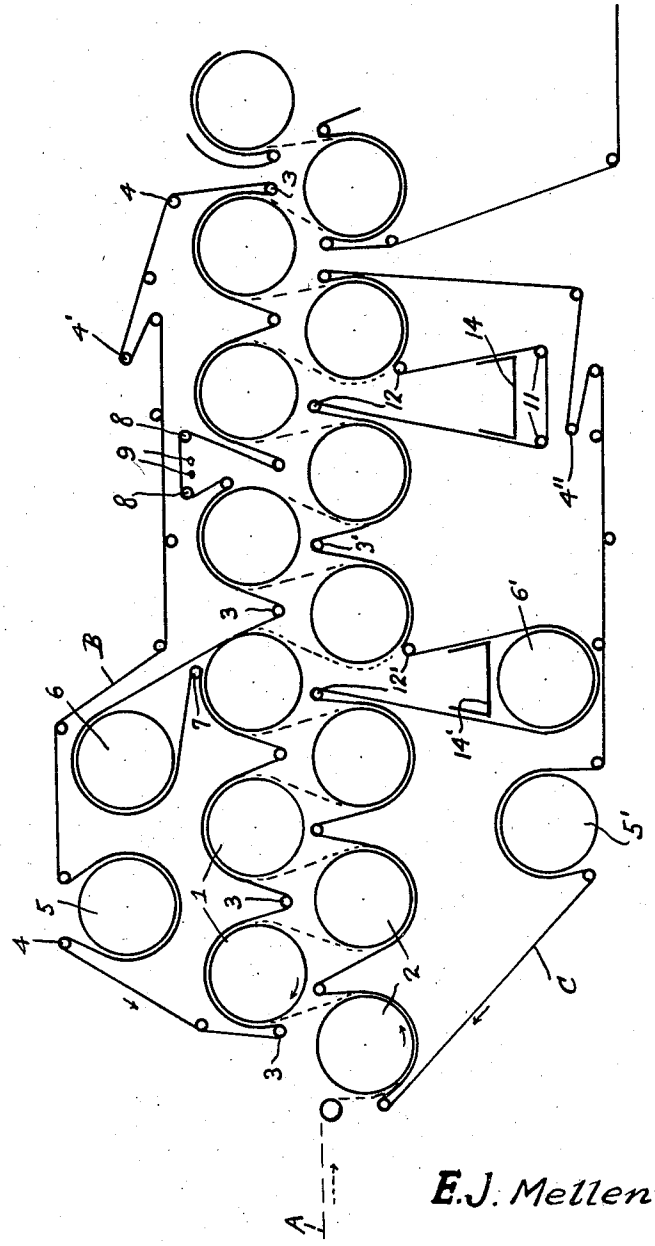
Nov. 17, 1936. E. J. MELLENTINE 2,060,945

PAPER MAKING MACHINE

Filed Dec. 11, 1935



Inventor

E. J. Mellentine

By Clarence A. O'Brien and Hyman Berman Attorneys

Patented Nov. 17, 1936 2,060,945

UNITED STATES PATENT OFFICE

2,060,945

PAPER MAKING MACHINE

Edward John Mellentine, Kapuskasing, Ontario, Canada

Application December 11, 1935, Serial No. 53,969

3 Claims. (Cl. 34—48)

This invention relates to improvements in paper making machine, the general object of the invention being to provide means for drying the paper side of the dryer felt so as to insure a more even drying of the paper.

Another object of the invention is to provide means for removing wads and the like, caused by the paper webs breaking, said wads causing damage to the dryer felts and other parts of the machine.

This invention also consists in certain other features of construction and in the combination and arrangement of several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claims.

The drawing shows a diagrammatic view of a drying part of a paper making machine constructed in accordance with this invention.

