(No Model.)

2 Sheets—Sheet 1.

C. CHAMBERS, Jr.

PALLET FOR DRYING BRICKS

No. 506,811. Patented Oct. 17, 1893.

Fig. 1

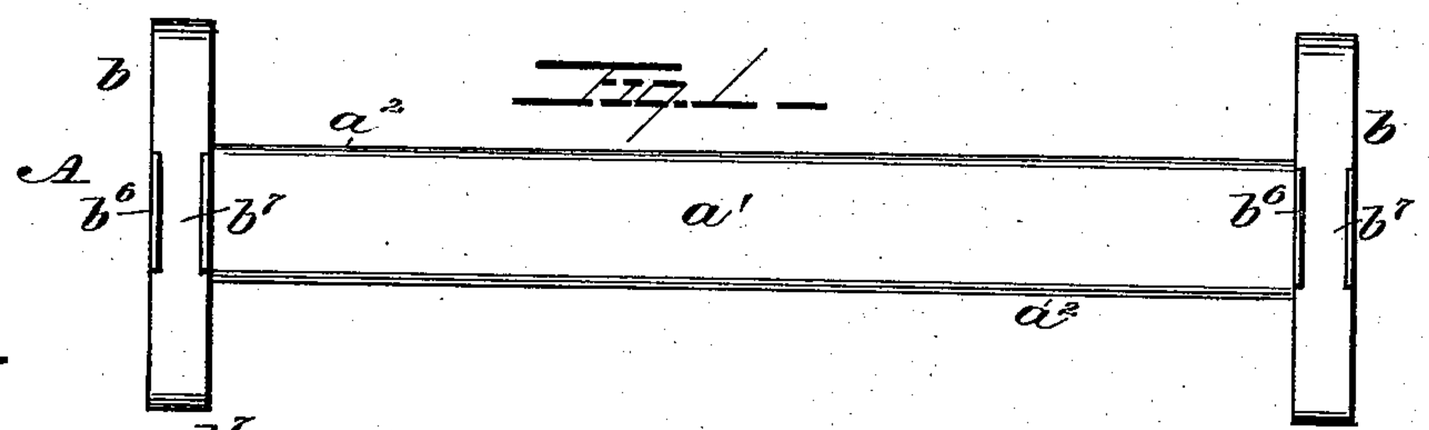


Fig. 3

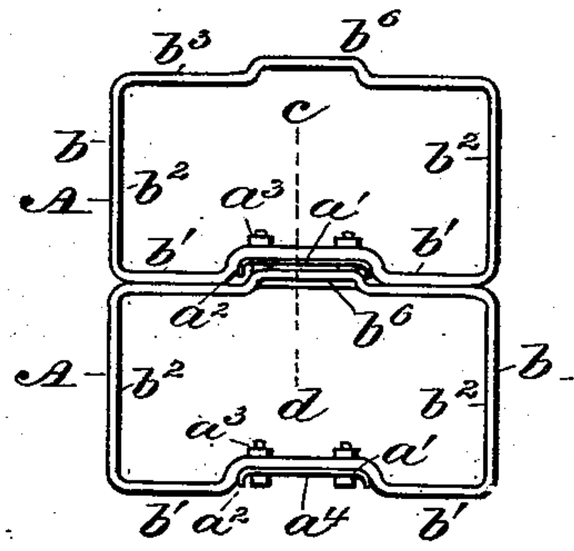


