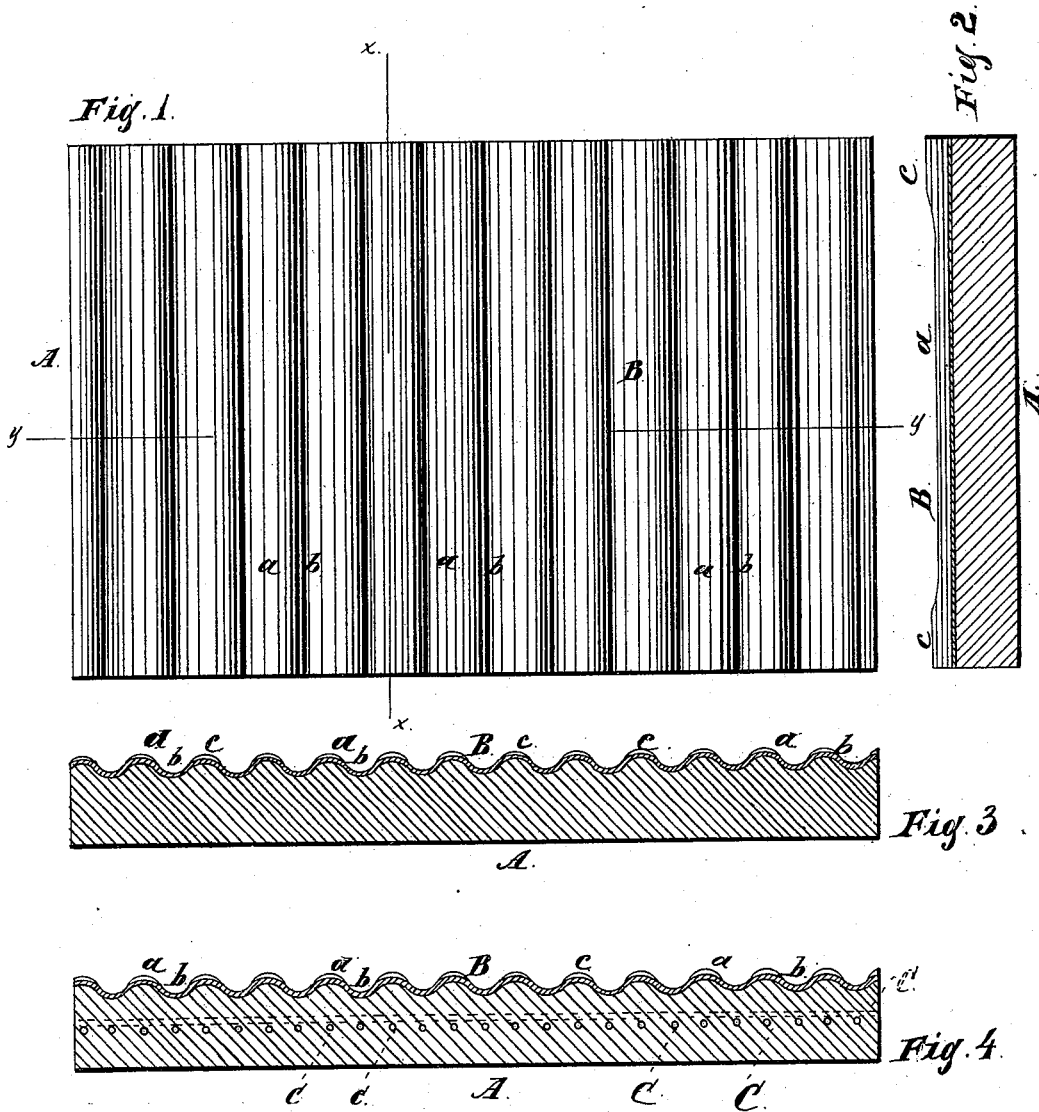


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 Mat for Oil-Presses.

No. 204,742.

Patented June 11, 1878.



Witnesses:

Inventors:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN MATS FOR OIL-PRESSES.

Specification forming part of Letters Patent No. **204,742**, dated June 11, 1878; application filed May 10, 1878.

*To all whom it may concern:*

Be it known that we, ANDREW C. LAUSTEN and ALFRED B. LAWTHOR, of the city of Chicago, Cook county, State of Illinois, have invented a new and useful Improvement in Mats for Oil-Presses, of which the following is a full description, reference being had to the accompanying drawing, in which—

Figure 1 is a top or plan view; Fig. 2, a cross-section on line *x x* of Fig. 1; Fig. 3, a longitudinal section on line *y y* of Fig. 1; Fig. 4, a modification, in section, showing the strengthening-wires.

