June 3, 1930. E. B. AYRES 1,762,043

MACHINE FOR CHILLING AND FLAKING SOAP

Filed Aug. 25, 1926 2 Sheets-Sheet 1

Fig. 1.

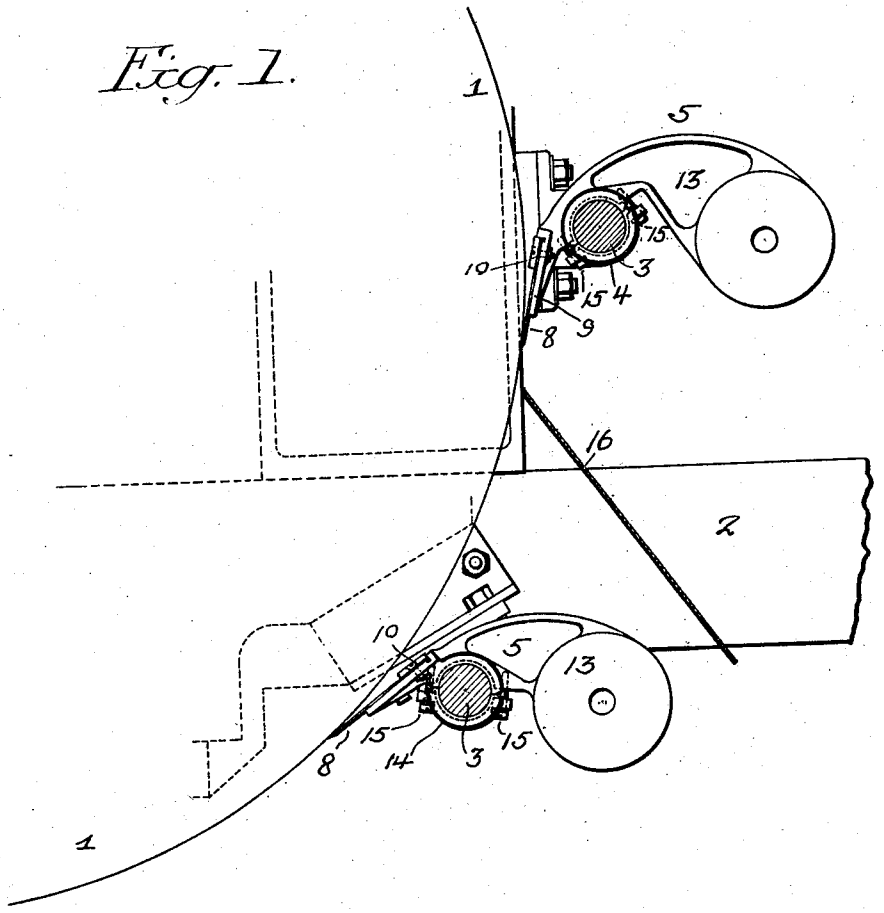
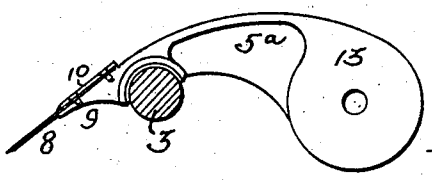


Fig. 4.



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Filed Aug. 25, 1926 2 Sheets-Sheet 2

Fig. 2.

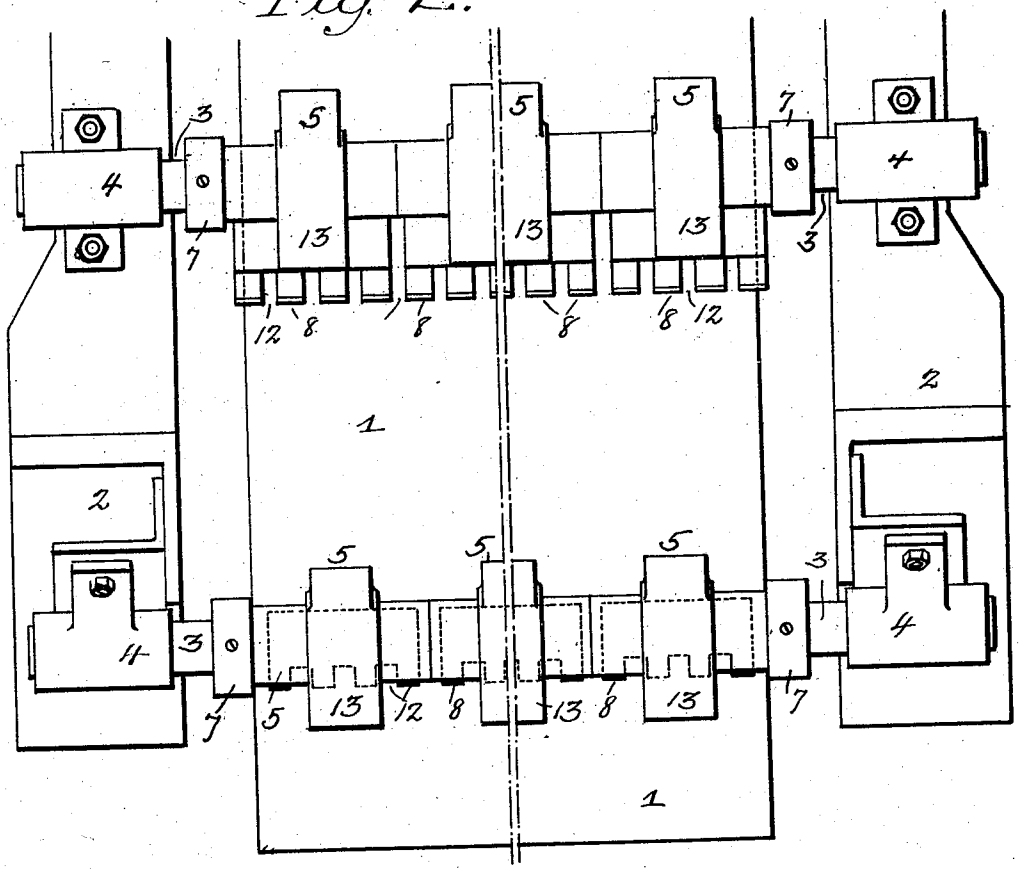
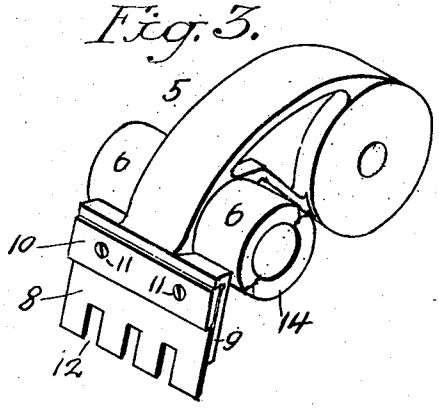