Fig. 2

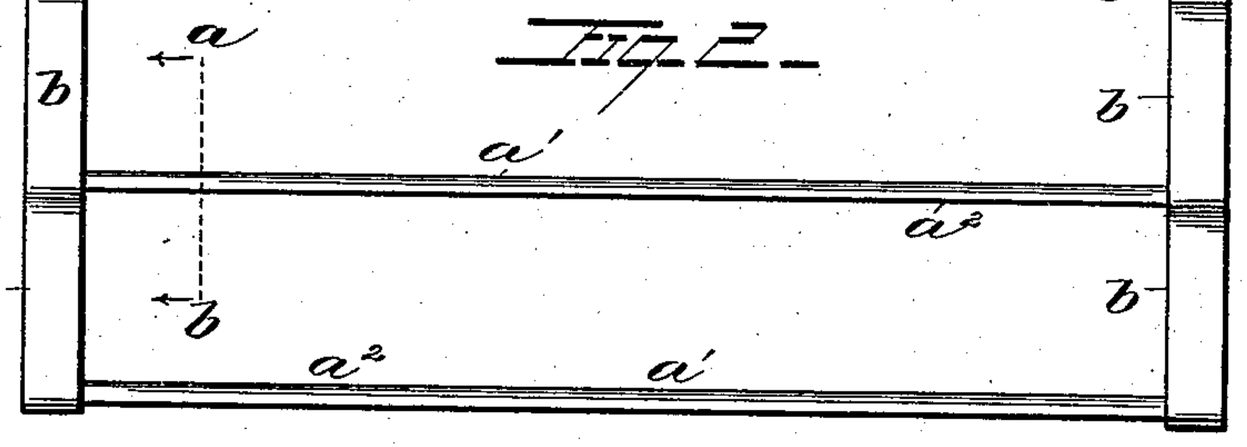


Fig. 6

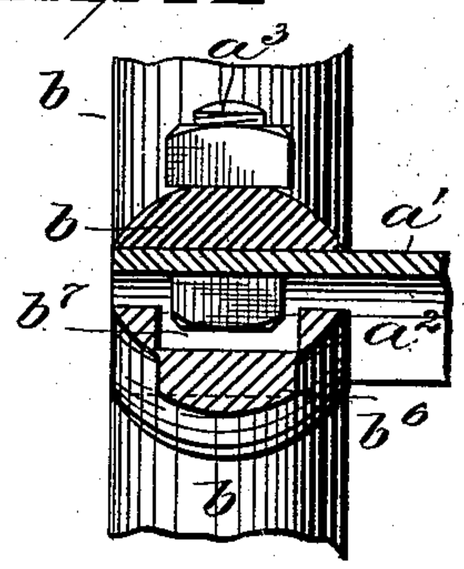


Fig. 4

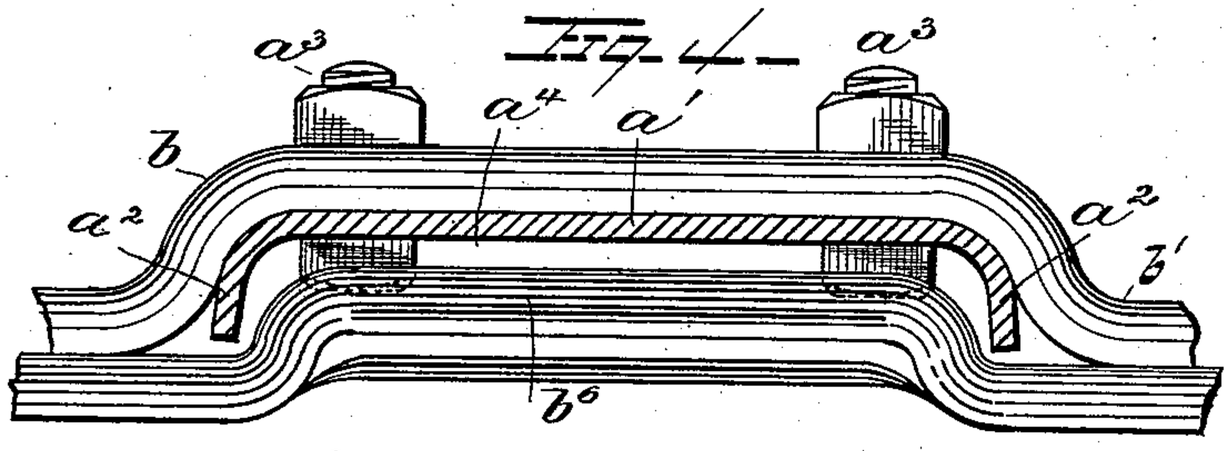
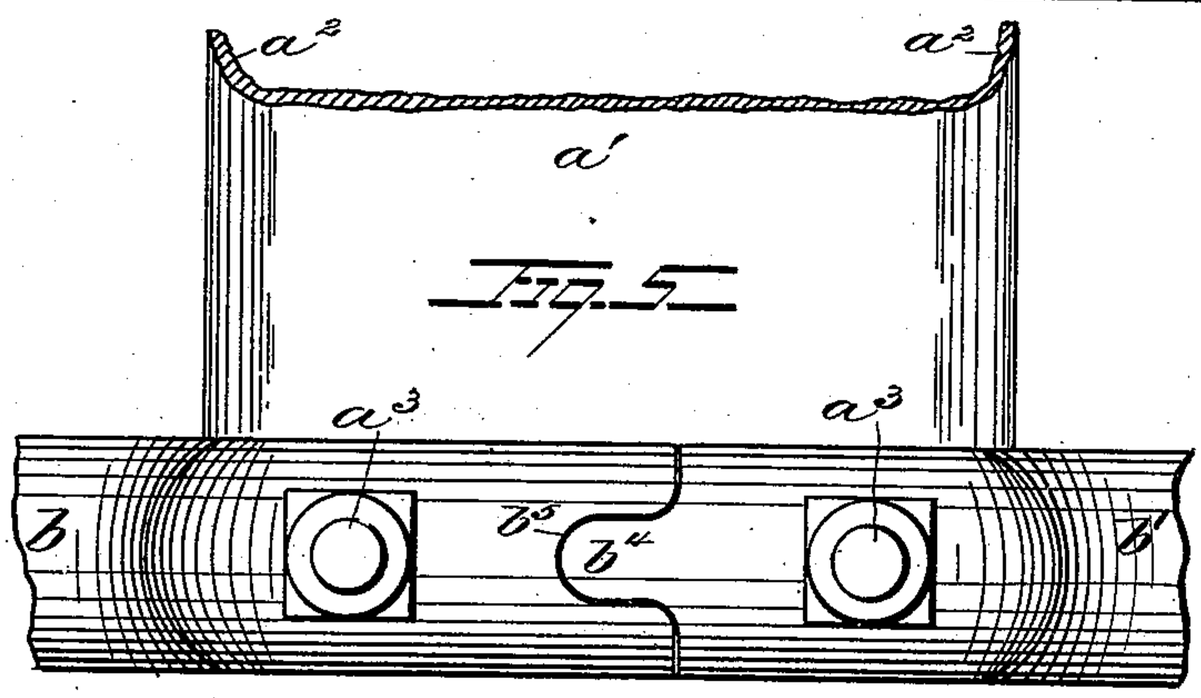


Fig. 5



WITNESSES:
Jno. Nolan
James Dugan

INVENTOR
Cyrus Chambers, Jr.,
per Joshua Pusey,
ATTORNEY

(No Model.) 2 Sheets—Sheet 2.

C. CHAMBERS, Jr.

PALLET FOR DRYING BRICKS.

No. 506,811. Patented Oct. 17, 1893.

