(No Model.) 2 Sheets—Sheet 1.

M. T. & J. A. MURPHY.

FRAME FOR USE IN THE MANUFACTURE OF OIL PRESS MATS.

No. 381,272. Patented Apr. 17, 1888.

Fig. 1.

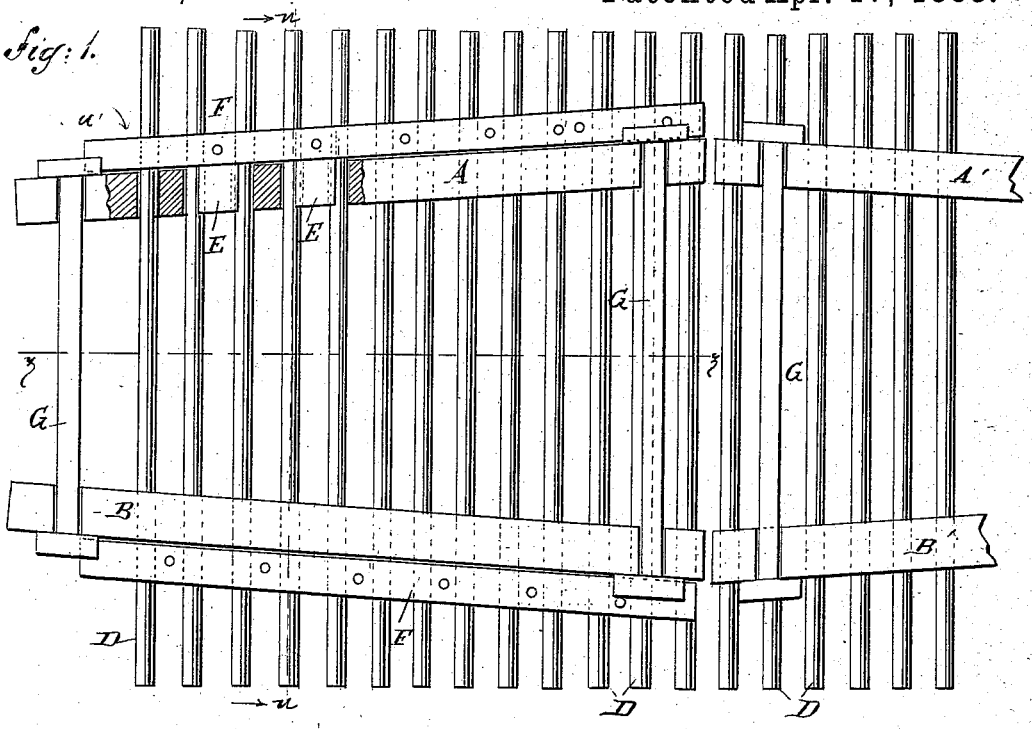


Fig. 2.

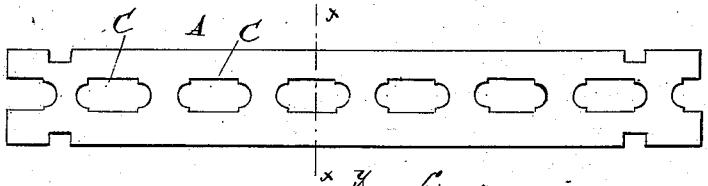


Fig. 3.

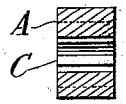


Fig. 4.

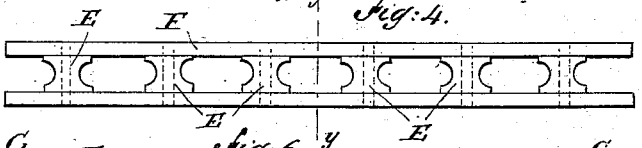


Fig. 5.

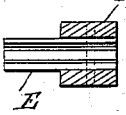


Fig. 6.

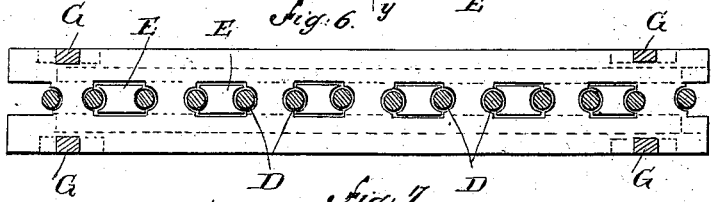
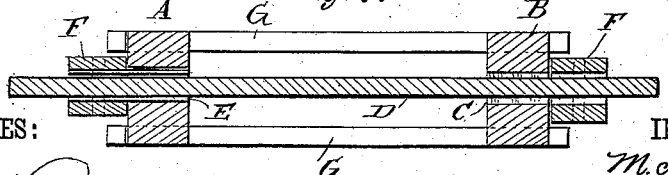


Fig. 7.



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(No Model.) 2 Sheets—Sheet 2.

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FRAME FOR USE IN THE MANUFACTURE OF OIL PRESS MATS.