Fig. 3.



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UNITED STATES PATENT OFFICE

ELWOOD B. AYRES, OF MELROSE PARK, PENNSYLVANIA, ASSIGNOR TO PROCTOR & SCHWARTZ, INCORPORATED, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

MACHINE FOR CHILLING AND FLAKING SOAP

Application filed August 25, 1926. Serial No. 131,433.

My invention relates to certain improvements in machines for chilling and flaking soap and like material.

The object of my invention is to improve the construction of the knives which remove the chilled soap from the cylinder.

A further object of the invention is to arrange the knives in groups so as to allow each group to accommodate itself to the surface of the roll.

In the accompanying drawings:

Figure 1 is a diagrammatic sectional view illustrating my improved arrangement of knives for the soap chilling and flaking machine.

Fig. 2 is a face view.

Fig. 3 is a detached perspective view of one of the knife carrying arms with a blade attached.

Fig. 4 is a detached view illustrating a modification of the invention.

1 is a cylinder mounted in suitable bearings 2 in the present instance. This cylinder can be of any width desired. The soap is fed to this cylinder and is chilled thereon so as to produce a thin film which is removed by suitable blades.

Heretofore it was the usual practice to make the blade in one piece, extending from one end of the roll to the other. The result was that the bearing pressure was not uniform on the roll; consequently, the blade cleaned the roll better on one portion than it did on the other.

My invention relates to certain improvements to overcome this difficulty.

3 is a bar mounted in suitable bearings 4 on the frame 2. This bar is cylindrical in cross section, and on the bar are a series of blade carriers or knife backs. Each blade carrier has an extended hub, and the hubs of the one carrier join those of another as clearly shown in Fig. 2, so there is a series of carriers extending the full width of the machine.

In order to hold the carriers in position, collars 7 are secured to the bar 3 as shown clearly in Fig. 2, so that while the carriers are free to turn on the bars, they cannot move longitudinally thereon.

On each carrier is a blade 8, secured to the flat portion 9 of the carrier by a clamp plate 10 and screws 11. The blade has a series of notches 12 which form, in the present instance, a series of scraping edges which bear upon the cylinder 1. The number of these edges may be increased or diminished as desired, and in some instances the blade may be used without the notches 12.

On each carrier 5 is a weighted arm 13 which extends beyond the rod 3 on the opposite side from the blades so that the tendency of the weight is to hold the blade yieldingly against the surface of the cylinder 1.

In the present instance, the hubs 6 of the carrier are made in two parts, the part 14 being in the form of a cap which is held in place by screws 15, so that when it is desired to remove one of the carriers its cap can be detached and the carrier bodily removed from the rod.

In some instances the carrier may be made as in Fig. 4, the bearing being in the form of a segment, and the weight of the carrier being relied upon to hold it in position.

In Figs. 1 and 2, I have shown two sets of blade carriers, the upper set scrape the soap from the cylinder, the soap flakes thus removed passing down the inclined plate 16, while the flakes removed by the lower blades drop directly from the cylinder.

There may be one or more blades depending upon the type of machine used, and where two or more series of blades are used, the blades may be staggered as shown in Fig. 2.

My improved blade arrangement removes the soap equally well from all parts of the roll or the cylinder, and does not require extensive adjustment.

If any one of the blades becomes damaged and does not act properly, it is easy to remove the carrier with the blade and place another in position when necessary.

I claim:

1. The combination in a soap chilling and flaking apparatus; of a cylinder on which the film of the soap is formed, a bar extending across the cylinder, and a series of independent blades resting on the top of the bar and arranged to bear against the cylinder and remove the soap therefrom.

2. The combination of a cylinder; a bar extending across the cylinder; a series of carriers resting on the bar, each carrier having a weight and blade, the weight tending to hold the blade against the cylinder, and each carrier having a removable cap extending under the bar.

3. The combination in a soap chilling and flaking machine; of a cylinder; two bars extending across the face of the cylinder, one bar being mounted above the other bar; a series of independent carriers detachably mounted on each bar, each carrier having a weight extending on one side of the bar and having a notched blade on the opposite side bearing against the cylinder, the blades of one series of carriers being out of register with those on the other carriers.

ELWOOD B. AYRES.