Fig. 1a

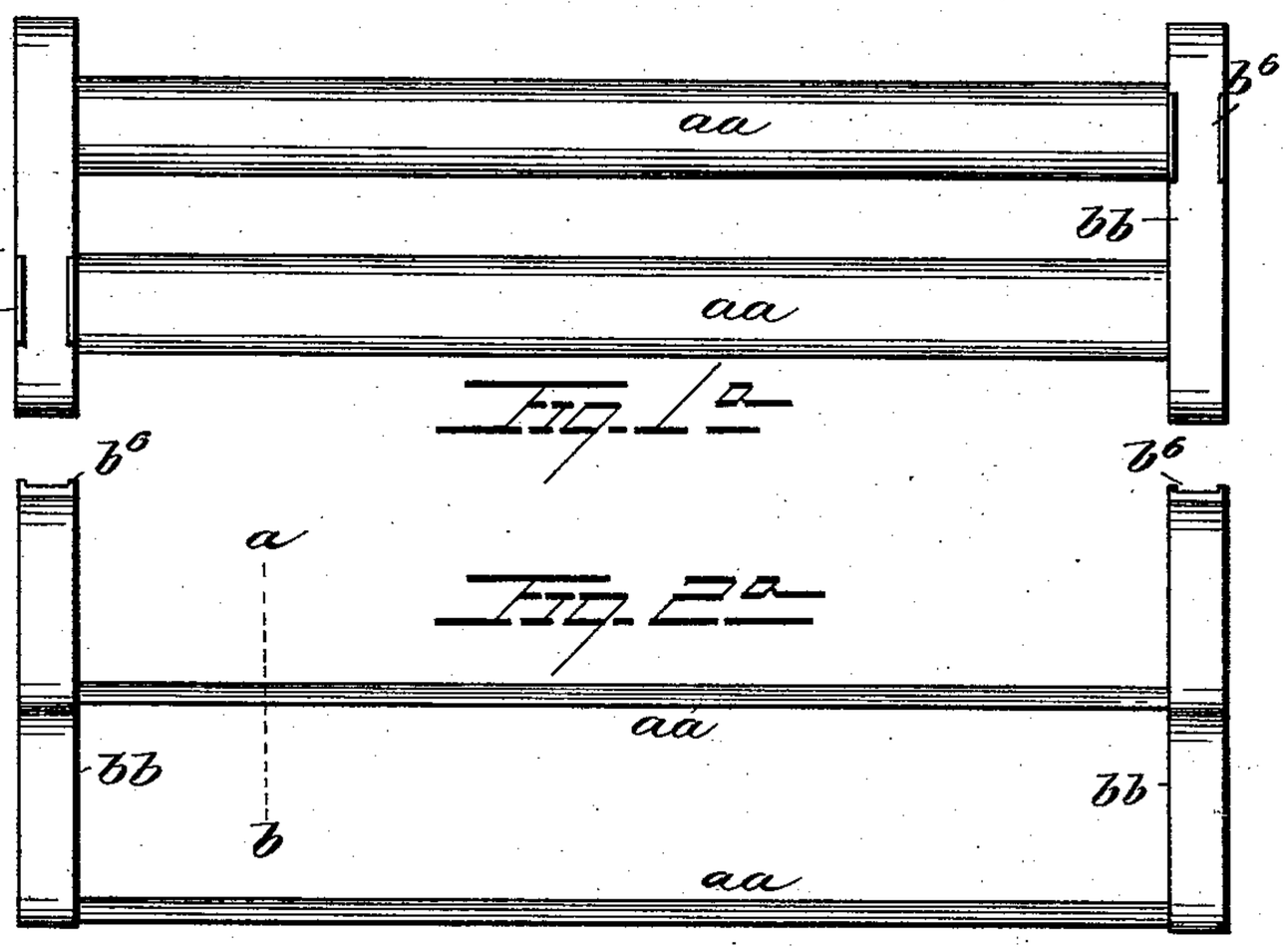


Fig. 2a

Fig. 3a

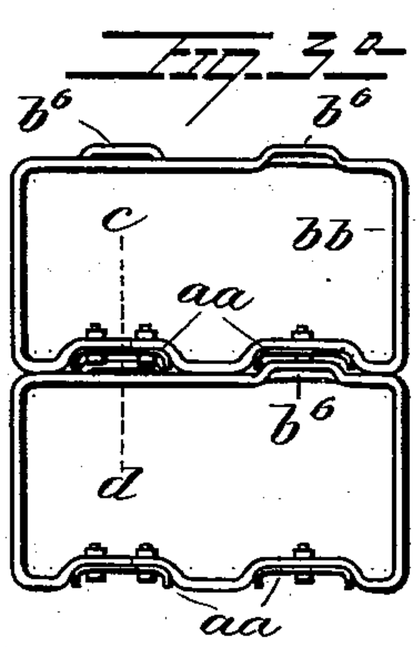