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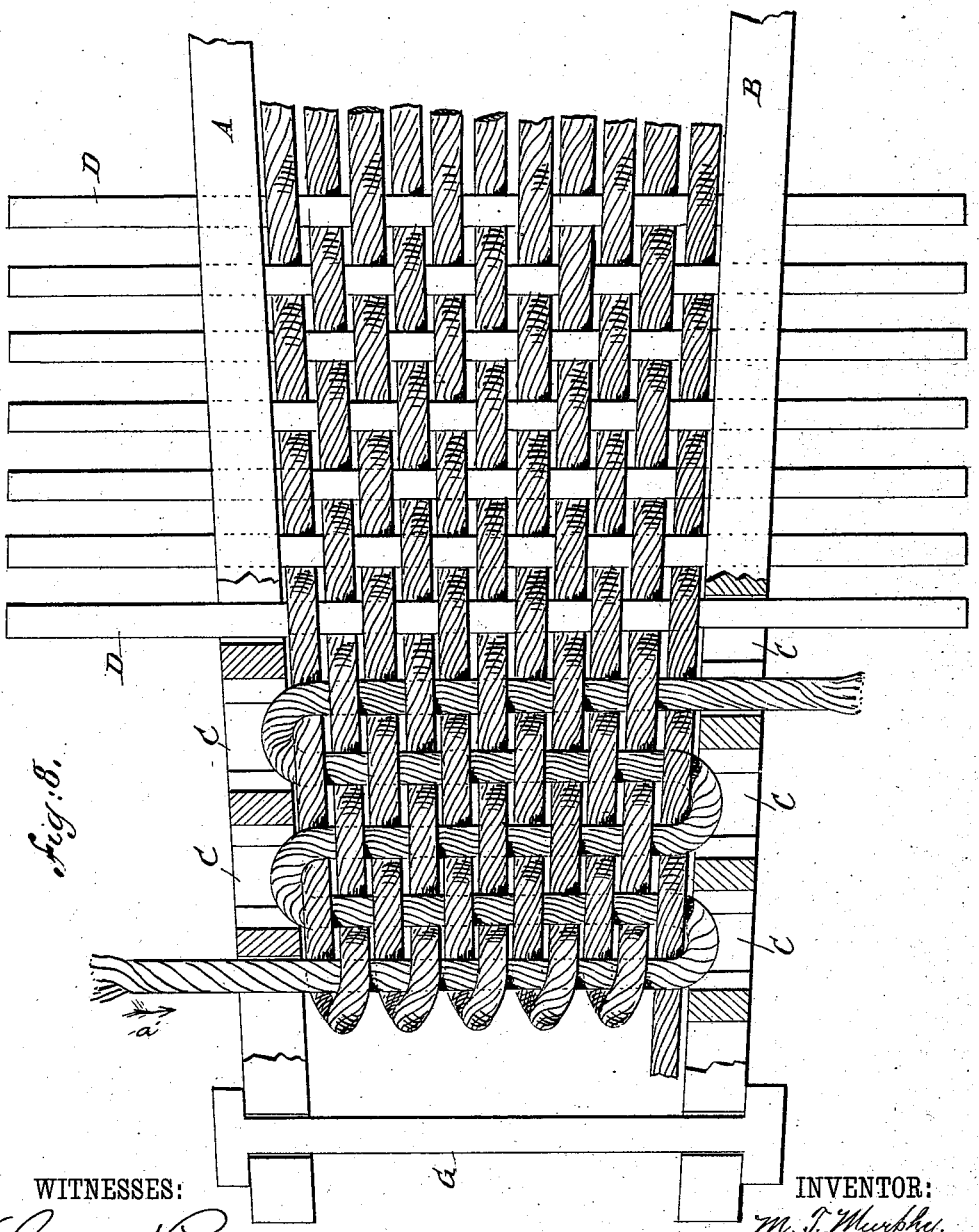

Fig. 8.

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UNITED STATES PATENT OFFICE.

MARCUS T. MURPHY AND JUNIUS A. MURPHY, OF NEW ORLEANS, LOUISIANA.

FRAME FOR USE IN THE MANUFACTURE OF OIL-PRESS MATS.

SPECIFICATION forming part of Letters Patent No. 381,272, dated April 17, 1888.

Application filed April 14, 1887. Serial No. 234,782. (No model.)

To all whom it may concern:

Be it known that we, MARCUS T. MURPHY and JUNIUS A. MURPHY, both of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Frame for Use in the Manufacture of Oil-Press Mats, of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved machine for weaving oil-press mats in such a manner as to produce a strong, compact, and uninjured mat.

The invention consists of auxiliary pusher-bars, used in connection with the regular mat-plates.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a mat-weaving frame provided with our improvement, parts being broken out. Fig. 2 is a side elevation of one of the mat-plates. Fig. 3 is a vertical cross-section of the same on the line *x x* of Fig. 2. Fig. 4 is a side elevation of one of the pusher-bars. Fig. 5 is a vertical cross-section of the same on the line *y y* of Fig. 4. Fig. 6 is a longitudinal side elevation of the machine on the line *z z* of Fig. 1. Fig. 7 is a vertical cross-section of the same on the line *u u* of Fig. 1. Fig. 8 is a plan view, on an enlarged scale, showing the warp in position on the rods and the woof being introduced as the said rods are withdrawn, parts being broken away and shown in section.