In this drawing, the upper row of drying dryers is shown at 1 and the lower row at 2, the two rows being staggered relative to each other and the paper web A passes first partly around the first dryer of the lower row and then upwardly partly around the first dryer of the upper row, then partly around a dryer of the lower row and so on throughout the unit, as shown in dotted lines. The dryer felt on the upper row is shown at B and a roller 3 is placed adjacent each side of each dryer for causing the felt to contact the paper web as it passes over a dryer. After passing around the rearmost roller 3 the felt is caused to pass to the front of the unit by means of the rollers 4, one or more of which is offset upwardly as shown at 4' to stretch the felt. The upper reach of the felt is caused to pass partly around a dryer 5 for drying the felt. A dryer 6 is located adjacent the dryer 5 and after the felt passes over a part of the third dryer 1 it passes around a roller 7 and then around the dryer 6 and then passes downwardly around the roller 3 which is located between the third and fourth dryers 1. This roller 3 and the dryer 6 are so arranged that the felt contacts another portion of the third dryer as shown. After passing over the roller 3 in rear of the fourth dryer the felt passes over the two spaced rollers 8 and then downwardly over the roller 3 located between the fourth and fifth dryers and in the space formed by the felt passing over the rollers 8 are located steam or hot air coils 9 which act to further dry the felt.

The felt for the lower row of dryers is shown at C and the dryer for the lower reach of this felt is shown at 5'. The dryer for this felt is shown at 6' and as it will be seen the felt after it passes partly around the first three dryers of the lower row passes around this dryer 6' and then upwardly partly around the fourth dryer.

The stretcher roller for the lower felt is shown at 4'' and this lower felt is caused to pass downwardly partly around the spacing rollers 11 which are spaced farther apart than are the rollers 12 which are located above the rollers 11. These rollers 12 form a pair of the rollers 3' which cause the lower felt to partly pass around the lower row of dryers. These rollers 12 and the rollers 12' which cause the lower felt to pass around the conditioner dryer 6' are arranged as shown in the drawing. A trough 14 is located above the rollers 11 so as to receive pieces or wads of paper breaking off from the web of paper so that said pieces or wads will not be carried along though the remainder of the dryers with the felt and pieces can be readily removed from the trough. If desired a second trough 14' may be placed above the dryer 6' and as many of the troughs can be used as desired and as many of the heating coils 9 can be used as desired.

The drawing shows a unit including six upper dryers and six lower dryers, the right end of the drawing showing two dryers and felts of a second unit. Of course, as many units can be used as desired or necessary.

Thus I have provided means for drying the paper side of the upper and lower dryer felts and means whereby pieces of paper or the like breaking off the web will be removed and therefore not caused to travel on through the rest of the dryers with the web and felt, it being well known that such pieces of paper cause damage to the felt and certain parts of the machine.

If desired or necessary heating coils can be placed below the trough 14 to condition the felt and it is to be understood that the various loops can be located wherever desired.

What is claimed is:—

1. In a paper making machine including upper and lower rows of heating dryers, dryer felts passing over the dryers, guiding rollers for said felts, a pair of rollers forming a loop in the lower felt between a pair of the dryers and a trough located in the space formed by the loop for receiving particles of paper breaking off the web of paper.

2. In a paper making machine including upper and lower rows of drying dryers, dryer felts passing over the dryers, guiding rollers for said felts, a pair of rollers forming a loop in the

lower felt between a pair of the dryers and a trough located in the space formed by the loop for receiving particles of paper breaking off the web of paper, a conditioner dryer around which felt passes from a point intermediate the row of dryers.

3. In a paper making machine including upper and lower rows of drying dryers, dryer felts passing over the dryers, guiding rollers for said felts, a pair of rollers forming a loop in the lower felt between a pair of the dryers and a trough located in the space formed by the loop for receiving particles of paper breaking off the web of paper, a conditioner dryer around which felt passes from a point intermediate the row of dryers, and a trough located in the space formed by the loop of the felt passing around said conditioner dryer.

EDWARD JOHN MELLENTINE.