Fig. 4a

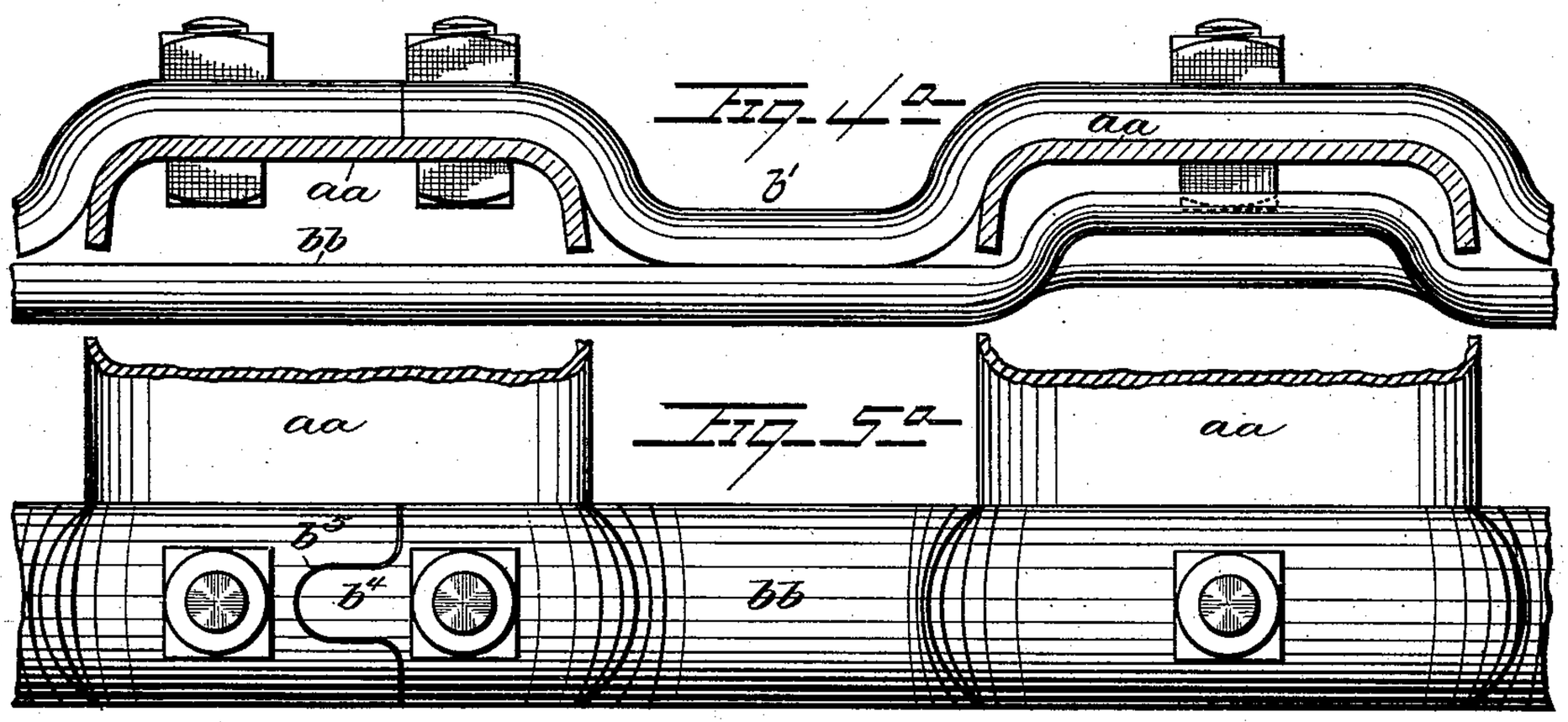
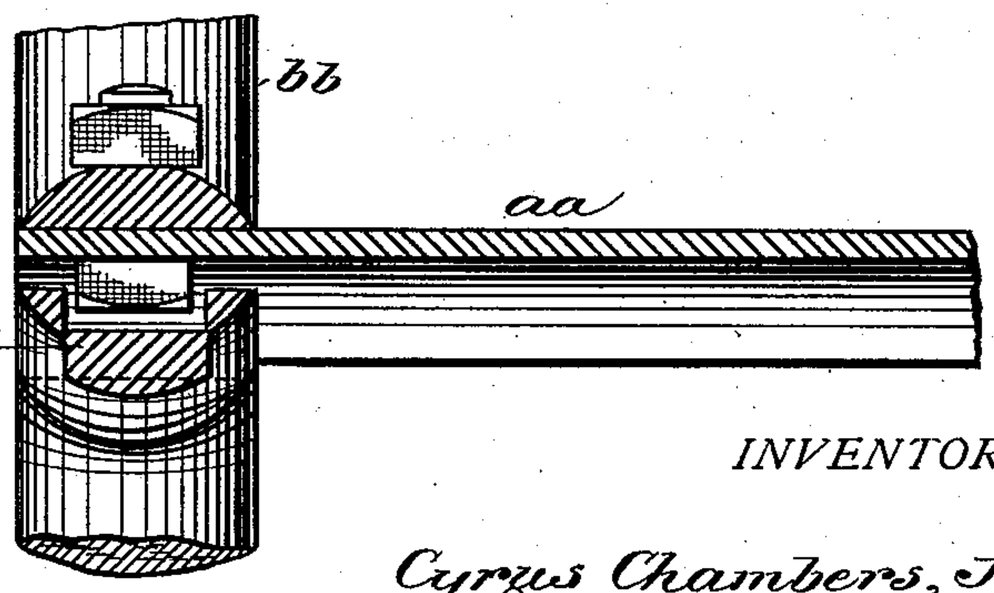


