

(No Model.)

A. E. OSBORN.

OIL PRESS MAT.

No. 301,747.

Patented July 8, 1884.

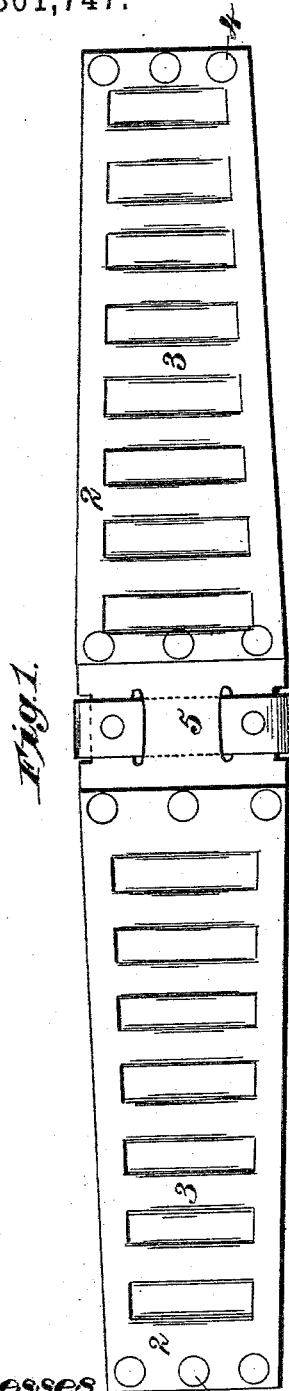


Fig. 1.

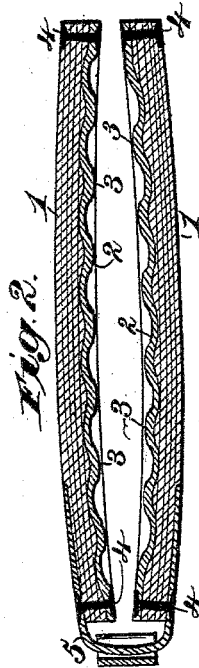


Fig. 2.

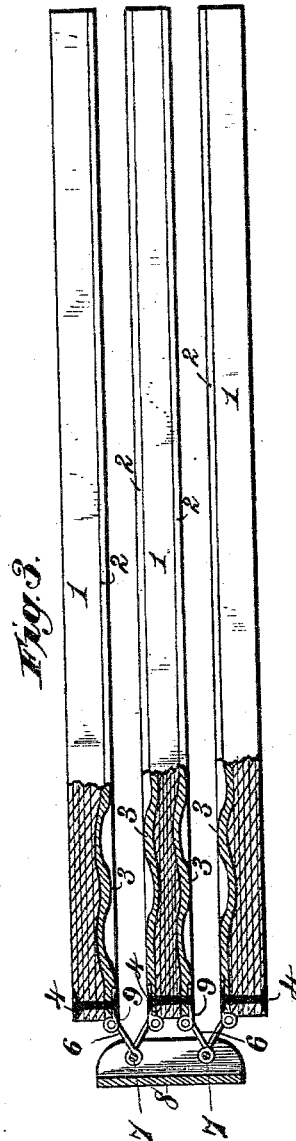


Fig. 3.

Witnesses.

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# UNITED STATES PATENT OFFICE.

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## OIL-PRESS MAT.

SPECIFICATION forming part of Letters Patent No. 301,747, dated July 8, 1884.

Application filed June 10, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ADELBERT E. OSBORN, a citizen of the United States, residing at Waco, in the county of McLennan and State of Texas, have invented new and useful Improvements in Oil-Press Mats, of which the following is a specification.

This invention has for its objects to provide an improved oil-press mat which can be pressed and shaped into a compact body of the required configuration, and such shape be retained when subjected to pressure to compress heated envelopes containing the meal from which the oil is to be extracted, and to provide a mat the face of which is elastic and tough, and not liable to become heated, like metal face-plates, while the main body of the mat is prevented from being softened and peeling or becoming detached from the facing when in use pressing the meal.

The objects of my invention are accomplished by constructing the mat of sheets or strips of tar or mill board, card-board, or other paper material faced with a sheet of vulcanized fiber, and the whole pressed into a compact body through the medium of suitable dies or molds for imparting thereto the requisite shape or configuration, the vulcanized fiber producing an elastic and tough face, which will not become heated, like metal, and prevents the tar or mill board or similar paper from peeling or becoming detached when in use pressing the heated meal, while the cost of a mat produced in this way is much less expensive than a mat composed entirely of vulcanized fiber, and, besides, will not stretch out or change its original shape or configuration by heat and pressure, as will one made wholly of the said fiber, as heretofore.

