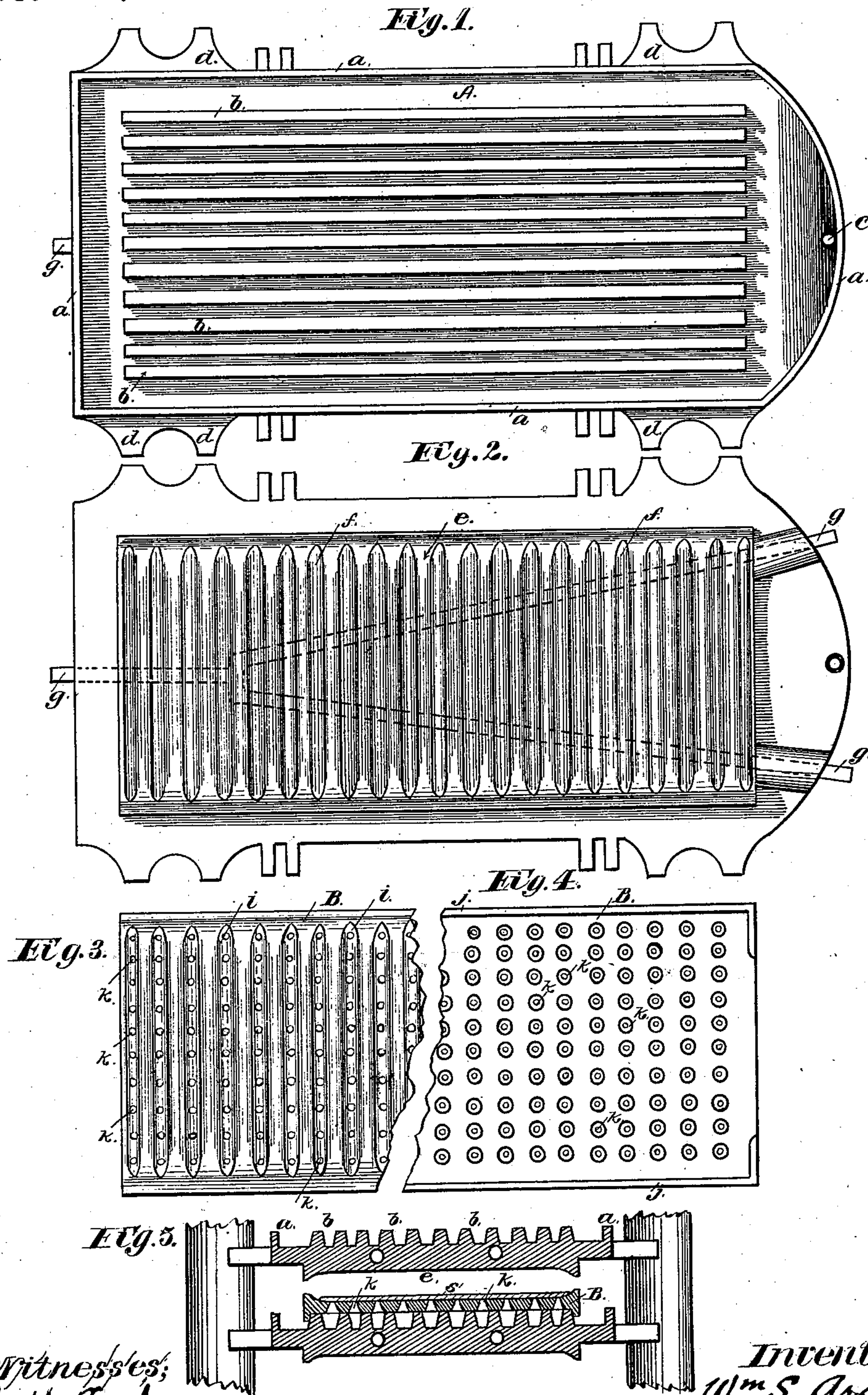


(No Model.)

W. S. ARCHER & H. L. POPE.
Oil-Press Mat.

No. 227,670.

Patented May 18, 1880.



Witnesses;
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UNITED STATES PATENT OFFICE.

WILLIAM S. ARCHER AND HENRY L. POPE, OF DAYTON, OHIO.

OIL-PRESS MAT.

SPECIFICATION forming part of Letters Patent No. 227,670, dated May 18, 1880.

