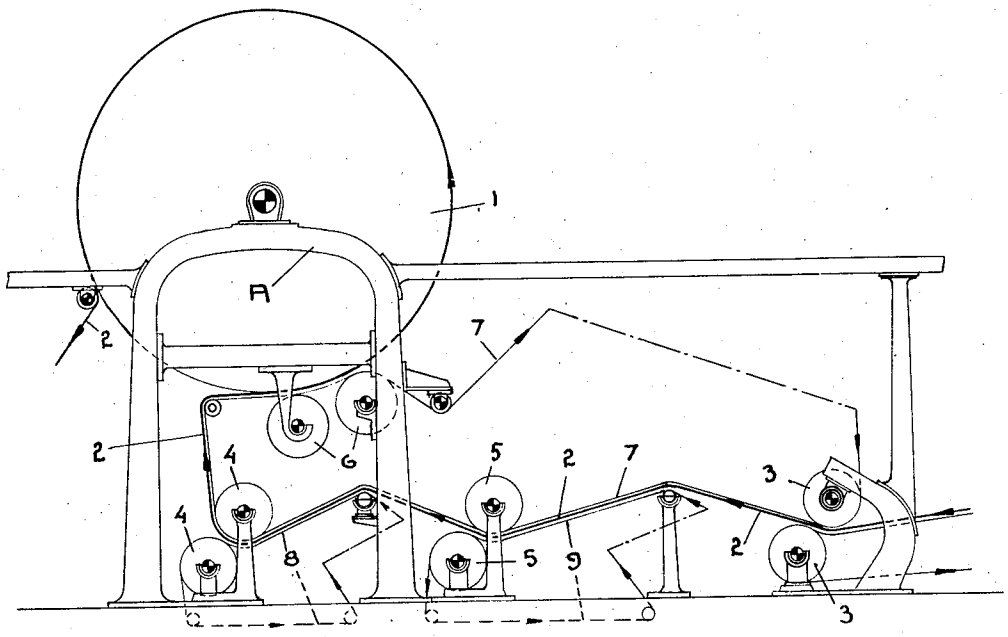
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PAPER MAKING MACHINERY

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PAPER-MAKING MACHINERY.

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The present invention relates to paper making machinery of the so called Yankee-type, e. g., a machine provided with only one drying cylinder and with a press section disposed between the drying cylinder and the couching press which press section is fitted with upper and under drying felts.

In paper making machineries of the kind referred to used up to the present the press section situated between the couching press and the drying cylinder consists of a single pair of pressing rolls. Consequently, the paper web can only be given a comparatively small degree of dryness by pressing before reaching the drying cylinder, partly owing to the fact that the pressure intensity between the pressing rolls must be kept within certain limits in order to prevent damaging the paper web either by crushing or through impressions left on the surface by the felts.

In order to reduce the drying work of the drying cylinder and thus obtaining greater driving speed of the machinery, the greatest possible pressure intensity between the rolls is generally adapted, but this pressure is so high that the felts and especially the lower one is very quickly worn out. The duration of the felts is usually so short that if one wishes to entirely utilize same one can not perform the necessary change of felts at occasions when the machinery for other reasons is out of work (f. i., on Sundays), but the machinery has often to be stopped just for the sake of refitting felts which obviously causes an economical loss.

The present invention has for its object an improvement of paper making machineries of the kind referred to which partly gives the machinery a greater capacity, because the paper web reaches the drying cylinder in a considerably drier condition, and partly causes an obvious saving of the felts owning to the fact that these are not subjected to such a high pressure as has been the case hitherto.

To obtain this result there are, according to the invention, provided at least two consecutive pairs of pressing rolls situated between the couching press and the drying cylinder and all having a common upper felt while each pair of pressing rolls has its separate under felt arranged in a known manner.

In the accompanying drawing there is shown by way of an example an embodiment of a paper making machinery fitted in accordance with the invention. In the drawing 1 denotes the drying cylinder rotatorily mounted on the frame A of the machinery, 2 the paper web and 3 the couching press of the machinery. According to the invention there are between the couching press 3 and the drying cylinder 1 provided two pairs of pressing rolls 4 and 5 respectively having the upper felt 7 in common which is by means of two rolls 6 pressed against the drying cylinder 1, while each pair of pressing rolls has its separate under felts 8 and 9 respectively. It is suitable that the under felt 9 of the press 5—which is situated near the couching press 3 and through which the paper web first passes—is made of loose stuff produced by hard-twisted yarn so that the felt offers an easy transmission for the water. To the under felt 8 for the press 4 there is used a more tight-woven felt material with an entirely smooth surface, so that impressions on the comparatively moist paper web left by the press 5 will entirely disappear when the paper web passes through the press 4.

The presses 4 and 5 are in a known manner provided with means for regulating the pressure so that, if an under felt at any occasion should be heavily worn the pressure on the same may be reduced at the same time as the pressure upon the other felt is increased. In this way it is possible to adjust the duration of the felts in such a manner that the change of the felts can be performed at such times when the machinery for other reason is out of use, f. i., on Sundays.

The invention is not limited to the embodiment described and shown, but may be varied in details without departing from the spirit of it. F. i., more than two presses may in certain cases be provided between the couching press and the drying cylinder. Further, the upper felt 7 can also be arranged in such a manner that it does not pass over the upper roll of the couching press.

What we claim is:

1. An improved paper making machinery comprising a single drying cylinder, a couching press, a plurality of presses provided between said couching press and said drying cylinder, the last mentioned presses having a common upper felt and separate under felts.

2. An improved paper making machinery comprising a single drying cylinder, a couching press, a plurality of intermediate presses between said couching press and said drying cylinder, a common upper drying felt and separate under felts for said intermediate presses, the felt for the intermediate press adjacent to the couching press being of comparatively loose stuff produced by hard-twisted yarn, and the felt for the intermediate press adjacent to the drying cylinder made by a more tight-woven felt material with a smooth surface.

In witness whereof we have hereunto set our hand.

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