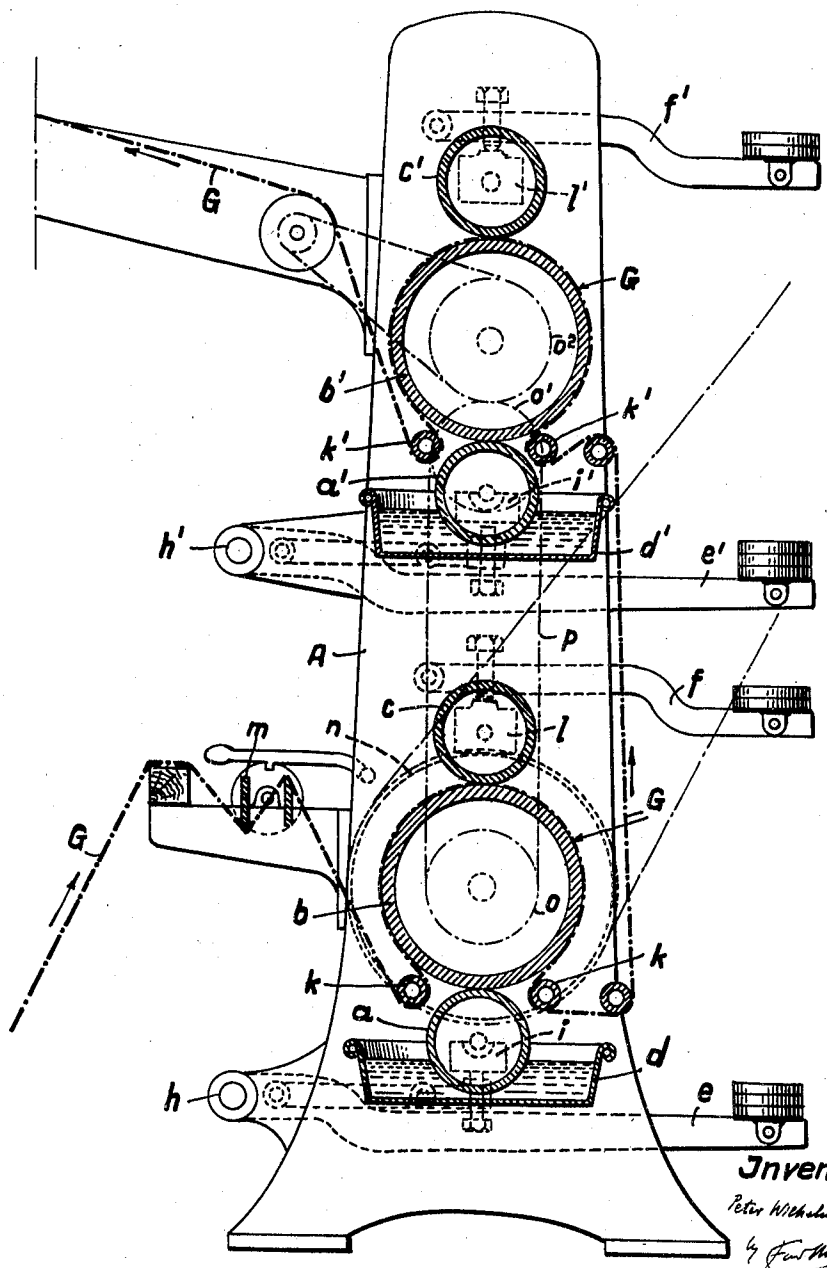
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MACHINE FOR MOISTENING AND COOLING FABRICS

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by [illegible]

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MACHINE FOR MOISTENING AND COOLING FABRICS.

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With the finishing of fabrics the serious inconvenience is encountered that the fabric after the drying in hot air or on heated drums or after the hot pressing has a hard, rough and dry unfinished touch as the fabric contains too little moistness and possesses unnatural heat.

By the machine for moistening and cooling fabrics according to the invention, owing to the combination of two sets each of three superposed cylinders, the fabric can be moistened on one side or on both sides directly or indirectly or directly and indirectly in one operation the two sides of the fabric being moistened to the same degree or to different degrees. The guide rollers for the fabric are arranged in proximity to the point at which the lower cylinder touches the intermediate cylinder so that this intermediate cylinder can grip the largest possible portion of the dry and hot fabric.

The machine according to the invention is shown in vertical section, partly in elevation in the only figure of the accompanying drawing.

In the frame A of the machine two sets, each of three rotatable cylinders, are arranged the one above the other. The intermediate cylinders b, b^1 of the two sets are mounted in stationary bearings, the lower cylinders a, a^1 being journalled in bearings i, i^1 which, by means of counter-weighted levers e, e^1 can be pressed more or less strongly against the cylinders b, b^1. The cylinders a and a^1 b and b^1 are preferably covered with cloth. The cylinders a, a^1 dip into water contained in vessels d, d^1 and transfer moistness to the cylinders b, b^1. The pressure-cylinders c, c^1 mounted above the intermediate cylinders b, b^1 can be pressed more or less strongly against the cylinders b, b^1 by the action of adjustable counterweight levers f, f^1, acting upon the bearings l, l^1 of said cylinders c, c^1. In proximity to the points of contact between the lower cylinders a and a^1 and the intermediate cylinders b, b^1 guide rollers k, k^1 are arranged at the right and left over which the fabric G is guided. On the axle of the cylinder b a belt-pulley n and a sprocket wheel o transmit rotating movement by a chain p to a sprocket-wheel o^1 with which gears a toothed wheel o^2 mounted on the axle of the intermediate cylinder b^1 so that this cylinder b^1 is rotated in the opposite direction as cylinder b.

The operation is as follows:—

The fabric is conducted differently in the machine according to the desired degree of moistness and duration of the cooling. The drawing shows the case when the fabric has to be moistened on both sides and indirectly and cooled as much as possible. The fabric G, passing over the guide-bars m and over the first guide-roller k, is conducted first (indicated in dash-lines) over the cylinder b and then over the opposite guide-roller k so that one side of the fabric is moistened and cooled, whereupon the fabric is conducted over cylinder b^1 to the second guide-roller k^1 to pass over the opposite guide roller k^1 after this side of the fabric has been moistened, to be further conveyed in the direction of the arrow.

During the travel of the fabric the pressure cylinders c, c^1 have pressed the desired degree of moistness into the fabric. When only one side of the fabric has to be moistened, the fabric has to be conducted only over the lower dipping cylinder a, whereby the corresponding side of the fabric is moistened directly.

When the fabric has to be moistened directly on both sides, it is conducted over the lower dipping cylinder a and thence over the upper dipping cylinder a^1.

When the one side of the fabric has to be moistened directly and the other side of the same has to be moistened indirectly, the fabric has to be conducted over the lower dipping-cylinder a and then over the upper intermediate cylinder b.

I claim:—

1. A machine for moistening and cooling fabrics, comprising in combination two sets each of three cylinders, the one set of cylinders being arranged above the other set, and means for guiding the fabric so that it is moistened in one operation as desired on one side or on two sides directly or indirectly or directly and indirectly the degree of moist-

ness being similar or different for the two sides of the fabric.

2. A machine for moistening and cooling fabrics as specified in claim 1, in which the means for leading the fabric to the cylinders is placed so close to the point of contact between the lower cylinder and the intermediate cylinder that the fabric is guided over the largest possible circumference of said intermediate cylinder the dry and hot fabric being thereby moistened and cooled to the maximum degree on both sides.

In testimony whereof I affix my signature.

PETER WILHELM CÜSTERS.