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PRESS ROLL.

APPLICATION FILED JUNE 3, 1910.

1,006,990.

Patented Oct. 24, 1911.

Fig. 1.

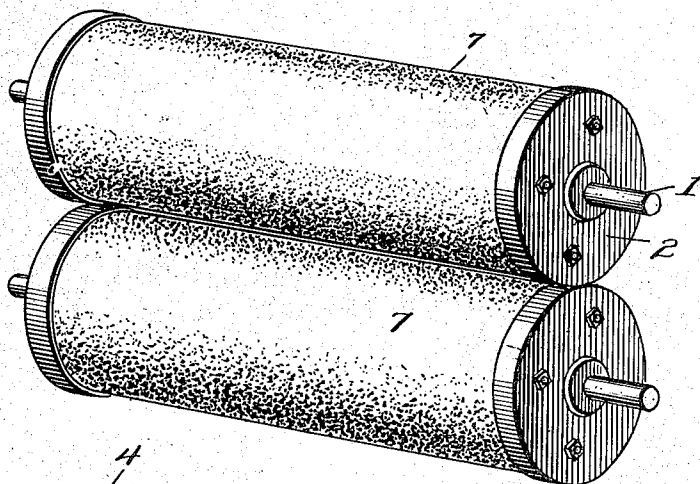


Fig. 2.

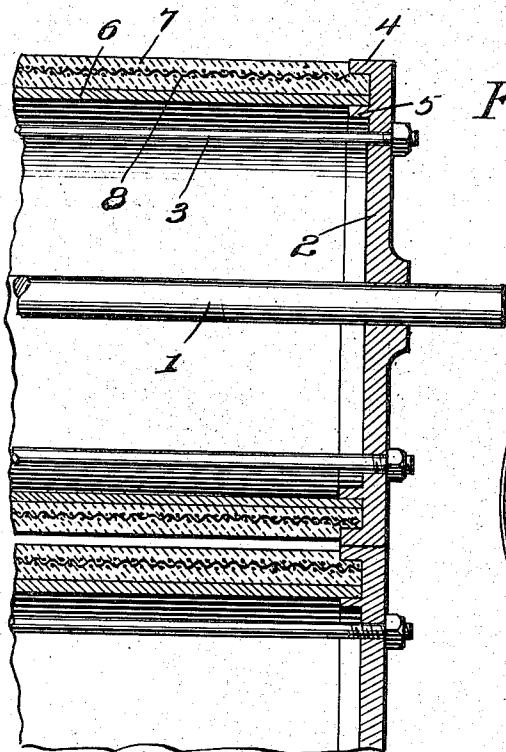
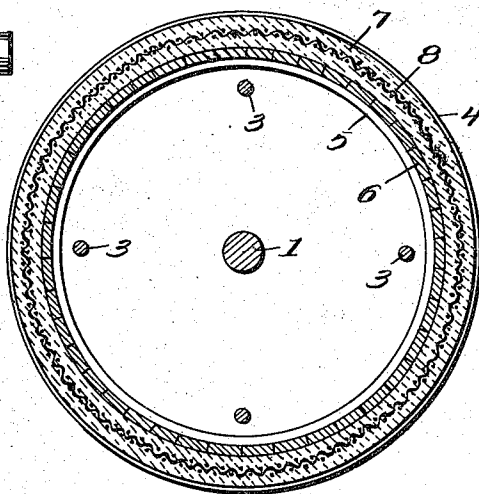


Fig. 3.



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UNITED STATES PATENT OFFICE.

SAMUEL E. WARREN, OF EUREKA, CALIFORNIA; ANNA S. WARREN EXECUTRIX OF SAID SAMUEL E. WARREN, DECEASED.

PRESS-ROLL.

1,006,990.

Specification of Letters Patent.

Patented Oct. 24, 1911.

Application filed June 3, 1910. Serial No. 564,850.

To all whom it may concern:

Be it known that I, SAMUEL E. WARREN, a citizen of the United States, residing at Eureka, in the county of Humboldt and State of California, have invented new and useful Improvements in Press-Rolls, of which the following is a specification.

This invention relates to press rolls, for use on expressing presses employed in separating the juice from fruit and the like, the object of the invention being to provide an improved form of press and roller which will not shrink and swell under the influence of the constant wetting and drying and which will not oxidize or corrode and which will not color or injuriously affect the juice.

A further object of the invention is to provide a roll which will make proper allowance for the usual belt or carrier so as not to subject said belt or carrier to pressure except when operating upon the fruit or other material.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of a pair of rolls embodying the present invention. Fig. 2 is an enlarged diametrical section through one end of the same, illustrating the construction thereof. Fig. 3 is a cross section through one of the rolls.

In the preferred embodiment of the invention, each of the rolls comprises a shaft 1, oppositely arranged heads 2 mounted on the shaft and secured together by rods 3, any desired number of which may be employed.

The heads are provided at their outer peripheries with inwardly extending outer rims or flanges 4 and they are further provided with inner flanges 5 which form the support for a form 6 ordinarily composed of wood or strips of wood resting on their ends on the flanges 5 of the heads as indicated in Figs. 2 and 3. The working face of each roll is composed of a body of concrete 7 in which is a reinforce 8 shown by preference in the form of meshed wire fabric. The concrete body is molded around the form 6 and a portion of said body is confined within the marginal rims or flanges

of the heads 2 as clearly shown in Fig. 2 wherein it will also be observed that the rim or flange 4 is of greater diameter than the concrete body of the roll, the object being to provide each of the rolls shown in Figs. 1 and 2 with marginal rims or flanges which will bear against each other and prevent the concrete bodies or working faces of the rolls from touching each other and causing unnecessary pressure on the traveling carrier or belt (not shown), which travels between the rolls in expressing presses of the class referred to. The construction also provides the necessary space between the working faces of the rolls to admit of the free passage between the same of the carrier or belt and no pressure is applied to such carrier or belt except when the latter contains fruit or other material from which the juice is to be expressed by the action of the press rolls.

The advantage of using a concrete working face for the press rolls resides in the fact that said working face will not shrink and swell by the constant wetting and drying thereof as in the case of wooden rolls; also the concrete working faces will not oxidize rust or corrode like iron or other metal rolls; further, the concrete working surface will not color or discolor or injuriously affect the juice.

It will be understood that the distance between the end flanges 4 is equal to or slightly greater than the extreme width of the belt or apron or carrier so that said belt or apron will not be caught between the bearing portions of the rolls formed by said flanges 4.

I claim:—

1. A roll for expressing presses comprising oppositely arranged heads each of said heads provided with inwardly extending inner and outer peripheral flanges, a wooden form arranged upon the inner flange of the heads, rods connecting said heads, and concrete cylindrical body formed upon the wooden form and of less diameter than the said heads, the said body having a reinforce formed therein.

2. A roll for expressing presses consisting of a support, oppositely arranged heads upon the support, said heads provided at their peripheries with inner and outer flanges, a wooden form arranged upon the inner flanges of the heads, a concrete cylin-

drical body formed upon the wooden form and of less diameter than the heads, and a reinforce embedded within the concrete body, and rods connecting the heads together and to the body of the roll.

3. A roll for expressing presses consisting of a shaft, circular heads arranged upon the shaft and provided at their peripheries with inwardly extending inner and outer flanges, a wooden form arranged upon inner flanges, a concrete cylindrical body formed upon the wooden form and provided

with a meshed wire fabric, said body being of less diameter than the heads, and rods extending through the wooden form and connecting the heads together and to the body of the roll. 15

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL E. WARREN.

Witnesses:

CHARLOTTE P. MOORE,
THOMAS H. SELVAGE.