

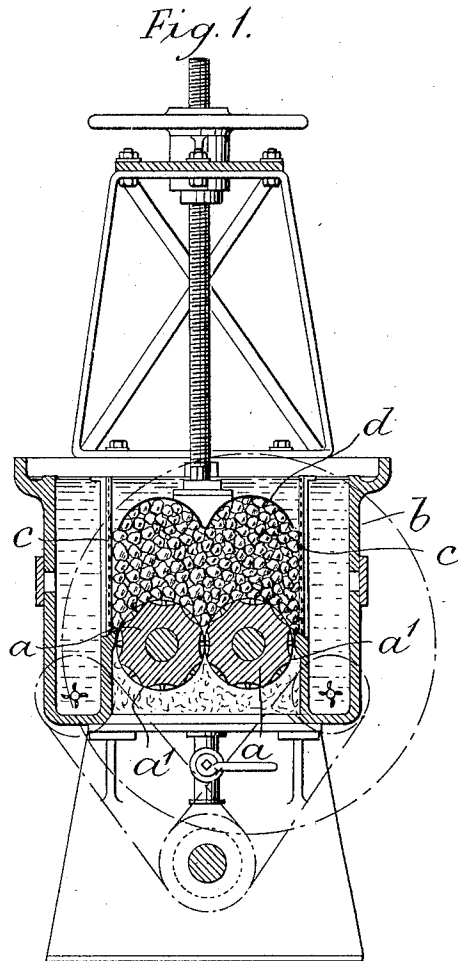
M. M. DESSAU.  
APPARATUS FOR REMOVING FOREIGN MATTER FROM INDIA RUBBER, GUTTA PERCHA, BALATA,  
AND THE LIKE.

997,047.

APPLICATION FILED NOV. 22, 1910.

Patented July 4, 1911.

4 SHEETS—SHEET 1.



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4 SHEETS—SHEET 2.



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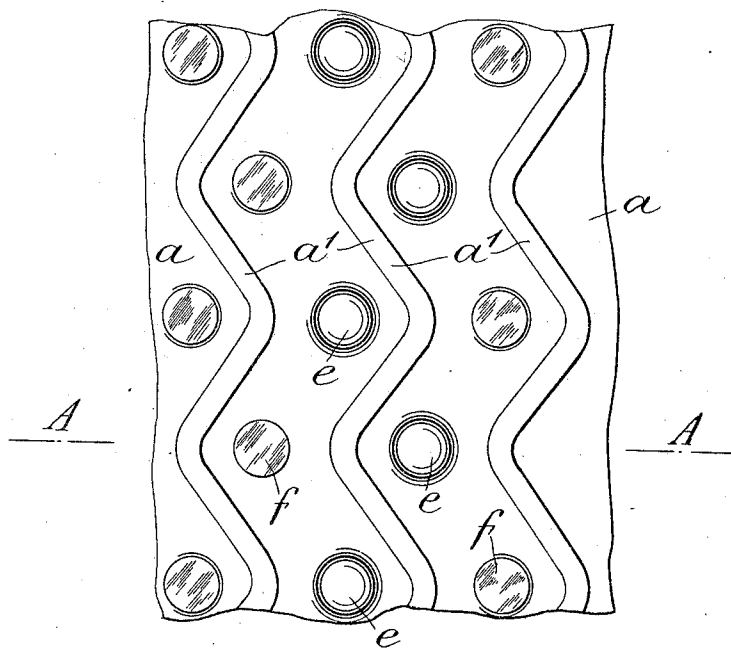
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4 SHEETS—SHEET 3.

Fig. 3.



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 by *[Signature]*  
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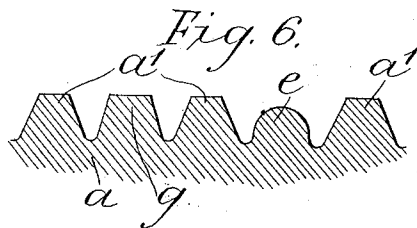
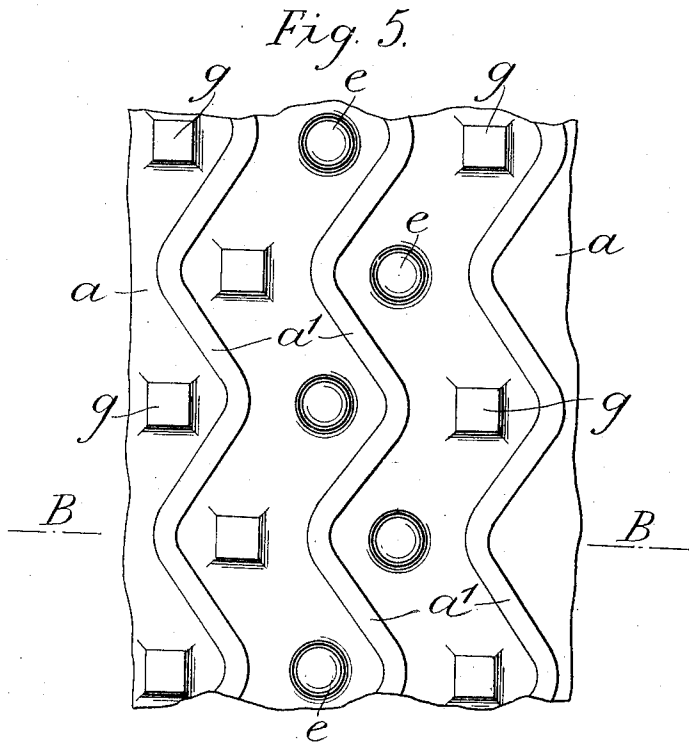
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# UNITED STATES PATENT OFFICE.

