, A. D. 1916.

CHARLES GEORGE OBERLEY.

Witnesses:

FRED. P. WHITELEY,
E. F. BARTELS,
E. P. STRONG.