J. T. HARBINE.

Mat for Oil-Presses.

No. 206,563. Patented July 30, 1878.

Fig. 1.

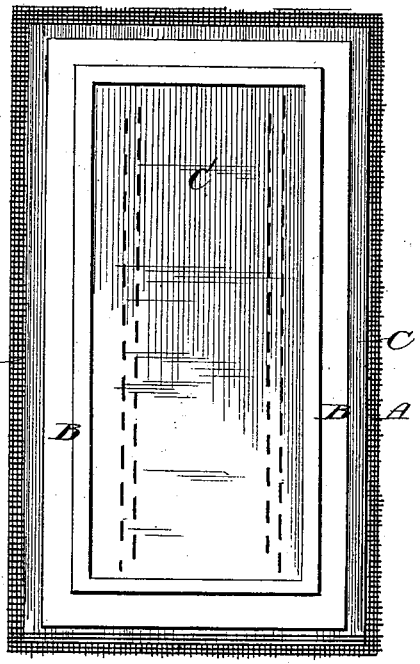
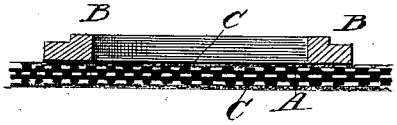


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN T. HARBINE, OF XENIA, OHIO.

IMPROVEMENT IN MATS FOR OIL-PRESSES.

Specification forming part of Letters Patent No. **206,563**, dated July 30, 1878; application filed June 5, 1878.

To all whom it may concern:

Be it known that I, JOHN THOMAS HARBINE, of Xenia, in the county of Greene and State of Ohio, have invented certain new and useful Improvements in Mats for Oil-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view, and Fig. 2 is a vertical section, of my improved mat for oil-presses.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to certain improvements in mats for oil-presses, and is more especially applicable to the press recently invented by me, and which forms the subject of a separate application for Letters Patent.

It consists in constructing the mats of two or more thicknesses of wire-cloth, with an upper and lower layer of fibrous material, to which is applied a rim or flange, substantially as hereinafter more fully set forth.

In oil-presses of the ordinary construction, mats of hair or fiber have been used, which are open to many objections, especially on account of the amount of space which they, with the plates or boxes, occupy.

The principal object of my invention is to overcome these objections.

In the drawings, A is the body of the mat, which is constructed of wire interwoven into two or more thicknesses, which texture thus manufactured is provided with an upper and lower layer of fibrous material, C C, to aid in properly expressing the oil from the oil-holding substance. At or near the outer edge thereof, upon its upper side, I arrange a rim, B, which, as before stated, may be constructed of any material that is deemed suitable for the purpose.

The shape of the rim in cross-section may be varied in any manner that may be desired, and it may be composed of one or more layers of material of the same or different kinds without changing the nature of my invention.

In oil-presses of the usual construction, mats of hair or fiber have, as above stated, been used as an envelope for the charges of oil-containing substance, while rigid imperforate plates or boxes of metal have been used as partitions to separate the charges.

The function of the mats has been to absorb the oil extracted from the charge, after which the oil, by increased pressure, has been forced out at the sides, the mats thus serving, to a certain extent, as filters, by separating the oil from the meal or residue. The objection has been that the mats soon become compressed to such an extent that their porosity is destroyed, and the escape of the oil thus seriously obstructed.

To overcome this difficulty, and at the same time do away with the rigid metallic partition-plates, is the purpose of my aforesaid construction.

The advantages of these mats will be readily understood.

The wire or perforated metallic mats can be subjected to any amount of pressure exerted in an oil-press without losing their porosity, thus affording at all times a ready escape for the oil, and enabling the charges or "cake" to be much more thoroughly drained than is possible in the presses and with the mats now usually employed.

When I use fibrous material as a covering for or interwoven with the metallic or wire mats, it is for the purpose of preventing the meal from getting into and choking the perforations or meshes, the metallic body being at all times sufficiently rigid for all practical purposes.

I will here state that I do not confine myself to the mats of the construction herein shown and described, as the details may be varied to suit various circumstances.

The mats may be constructed either of wire or perforated sheet metal, or a combination of either with the other or with fibrous material, or of perforated sheet metal, wire, and fibrous material combined, without changing the nature of my invention.

The rim will prevent the charge of material from spreading while under pressure, and will in like manner prevent the oil from splashing out.

Having thus described my invention, I claim

and desire to secure by Letters Patent of the United States—

A mat for oil-presses consisting of two or more or several thicknesses or layers of wire-cloth, having an upper and lower layer of fibrous material and a rim or flange, B, all arranged and combined substantially as shown and described, for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two winesses.

JOHN THOMAS HARBINE.

Witnesses:
JOHN LITTLE,
C. C. SHEARER.