Fig. 5a

Fig. 6a



WITNESSES:

Leo. Nolan.

James Dugan

INVENTOR

Cyrus Chambers, Jr.,

per Joshua Pusey

ATTORNEY

UNITED STATES PATENT OFFICE.

CYRUS CHAMBERS, JR., OF WYNNEWOOD, ASSIGNOR TO THE CHAMBERS BROTHERS COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

PALLET FOR DRYING BRICKS.

SPECIFICATION forming part of Letters Patent No. 506,811, dated October 17, 1893.

Application filed September 8, 1888. Serial No. 284,852. (No model.)

To all whom it may concern:

Be it known that I, CYRUS CHAMBERS, Jr., a citizen of the United States, residing at Wynnewood, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Pallets for Drying Bricks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1, Sheet 1, is a plan view of one form of my pallet. Fig. 2 is a side elevation of two of such pallets, the one resting upon the other, as in use. Fig. 3 is an end view of Fig. 2. Fig. 4 is a partial transverse section, enlarged, taken through the line *a b*, Fig. 2. Fig. 5 is a plan of a portion of one end of the pallet, showing the manner of connecting the ends of the frame, or handle, iron, and the supporting slat. Fig. 6 is a partial vertical section, enlarged, taken through the line *c d*, Fig. 3. Figs. 1ª, 2ª, 3ª, 4ª, 5ª and 6ª, Sheet 2, are views corresponding respectively to Figs. 1, 2, &c., Sheet 1, of another form of the invention.

The nature of this invention is a metallic frame, or pallet, adapted to support, during and after their transportation to the drying kilns or chambers (also within the kilns) bricks that have been molded by the so-called "stiff mud or plastic" process, and are sufficiently firm "to handle" immediately after being molded.

Heretofore, as shown in my Letters Patent of the United States, Nos. 274,907 and 274,910, dated April 3, 1883, for improvements in kilns for drying bricks, &c., the raw bricks were arranged in "hacks," upon their edges and upon each other; but this practice, I found, by experience, to be objectionable for various reasons; among others, in that the weight of the upper bricks tended to crush those below; in that there was not sufficient space to permit the free circulation of air around all sides of the several bricks; and in that their edges or faces were marred or defaced by the impression of the contiguous upper and lower bricks. My present improvement is designed to obviate these objections, and to produce a brick supporting pallet whereby the clay will be better dried, and a more perfect and uniform brick produced.

The invention consists, primarily, in a metallic pallet, composed of a brick-supporting slat, or slats, provided with a hollow frame, or handle, at each end thereof, whereby the pallet can be readily handled, and whereby a number of such pallets can be supported upon each other, without the bricks being brought together in contact, and thus a free circulation of the air assured.

