W. AHRENBECK.

Oil Press Mat.

No. 242,576. Patented June 7, 1881.

Fig. 1.

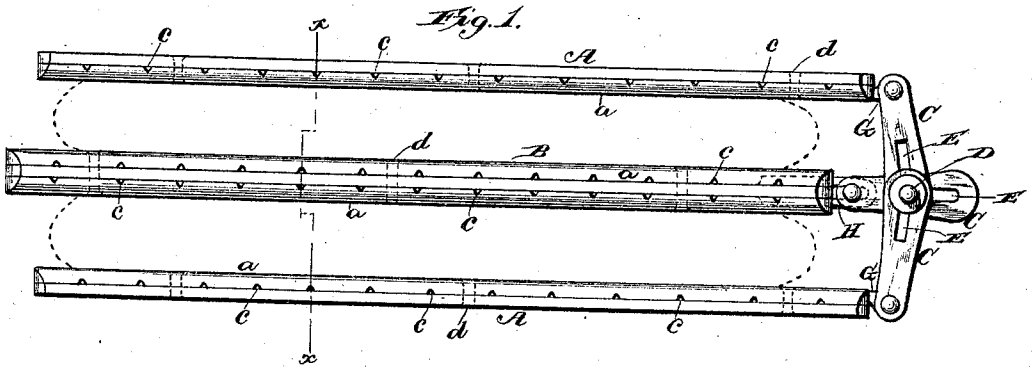


Fig. 2.

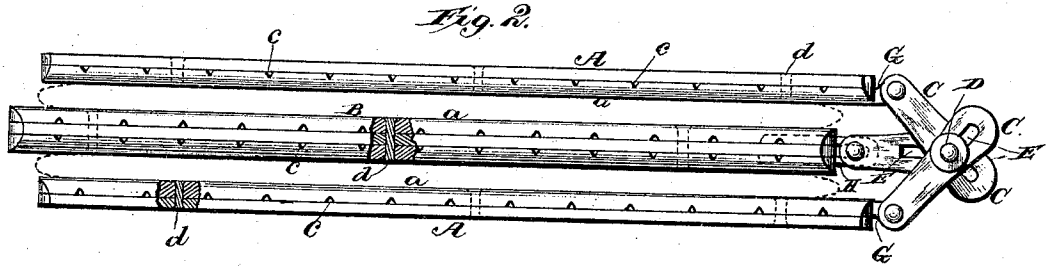


Fig. 3.

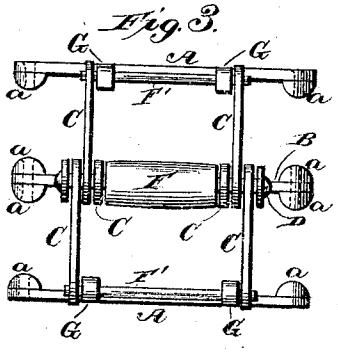


Fig. 4.

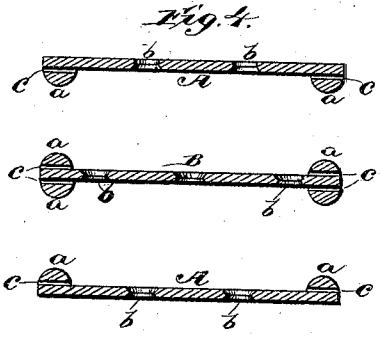
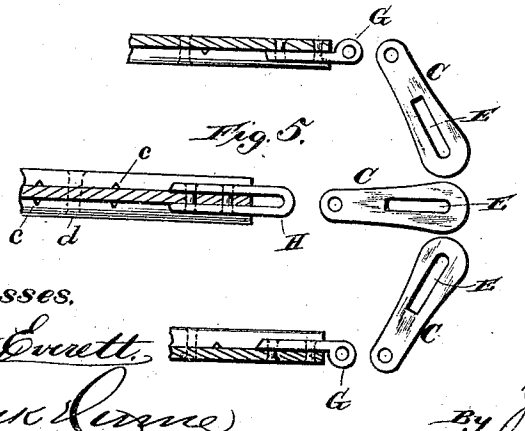


Fig. 5.