This invention relates to an improvement in mats or squeezers for oil-presses.

Heretofore the practice has been to inclose the heated oil-seed in bags or wrappers of cloth, which bags or wrappers have been, in turn, inclosed within mats or squeezers, the whole being then subjected to the action of the press. The mats or squeezers heretofore used have been made of various materials, but mostly of hair, spun or woven into a heavy ribbed fabric, so that the oil-cake formed between such mats has two impressions on its surface, the first from the comparatively fine threads composing the bag or wrapper, and the second from the coarser ribbed surface of the spun mat or squeezer, which peculiarity of surface has come to have a commercial value, buyers of oil-cake viewing with disfavor any oil-cakes having a different surface appearance. The first cost of hair mats is very high, and their perishability under the severe usage to which they are subjected makes their use very expensive. For this reason various attempts have been made to substitute therefor mats made of metal, but without success, because of the loss in the cakes made therein of the peculiar surface appearance of cakes made with hair mats, and from the fact that, metal being a good conductor of heat, the heated oil-seeds were rapidly cooled below the proper temperature by contact with the metal.

The object of this invention is to furnish a mat or squeezer which will give to the oil-cakes formed therein essentially the same surface appearance as that produced by the use of hair mats, and which will be much cheaper and more durable than hair mats, which we

accomplish by constructing our improved mats from materials which are substantially non-conductors of heat, and possess the quality of being compacted into a permanent shape and of retaining such shape when subjected to heavy pressure.

In the drawings, A represents the body of the mat or squeezer; B, the cloth facing, which comes in contact with the cake; C, the metal rods, used when greater strength is required; *a*, the ribs; *b*, the depressions, and *c* the raised edges on the face or surface of the mat which comes in contact with the cake.

The body A of the mat is preferably made of paper in sheets or paper-pulp, either alone or combined with cloth, or cloth alone, as may be required, and the surface of the mat which comes in contact with the oil-cake is to be given a contour of any desired form; but the one preferred is a contour similar to that of a hair mat.

To form the body A, we provide a mold or die having the desired form and contour, and capable of receiving the material from which the body is to be made. In this die we place either a succession of sheets of suitable strong paper or cloth, or both combined, or paper-pulp, moistened with water or any suitable cement until the required thickness to form the mat is obtained, after which we subject the material to a heavy pressure until it has taken a permanent shape, and will retain such shape after it is removed from the die and when subjected to a heavy pressure.

When paper or paper-pulp is used for the body of the mat, cloth may be added to give the fine woven appearance to the oil-cake, thus dispensing with the bag or wrapper for this purpose, and after the mat is pressed into shape any suitable cloth, B, can be cemented to the surface to give the required impression to the cake.

In the form shown the body A is provided with ribs or projections *a* and depressions *b*, and the outer edges of the ribs or projections are raised slightly, as shown at *c*, for the purpose of holding the oil-cake from spreading.

For ordinary purpose a mat constructed as above described will be sufficient; but where great strength is required, strong cloth—preferably cotton-duck—can be used for forming

the body of the mat, the material being suitably cemented together, and compacted into shape in a die, as before described. When the mats are to be exposed to very severe pressure, we further strengthen them by inserting metal rods within the substance of the mat in such manner as to hold the mat from expanding. This form of mat is shown in Fig. 4, in which the body A is made from paper in sheets, or paper-pulp, or cloth, or other material, compacted into shape under heavy pressure, the metal rods C being inserted between the sheets of paper or cloth as they are placed in the die, or within the paper-pulp, so as to be fully covered thereby, and the whole subjected to the action of a heavy press, compacting it firmly and solidly together.

Other forms of surface contour can be used, as we do not confine ourselves to any particular form or thickness or contour, the invention being applicable to any form or contour. The die or mold could be arranged to give any required impression in the form of a trade-mark, or name, or other device, in which event the impression will appear on the mat, and obviously on each cake made therein.

In place of the material mentioned for forming the body of the mat, other materials—such as cotton fibers, felt, tarred rope made into a pulp, and other similar materials which are poor conductors of heat and possessing the quality of being compressed and formed into a compact and permanent shape, and capable of resisting expansion and of retaining their shape under heavy pressure—may be used.

What we claim as new, and desire to secure by Letters Patent, is—

1. An improved press-mat constructed of paper, paper-pulp, cloth, or other material, compacted together, substantially as described.

2. In an improved press-mat constructed of paper, paper-pulp, cloth, or other material, compacted together, the metal rods C, substantially as and for the purpose specified.

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