The invention consists, secondly, in forming said frames, or handles, of a height and length exceeding the width and length, respectively, of the brick to be dried, whereby the latter may be laid upon its side or edge transversely to the supporting slat, or slats, without projecting beyond the edges of said frames or handles, and thus, when the pallets are piled one upon another, and close together sidewise, vertical and horizontal air spaces between the several courses of bricks, will be provided.

The invention consists, thirdly, in longitudinally bending or corrugating the edges of the supporting slat, or slats, in order to stiffen the latter, and in so forming the lower edges of the end frames, or handles, that they will conform to, or nearly to, the shape of the ends of said slat, or slats, and thus be bound firmly to, and be also prevented from shifting or twisting upon, the same.

The invention consists, fourthly, in providing the upper and lower edges of the pallet ends with projections and recesses, respectively, in line vertically with each other, whereby, upon the registering of the projections and recesses of the adjacent pallets, proper alignment of the pallets, in the piling thereof, will be assured, and lateral displacement of the same prevented.

The invention consists, fifthly, in forming the upper projections of said pallet directly in line vertically with the point of connection of the end frames, or handles, with the channeled or corrugated supporting slat, or slats, whereby the ends of the latter form the above described registering recesses.

The invention consists, sixthly, in forming each of said upper projections with a longi-

tudinal groove or depression, whereby, when the pallets are piled upon each other, the heads of the bolts or rivets connecting the slats and handles will enter the depressions in the projections of the adjacent pallets, thus securing endwise alignment of the latter, and preventing their displacement endwise.

The invention consists, seventhly, in providing the meeting ends of the bent handles or end frames, at the point where they are bolted or riveted to the slat, or slats, with an interlocking tongue and groove, respectively, whereby said ends are kept in alignment and made firm and rigid without welding.

The invention consists, finally, in details of construction, which will be hereinafter described and duly claimed.

Referring to Sheet 1 of the annexed drawings, wherein one form of the invention is illustrated, A represents the pallet, which is composed of a brick-supporting slat, a', provided with end frames or handles, b. The slat a' consists of a comparatively long narrow piece of thin metal, say, one-eighth of an inch thick, whose lateral edges, a^2, are bent down, as shown, whereby the same are rounded and the slat greatly stiffened and strengthened. The width of this slat is much less than the length of the bricks to be supported thereon, so that when a brick is set upon its edge, cross wise of the slat, the ends of said brick will project beyond each side of the metal, say, one-fourth the entire brick length. Thus, the ends, side, top edge or face, and one-half of the bottom face of the brick, will be exposed to the action of the heat and air within the kiln or chamber in which the pallet, with the brick balanced thereon, is contained.

The end-frames, or handles, b, are made of "half-oval" iron, each frame consisting of a single piece of metal bent as shown in Fig. 3, that is to say,—so as to fit around the top and sides of the slat a', extending outward horizontally therefrom, as at b', up at right angles or vertically, as at b^2, and horizontally over the top, as at b^3, so as to form an open rectangular end frame, whose height and length exceed the width and length, respectively, of the brick to be supported upon the pallet, whereby, when such pallets are piled one upon another and close together sidewise, vertical and horizontal air-spaces between the several courses of bricks, will be provided. These frames are secured to the ends of the slat a' by means of rivets, or bolts, a^3, and in order to secure rigidness without the necessity of welding the meeting ends of the "half oval" iron, I provide said ends, before bending, with a tongue, b^4, and groove, b^5, respectively, which fit into each other when the metal is bent, thus securing the two ends in perfect alignment, as seen in Fig. 5. This frame, or handle, being bent as above described, so as to conform to the upper surface of the pallet slat, cannot move sidewise nor twist when riveted or bolted to said slat. Hence, the pallet, as a whole, is rendered very rigid and substantial.

In order that the pallets will stand steadily upon the floor of the drying room or car, and upon one another, the lower edges, b', of the handles, b, are so formed as to slightly project below the turned edges of the slat, as clearly shown. In order, also, to insure the correct disposal of one pallet upon another, and to guard against lateral displacement thereof, during the passage of the car carrying the same, I provide the upper edge of each of the handles or end frames, directly in line vertically with the slat, with a longitudinally-grooved projection, b^6, which is adapted to enter the concave or under side, a^4, of the slat of the contiguous upper pallet. The longitudinal grooves, b^7, in these projections, permit the heads of the bolts or rivets, a^3, to enter therein, thus preventing endwise displacement of the pallets.