Heretofore in making oil-press mats the mat-plates could not be pressed toward each other with a great pressure after the warp had been made without breaking the plates and injuring the edges of the warp. In our frame, presently to be described, we avoid these difficulties, and provide a machine which can stand a great hydraulic or other pressure for pressing the warps into a compact form without breaking the mat-plates or injuring the warps.

The mat-plates A A′ on one side and the mat-plates B B′ of the opposite side are provided with slots C of like shape, but arranged in such a manner that the slots C of two opposite plates, A and B or A′ and B′, are not directly opposite each other, but are arranged alternately, so that when the woof-rods D are held in place on the said mat-plate, as shown in Figs. 1, 6, and 7, then the bearing of, say, the second rod D in the plate A is in the left end of the slot C, while the bearing of said rod D in the opposite plate, B, is in the right end of the slot C of the plate B. The next or third rod D has its bearing in the right end of the slot C of the plate A, while the other bearing of the same rod is in the left end of the second slot C in the plate B, and so on.

Into the slots C fit the projections or lugs E, secured by rivets or other means to the pusher-bars F, of which one is used for each mat-plate. The lugs E, when introduced in the slots C, leave space for the passage of the woof-rods D, as shown in Fig. 6, said rods D being held in place in the slots C by the lugs E. The pusher-plates F, when in position, rest against the outside of the respective mat-plates, and the inner ends of the lugs E are flush with the inside of the mat-plates.

The operation is as follows: The mat-plates A A′ and B B′ and the respective pusher-bars F are fitted to each other, and the woof-rods D are then put in place, passing through the openings left in the slots C by the lugs E, as before described. Hydraulic or other pressure is now applied to force the mat-plates A B and A′ B′ toward each other until they assume the form shown in Fig. 1, so that the warps are pressed together until the desired varying width of the intended mat is reached. It will be seen that the mat-plates are very materially strengthened by the pusher-bars, so that a great pressure can be applied for pressing the respective mat-plates toward each other, thus forming a compact warp, the edges of which will not be injured by reason of the lugs E extending through the mat-plate slots C flush with the inner sides thereof. If these slots were left fully open, the outer warp-ropes would be pressed into the slots and broken, thereby injuring the edges of the warp. The locking-bars G, of the usual construction, are then placed upon the plates A B and A′ B′, as shown in Fig. 1, so as to hold the respective mat-

plates in a locked position after the hydraulic pressure is removed. The pusher-bars F are then removed by being pulled outward. The warps are now ready to receive the woof-rope, which is inserted as follows: The first woof-rod D on one end of the machine is removed, and the woof-rope is passed through the aperture formed by said rod by first passing the end of the woof-rope into the first aperture in the plate A in the direction of the arrow *a'*, (shown in Fig. 8,) and through the warp-aperture and through the first slot C in the mat-plate B. The second woof-rod D is then removed and the end of the woof-rope is returned to the other side through the aperture formed by said second woof-rod D.

It will be seen that on the turning of the woof-rope the bend of the rope will be in the slot C in the plate B, so that the woof-rope lies flush against the edge of the warp between the first two apertures. The woof-rope, on passing through the second slot C in the plate A, is at the left end of said slot, and when the third rod D is now removed and the woof-rope is again returned to the other side through the aperture formed by the third rod, then the bend of the woof-rope is formed in the second slot C of the plate A and rests directly against the edge of the warp. This operation is continued until all the woof-rods D are removed and the woof-rope is passed through the apertures in the warp formed by said rods. The woof-rope is then fastened in the usual manner, after which the locking-bars G are removed from the mat-plates A B and A' B', and then the latter are removed from the finished mat.

In Fig. 8 the warp-ropes are shown somewhat apart in order to illustrate clearly the woof-rope.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a frame for use in the manufacture of oil-press mats, the combination, with the mat-plates, of pusher-bars held on said mat-plates, substantially as shown and described.

2. In a frame for use in the manufacture of oil-press mats, the combination, with the mat-plates and woof-rods, of pusher-bars held against the outside of said mat-plates, substantially as shown and described.

3. In a frame for use in the manufacture of oil-press mats, the combination, with the mat-plates having slots, of pusher-bars provided with lugs fitting into said slots, so as to leave space for the woof-rods, substantially as shown and described.

4. In a frame for use in the manufacture of oil-press mats, the combination, with the mat-plates, each having slots, of pusher-bars resting against the outside of said mat-plates and provided with lugs projecting inward from said pusher-bars into said slots in the mat-plates, and woof-rods held in openings between the mat-plates and said lugs, substantially as shown and described.

MARCUS T. MURPHY.
JUNIUS A. MURPHY.

Witnesses:
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ANDREW HERO, Jr.