Witnesses.

Robert Everett.

Frank Logue

Inventor.

William Ahrenbeck.

By James L. Norris.

Atty.

UNITED STATES PATENT OFFICE.

WILLIAM AHRENBECK, OF HEMPSTEAD, TEXAS.

OIL-PRESS MAT.

SPECIFICATION forming part of Letters Patent No. 242,576, dated June 7, 1881.

Application filed July 26, 1879.

To all whom it may concern:

Be it known that I, WILLIAM AHRENBECK, of Hempstead, in the county of Waller and State of Texas, have invented a new and Improved Oil-Press Mat; and I do hereby declare that the following is a full, clear, and exact description of the same.

Prior to my present invention an oil-press mat for expressing oil from the meal of cotton or other seed placed in bags has been composed of three metal plates or leaves connected together at one end by means of a flexible hinge consisting of a strip of canvas or other analogous flexible material. The metal plates or leaves of such mat have been provided at their edges with a rim or border of wood, cord, or leather, and in some instances the said leaves have been strengthened so as to adapt them to withstand the pounding or pressure to which they are subjected by bending over and folding down their edges. The leaves of a three-leaved mat of such character have also been connected by links pivoted to the leaves and pivoted to each other at their outer ends. But the difference between the flexible strip or the said pivoted links and the slotted links or hinge-plates that I employ for the purpose of keeping the leaves parallel and to protect them from shifting endwise during operation will be apparent from the following specification.

The object of my invention is to flexibly connect the metal plates or leaves of a three-leaved oil-press mat in such manner that when the mat with the bags of meal interposed between its leaves is subjected to pressure for the purpose of expressing the oil the parallelism of the leaves will be maintained and endwise shifting of the same prevented. A further object is to provide a fastening subserving the above purpose which shall be stronger, more durable, and more positive in its functions than the ordinary flexible strip before alluded to; also, to provide for the said leaves a hinged flexible connection of the aforesaid nature, with a handle to enable the operator to readily manipulate and adjust the mat; also, to strengthen the several metal leaves of the oil-press mat by means of marginal ribs, and to form lateral perforations or passages through these ribs for carrying off the oil at the sides of the mat.

To such end my invention consists, first, in the combination, with the metal leaves of a three-leaved oil-press mat, of a hinge flexibly connecting the said leaves together, and provided with a pintle common to all of the leaves, said hinge consisting of three metal hinge-plates, each formed with an elongated slot at one end and pivoted at their remaining ends to the leaves and a rod or pintle passing loosely through the slots of the hinge-plates, whereby the parallelism of the leaves will be maintained under pressure and the leaves moved simultaneously together; second, in the combination, with the metal leaves of a three-leaved oil-press mat, of a hinge flexibly connecting said leaves together, and composed of two sets of metal hinge-plates slotted at one end and pivoted at their remaining ends to the several leaves of the mat, a single rod or pintle common to all the leaves passing loosely through the slots of the hinge-plates, and a handle arranged upon the pintle between said two sets of slotted hinge-plates; third, in the several metal plates or leaves of an oil-press mat flexibly connected together at one end, and provided with a marginal strengthening-rib formed with lateral perforations or oil-passages, all substantially as hereinafter fully described.

In the drawings, Figure 1 is a side elevation of the three-leaved oil-press mat and the hinge for flexibly connecting together the several leaves thereof, with the leaves apart. Fig. 2 is a side view with the leaves closed together. Fig. 3 is an end view of Fig. 1. Fig. 4 is a transverse section taken in the line *x x*, Fig. 1. Fig. 5 represents in detail the three slotted metal hinge-plates and the ends of the three leaves of the mat.

