

N. W. L. BROWN.
OIL CAKE ENVELOP OR PRESS CLOTH.
APPLICATION FILED AUG. 5, 1908.

948,409.

Patented Feb. 8, 1910.

Fig. 1

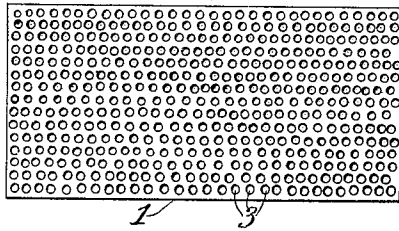


Fig. 2

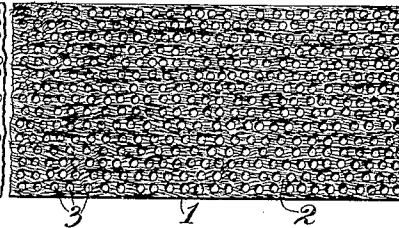


Fig. 3

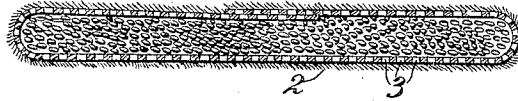


Fig. 4

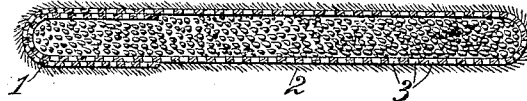


Fig. 5

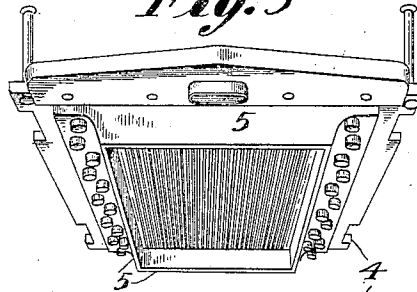
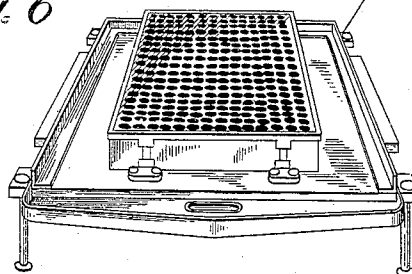


Fig. 6



Witnesses:
C. E. Bridge
E. Rebel.

Inventor:
Nimrod W. L. Brown
By A. O. Rebel
Attorney

UNITED STATES PATENT OFFICE.

NIMROD W. L. BROWN, OF THOMASVILLE, ALABAMA.

OIL-CAKE ENVELOP OR PRESS-CLOTH.

948,409.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed August 5, 1908. Serial No. 447,170.

To all whom it may concern:

Be it known that I, NIMROD W. L. BROWN, a citizen of the United States, and resident of Thomasville, in the county of Clarke and State of Alabama, have invented new and useful Improvements in Oil-Cake Envelops or Press-Cloths, of which the following is a specification.

In cotton seed industry the cotton seed "meats" are subjected to heavy pressure to express the oil, and it is customary to envelop the mass of seeds which is put into the press in what is known as a press cloth. Such press cloths are subjected to such heavy pressure in the oil press that a textile of great strength is necessary to stand the service.

Various cloths have been adopted from time to time, but the cloth most in favor is made of camel's hair which gives when woven a strong cloth and one which drains readily. The camel's hair cloth however is so expensive that it forms a very considerable item in the operation of oil milling plants, and it is with the object of supplying a press cloth or mat envelop which has the required strength and draining qualities and which can be supplied at much less cost than the cloths now commonly used, that I have devised the present novel cloth.

It is essential that a press cloth for oil presses be strong, as above stated; that it permit the expressed oil from the mass of seeds to escape freely from the envelop; and that a good drainage of the oil thus expressed be given. I have found that by taking a hide, preferably cowhide with the hair thereon, cutting it into proper dimensions for press cloths, and perforating it with a large number of minute perforations, a very strong and good draining press cloth is provided. And in the drawings which accompany this specification and form a part thereof, I have illustrated a press cloth made in accordance with my invention in order that the invention may be clear to those skilled in the art.

In these drawings: Figure 1 is a view of a press cloth made in accordance with my invention, this view being on the flesh side of the hide. Fig. 2 is a similar view of the reverse or hair side of the cloth. Fig. 3 is a view of a press cloth folded around a cake of meats for the press. Fig. 4 is a view show-

ing the press cloth folded so as to bring the folded end on the underside of the cake. Fig. 5 is a perspective view of a press-box. Fig. 6 is a detail sectional view of a portion of a press cloth and the press-box, to which reference will be made hereinafter.

Referring to the drawings by numerals like numbers indicating like parts in the several views, 1 denotes a press cloth made of a piece of hide, the hide, as shown, having the hair 2 left on. The cloth 1 is perforated with a large number of minute perforations 3, which penetrate or pass through the hide, as clearly shown in Fig. 1, but which on the hairy side will be covered or matted over by the hair 2, as will be seen from Figs. 2, 3 and 4. It is essential, of course, that the press cloth give a free flow of oil therethrough and as the hide is naturally too impervious to permit the expressed oil to escape freely I resort to the perforating of the hide to secure the porosity of the cloth.

The press cloth with its inclosed cake is placed in the press-box 4, and it will be observed from Fig. 6 that since it is impossible to provide a press-box having a draining plate with the same number of perforations as are necessary in the press cloth, and as it is also impossible to expect the minute perforations 3 in the press cloth 1 to register with the perforations 6 in the bottom of the press-box 4, the number of active perforations 3 in the press cloth would ordinarily be limited to those which register with the perforations 6 in the bottom of the press-box 4, for under the extremely heavy pressure to which the press cloth and cake are subjected, the perforations 3 which do not register with the perforations 6 would be entirely closed. This difficulty, however, is overcome in the present instance by reason of the fact that the hair 2 which lies interposed between the press cloth 1 and the face of the press-box 4 forms a drainage area between the envelop and the press-box which will permit and stimulate draining of the oil from the mat through all of the perforations 3, and no danger of shutting off any of these perforations exists no matter to what pressure the cake of meats may be subjected.

The press-boxes 4 are preferably provided with side walls 5 on all four sides, as

shown, although, of course, any type of press box may be used, and I do not limit my invention to any particular form of folding the press cloth, although the method of folding shown in Fig. 4 is preferable, as I find it can be more readily removed after pressure.

It will be seen therefore that by utilizing hide in the manner described I am able to produce a press cloth which may be very cheaply made and which has all the advantages of the expensive press cloths of camel's hair, and like fabrics with the superiority of strength, for I have found in practice that the hide becomes filled with the oil, is soft and pliable and easily handled and its durability materially increased.

I do not, of course, limit myself to the particular method shown of making the hide porous, as it is possible to secure this in other ways than by filling it with minute perforations shown, as, for example, by slitting, or in fact providing any form of apertures which will permit the flow of oil without allowing the escape of the meats.

Having fully described my invention I claim:

1. As a new article of manufacture a press cloth for oil presses formed of hairy hide with apertures therethrough. 30

2. As a new article of manufacture, a press cloth for oil presses formed of a substantially impervious sheet of flexible material, said sheet having apertures therethrough, and a fibrous drainage coat integral with said sheet overlying such apertures. 35

3. As a new article of manufacture, a press cloth for oil presses formed of hide having a plurality of minute perforations therethrough with the naturally matted hair of the hide overlying such perforations. 40

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

NIMROD W. L. BROWN.

Witnesses:

R. G. HARKNESS,
J. H. ROAN,