MORLAND MICHOLL DESSAU, OF LONDON, ENGLAND.

APPARATUS FOR REMOVING FOREIGN MATTER FROM INDIA-RUBBER, GUTTA-PERCHA, BALATA, AND THE LIKE.

997,047.

Specification of Letters Patent.

Patented July 4, 1911.

Application filed November 22, 1910. Serial No. 593,672.

*To all whom it may concern:*

Be it known that I, MORLAND MICHOLL DESSAU, a citizen of the United States of America, residing at London, England, have invented Improvements in Apparatus for Removing Foreign Matter from India-Rubber, Gutta-Percha, Balata, and the Like, of which the following is a specification.

This invention relates to washing and like machines for treating crude india rubber, gutta percha, balata and similar material (hereinafter included in the term rubber) for the removal of foreign matter therefrom and it has for its object to provide rolls with surfaces capable not only of compressing and more or less dividing the crude rubber into strips extending in the longitudinal direction of the rolls but also of compressing the strips at various points along their length so as to admit of the rubber being effectually washed and cleaned in a shorter time than heretofore, thereby considerably increasing the efficiency or output of the apparatus. For this purpose the rolls are provided with surfaces of an improved character combining the features of longitudinally arranged sinuous crests and studs or projections arranged in the intervening spaces between the several crests. In this way there is secured the advantage accruing from the use of rolls having sinuous crests alone combined with that accruing from rolls having studs alone whereby an enhanced effect is obtained. Thus the rubber when it is passed between a pair of rolls such as described, is practically severed longitudinally into strips by the crests upon the rolls while the studs in the intervening spaces serve to effect displacement of the material such that it becomes compressed circumferentially between the respective studs of one roll and the crests thereon and simultaneously stretched along the crest line in the said vicinity while the material between the several studs is compressed. An efficient opening action therefore results which, being repeated frequently, so exposes the material that it can experience the cleansing action of a liquid, to wash out impurities, in a quicker and more effective manner than heretofore usual.

The studs according to the invention may extend to the same peripheral surface as the crests of the roll or they may not extend so far. Or some may be of one length and

others of another length arranged alternately or in any other required order. Similarly, they may be of the same outline in plan and of the same or different section transversely of the roll; or they may be of different outline in plan as well as of different section transversely of the roll.

Rolls constructed as described can be used in rubber washing machines of various kinds.

In the accompanying drawings, Figures 1 and 2 are sectional elevations at right angles one to the other of a rubber washing machine embodying the invention. Fig. 3 is an enlarged detail of the surface of part of the improved roll in one of its forms and Fig. 4 is a section taken on the line A—A of Fig. 3. Figs. 5 and 6 are views similar to Figs. 3 and 4 of a modified roll surface, the section in Fig. 6 being taken on the line B B of Fig 5.

*a* are the rolls for deforming the material to be treated, *b* being the liquid-containing trough with screens *c*, and *d* a rockable platen or plunger adapted to oscillate under the action of the material passing between the rolls *a* and cause the liquid to surge in the trough so that the impurities are not allowed to settle. The rolls *a* of Figs. 1 and 2 are, as shown more particularly in Figs. 3 and 4, each formed with sinuous crests *a'* between each pair of which are alternately arranged studs *e*, *f*, that are circular in plan, the studs *e* being of hemispherical form each followed circumferentially and in the path of the crests of the roll by one of the studs *f* which are of a truncated conical shape, the studs *e* and *f* being all of the same radial length. The rolls *a* are geared together so that the hemispherical studs *e* on one roll register either with hemispherical studs *e* on the other roll, or with the truncated conical studs *f* of the said other roll, the crests *a'* on one roll coming opposite those on the other roll.

In some cases the rolls may be so geared that the crests on one work between the crests on the other and over the studs or projections between such crests.

In Figs. 5 and 6, studs *g*, of truncated square pyramidal form, are arranged alternately with hemispherical studs *e*, the studs *g* being of greater radial length than the studs *e* and equal in radial length it may be, and as shown, to the crests *a'*.

What I claim is:—

1. In a rubber washing machine, rolls  
each having a series of longitudinally ar-  
ranged sinuous crests forming intervening  
5 spaces and studs of dissimilar shape in plan  
and of different radial lengths arranged in  
such intervening spaces.

2. In a rubber washing machine, rolls  
each having a series of longitudinally ar-  
10 ranged sinuous crests forming intervening  
spaces and studs dissimilar in shape in plan,  
of dissimilar shape in section taken trans-  
versely of the roll and of dissimilar radial  
length, arranged in such intervening spaces.

3. In a rubber washing machine, a pair 15  
of rolls each having a series of longitudi-  
nally arranged sinuous crests forming in-  
tervening spaces, and studs of two different  
types arranged alternately in such spaces,  
the rolls being geared together so that corre- 20  
sponding types of studs of both rolls register.

Signed at London England this 17th day  
of October 1910.

MORLAND MICHOLL DESSAU.

Witnesses:

HUGH HUGHES,  
CHARLES COPS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."