A A indicate the two outer leaves of the oil-press mat; and B the inner leaf, that is arranged between said two outer ones, each leaf being composed of a metal plate of sufficient thickness and rigidity to withstand the pressure or blows to which the mat will be subjected, so that under such pressure or blows the leaves will not be liable to become bent or broken. These leaves are flexibly connected at one end of the mat by means of a hinge composed of slotted metal hinge-plates C, pivoted at one end to the leaves of the mat and connected together at their remaining ends by means of a

pintle, D, that is common to all of the said plates and leaves and passes through the elongated slots E, which are formed in the outer ends of the said hinge-plates. These hinge-plates are arranged in sets of three each, the hinge-plates connecting with the outer leaves being connected with said leaves by the rods or pintles F′ passing through lugs G, that are secured to the said leaves and provided with eyes for the said pintles to pass through, and the hinge-plates connecting with the center leaf being connected with the same by a similar rod or pintle passing through the bars H H′, that are secured to the center leaf and bent to form loops, through which the said rod or pintle passes, so as to allow a longitudinal play of the said pintle. The pintle D will be provided with a suitable head and nut or be otherwise formed to prevent its slipping through the slots of the hinge-plates. By this arrangement it will be seen that after the bags of meal have been placed between these leaves, as shown in dotted lines, Figs. 1 and 2, and pressure applied to the mat, the parallelism of the leaves will be maintained, the leaves approaching each other and the hinge-plates of the outer leaves moving from the nearly vertical position shown in Fig. 1 to the inclined or nearly horizontal position shown in Fig. 2. This movement on the part of the hinge-plates is attained by reason of the slots and the pintle passing loosely through the same, it being obvious that the outer ends of the outer hinge-plates, as the leaves of the mat are brought toward each other, will be thrown out or away from the mat to the extent of the slots through which the pintle passes. By reason of these slotted hinge-plates the pintle will not be twisted or broken, and the outer leaves will not shift endwise during operation, as will be seen by referring to Figs. 1 and 2, the former showing the pintle at the inner end of the slot that is formed in the hinge-plate of the center leaf, and the latter the said pintle moved out to the outer end of said slot when the leaves are brought together.

The outer leaves of the mat have a continuous marginal rib, *a*, rounded on its upper edge and secured upon their inner faces, while the inner or central leaf, B, is provided with two of said marginal ribs, one upon each side of the leaf. These ribs supply the place of the borders referred to in the first portion of this specification, and not only serve to increase the rigidity of the leaves, but also constitute solid walls, through which I form the lateral oil-passages *c c* for the outflow of the expressed oil at the sides of the mat, thereby allowing all or the greater portion of the oil to pass out from the mat and preventing its collecting between the bags and the ribs or borders. The leaves are also provided with any suitable number of perforations, *b*, for the oil that is expressed from the meal to pass through.

Upon the pintle D, between the two sets of hinge-plates, I arrange a handle, F, of suitable material, whereby the mat can be readily taken out from or placed within the press and adjusted thereon.

A mat provided with a handle is not herein claimed, broadly, since in some instances the flexible strip constituting a hinge for the leaves has been utilized as a handle, and in other instances links pivoted together and to the leaves of the mat have been provided with a handle for the above purpose.

What I claim, and desire to secure by Letters Patent, is—

1. The combination, with the metal leaves of a three-leaved oil-press mat, of a hinge flexibly connecting the said leaves together and provided with a pintle common to all of the leaves, said hinge consisting of two sets of metal hinge-plates of three in a set, each plate formed with an elongated slot at the outer end, two of the said hinge-plates of each set being pivoted at their inner ends to the leaves, and the remaining hinge-plates of said sets being connected with loops secured to the center loop, and a rod or pintle passing loosely through the slots of the hinge-plates, whereby the parallelism of the leaves will be maintained under pressure and the leaves moved simultaneously together and the pintles relieved from strain, substantially as described.

2. The combination, with the metal leaves of a three-leaved oil-press mat provided with marginal ribs, of a hinge flexibly connecting said leaves together and composed of two sets of metal hinge-plates slotted at one end and pivoted at their remaining ends to the several leaves of the mat, a single rod or pintle, common to all of the leaves, passing loosely through the slots of the hinge-plates, and a handle arranged upon the pintle between said two sets of slotted hinge-plates, substantially as described.

3. The metal plates or leaves of an oil-press mat provided with a marginal strengthening-rib formed with lateral perforations or oil-passages, substantially as described.

WILLIAM AHRENBECK.

Witnesses:
HENRY L. RANKIN,
JOSEPH H. FARR.