The invention is illustrated in the accompanying drawings, in which Figure 1 is a plan view of a two-leaf mat embodying my invention, the leaves being spread out flatwise; Fig. 2, a longitudinal sectional view of the same; and Fig. 3, an edge elevation of a three-leaf mat embodying my invention, and showing a novel hinge-connection for the leaves.

The leaves of the mat are each composed of a series of sheets or strips of tar or mill board, card-board, or other paper material suitably

disposed against each other to build up what will be the back number, 1, of the mat, and upon one side is placed a sheet, 2, of vulcanized fiber, this material being composed usually of paper, paper-pulp, or other vegetable fibrous substance prepared by saturation and coating with chemicals, so that it possesses great toughness and tenacity, combined with elasticity. These are then placed in a press-box, and a suitable die brought to bear upon the same, the die being of such form as to impart the required shape or configuration to the mat, and then heavy pressure is applied, so that the die, which may have a pressure of, say, six hundred tons, will press the materials into a compact body, the tar-board sheets and the vulcanized-fiber sheet closely adhering. In this pressing operation the vulcanized-fiber face may be provided with transverse ribs 3, or otherwise formed on its outer surface, to crimp the envelope of the meal or seed from which the oil is to be extracted. The vulcanized-fiber face will not become heated, like a metal face-plate, and it possesses the requisite elasticity, combined with great toughness and tenacity, and, besides, this fibrous facing absolutely prevents the possibility of the heat of the hot sacks or envelopes containing the heated meal or seed from acting on the tar-board or paper material and causing it to peel or separate from the facing.

A composite mat, as described, is less costly than a mat composed entirely of vulcanized fiber, which is an expensive material, and, besides, will not stretch or change its shape from heat and pressure, as will one composed wholly of the fiber. After a composite mat of the materials set forth has been pressed into the required shape or configuration, it will remain in that condition, whereas a mat made entirely of vulcanized fiber will constantly change its shape, and by the heat and pressure it flattens out to such extent as to enlarge and become too large for its oil-press box, and hence it is inconvenient to place in and remove from the box, whereas my mat is not only cheaper, but is more conveniently handled, in that it never sticks in the box, for the reason that heat and pressure will not enlarge, flatten out, or change its shape after it has been brought

to the required form by the die. A composite mat made as described is also lighter than one made wholly of vulcanized fiber or of paper and a metal face, which is a desideratum. The ends of the tar-board sheets or strips and the vulcanized-fiber facing, after being shaped and pressed by the die, as stated, are united securely by rivets 4. The tar-board or paper back renders the mat very durable, in that it prevents the solid-fiber facing-sheet from stretching.

A mat thus made is light, elastic, tough, and unchangeable in shape after being formed by the die. It possesses the desirable qualities of the vulcanized fiber without the great expense thereof incident to constructing it entirely of such fiber, and it is superior to a paper leaf faced with a metal plate, in that the metal rapidly transmits heat to the paper and causes the latter to peel, separate, or be detached from the metal face-plate.

The mat may comprise any desired number of leaves, and where two are used they are connected by a simple leather-strap hinge-connection, 5, which also constitutes a handle by which to handle the mat; but where three leaves are used, as in Fig. 3, it is desirable to have a hinge that will permit the leaves to approach each other in parallel lines. This is effected in a very desirable manner by du-

plex hinges, each composed of four plates, the plates 6 being jointed together at one edge, as at 7, and connected at this point to a leather loop, 8, and at the other edges jointed separately to plates 9, which are secured, respectively, to the three leaves.

Having fully described my invention, what I claim is—

1. An oil-press mat the leaves of which are each composed of a back of paper material and a facing of vulcanized fiber pressed together and united in a compact body, substantially as described.

2. An oil-press mat consisting of a back of sheets or strips of tar-board and a facing of vulcanized fiber pressed and united together, substantially as described.

3. The combination of the three leaves, each composed of a back of paper material and a facing of vulcanized fiber pressed and united together, and the duplex hinges, each composed of the four jointed plates, substantially as shown and described.

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

ADELBERT E. OSBORN.

Witnesses:

J. C. JENKINS,

E. A. MCKENNEY.