Application filed March 20, 1880. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM S. ARCHER and HENRY L. POPE, of Dayton, in the county of Montgomery and State of Ohio, have invented a certain new and useful Improvement in Oil-Press Mats; and we do hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates to an improvement in presses for extracting oils from seeds; and the novelty of our improvement consists in the construction and combination of the devices employed, whereby the greatest amount of oil can be obtained from any given amount of meal or seed, and whereby the oil, having been once expressed from the meal, cannot be re-absorbed by capillary attraction when the pressure is removed from the press, all as will be herewith set forth and specifically claimed.

In the accompanying drawings, Figure 1 is a plan view of one of our improved division-plates. Fig. 2 is a reverse view of the same. Fig. 3 is a plan view of the perforated bed-plate. Fig. 4 is a reverse view of the same. Fig. 5 is a sectional view, in end elevation, through two pairs of these plates as they would appear in the press.

The division-plate A, Figs. 1 and 2, has an oblong shallow pan upon its upper surface, formed by the flanges *a*, surrounding its edges. This pan forms the first receptacle for the oil as it is pressed from the meal. Running longitudinally along the bottom are a set of parallel ribs, *b*, which do not extend quite to the sides or ends, as represented, and the front or bowed end of the pan has its bottom slanting to form a pocket, which directs the expressed oil to the outlet-aperture *c*. The tops of the ribs *b* and flanges *a* are on a level. The sides of the plate are provided with guide ears or extensions *d*, which, partially embracing the standards of the press, hold the plate in its proper relations.

Upon the under side of the plate, as seen in Fig. 2, is the pressure-cap *e*, made slightly concave, and having transverse corrugations *f*, as represented. This cap-piece rests upon the meal-sack of the subjacent division-plate.

To keep the meal warm, and thereby enabling all the oil to be expressed more readily,

we employ steam-pipes *g*, which, passing by proper connections from a boiler, extend through the plate A longitudinally, as represented by the dotted lines.

The bed-plate B, upon which the sack of meal rests, Figs. 3 and 4, is an oblong thin metal plate, slightly concave upon its upper surface, and having transverse corrugations *i*. This plate is flat upon its under surface, and has a flange, *j*, upon each side and at the corners, which fits over the outer ribs, *b*, and serves to hold the plate from displacement when resting on the ribs. In each of the transverse corrugations or gutters *i* is a row of perforations, *k*, which extend through the plate, and are gradually enlarged, so as to form countersunk apertures, as seen in Fig. 5.

The meal, after being inclosed in its sack, is placed upon the plates B in the press, and is pressed thereon by the caps *e* of the plates A, and the oil being expressed passes down through the apertures *k* between the ribs *b* and into the pocket, whence it is conducted, through pipes leading from the apertures *c* into the proper receptacle.

In order to more effectually prevent any re-absorption of the oil into the cake after it has been once pressed out, we employ a matting, *s*, Fig. 5, of any suitable textile material, which is placed upon the bed-plate, and may be confined by raised ribs or flanges at the edges of said plate to hold it from spreading. This matting receives and holds the last particles or drops of oil which are pressed out of the cake, and delivers this retained oil when the next succeeding sack of meal is introduced. This matting always remains upon the bed-plate, and is sufficiently open in its texture to permit the oil to pass freely through it.

The advantages of the above construction are, that by means of the beveled sides of the meal-confining plates, which makes them slightly concave, the meal is more readily contained between them without danger of being pressed out at the sides; secondly, by means of the countersunk apertures the oil, when once pressed out of the meal, cannot find its way back by capillary attraction into the cake when the pressure is removed; thirdly, by means of the steam introduced into the divis-

ion-plates the meal is kept warm, in which condition it more perfectly and readily yields its oil.

We do not wish to be limited to the precise construction herein shown; but

What we claim as new is—

1. In an oil-press, the combination, with the division-plates, of steam-pipes, whereby said plates are kept warm, as and for the purpose specified.

2. In an oil-press, the meal-confining plates having transverse corrugations, and having their sides beveled or formed with their faces which lie next to the meal concave, as and for the purpose specified.

3. In an oil-press, the plates upon which the meal directly rests, having their upper surfaces corrugated or ribbed transversely, and provided with apertures smaller at the top

than at the bottom, substantially as and for the purpose specified.

4. The herein-described division-plates A, constructed with the ribs *b*, flanges *a*, and corrugated pressure-cap *e*, substantially as set forth.

5. In an oil-press, the combination, with the bed-plate and the meal-sack, of an interposed matting adapted to receive and retain the last particles of oil which are pressed from the meal, as specified.

In testimony whereof we have hereunto set our hands.

WILLIAM S. ARCHER.
HENRY L. POPE.

Witnesses:

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