A pallet constructed as above described, is designed, more especially, to support bricks composed of stiff or strong clays, as those composed of weak or tender clays are apt to droop at each end over the narrow supporting slat, and, in some cases, to even break in two and fall down upon the bricks below. In order, however, to provide for the support of such soft clay bricks, I construct the pallets as illustrated in Sheet 2 of the drawings, that is, with two bottom slats, $a\,a$, each of which is narrower than the slat of the first described construction, and has its lateral edges, likewise turned down. These slats are disposed at such distance apart as to allow the ends of the brick to rest thereupon, and the end frames, or handles, $b\,b$, are bent to fit around each slat, and are secured thereto, as shown in Figs. 1^a to 6^a, both inclusive. It will be observed by reference to Figs. 1^a, 3^a and 4^a, that the grooved projection, b^6, on the top of each handle is toward one side, and is adapted to fit into but one of the slats of the upper adjacent pallet, and also that the projections are at opposite sides of the pallet. The object in this, is economy in construction, and to avoid the making of another grooved projection above the point where the two ends of the handle are united by the tongue, b^4, and groove, b^5. As each handle is riveted or bolted to both slats, it is obvious that a firm and rigid structure is produced.

By means of the twin-slat pallet just described the drying of the under edge or face of the brick is greatly facilitated, and the described defect incident to the single-slat pallet, in supporting bricks composed of weak clays, is entirely remedied.

Having thus described my invention, I claim as new and wish to secure by Letters Patent—

1. A brick pallet comprising two open or skeleton end frames of a height and length exceeding the width and length respectively of the brick to be supported upon the pallet,

and a slat, or slats, rigidly connecting the said end frames, each of these frames constructed of a strip of metal bent into rectangular, or approximately rectangular, shape, and united at its meeting ends, substantially as described.

2. A brick pallet comprising two end frames and a slat, or slats, connecting the same, each of said frames constructed of a single strip of metal bent into rectangular, or approximately rectangular, shape, and offset at its point, or points, of connection with said slat, or slats, substantially as described.

3. A brick pallet comprising two open or skeleton end frames of a height and length exceeding the width and length respectively, of the brick to be supported on the pallet, and a slat, or slats, rigidly connecting the said end frames, each of these frames constructed of a strip of metal bent into rectangular, or approximately rectangular, shape, united at its meeting ends, and provided with locking devices adapted to prevent displacement of the pallets when they are piled one on another, substantially as described.

4. In a pallet for drying bricks, the combination of the slat, or slats, having its, or their, edges bent or corrugated, and the end-frames having their lower edges bent to conform to the shape of the ends of said slat or slats, substantially as and for the purpose set forth.

5. In a pallet for drying bricks, the combination of the slat, or slats, having its, or their, edges bent or corrugated, and the end-frames having their lower edges bent to conform to the shape of the ends of said slat or slats, and projecting slightly below the latter, substantially as and for the purpose set forth.

6. A brick pallet consisting of the combination of the channeled slat, or slats, and the open or skeleton end frames secured thereto, said end frames bent at their lower edges to conform to the shape of the ends of said slat, or slats, and provided with projections on their upper edges in line vertically with said slat, or slats, substantially as described.

7. In a pallet for drying bricks, the combination of the channeled slat, or slats, and the end-frames provided with projections at their upper edges, in line vertically with said slat, or slats, substantially as and for the purpose set forth.

8. In a pallet for drying bricks, the combination of the slat, or slats, and the end-frames secured thereto, said frames provided with depressions on their upper edges in line vertically with the bolts or rivets connecting said frame and slat, or slats, substantially as and for the purpose set forth.

9. In a pallet for drying bricks, the combination of the channeled slat, or slats, and the end-frames bolted or riveted thereto, said frames being provided with grooved projections on their upper edges, in line vertically with said slat, or slats, substantially as and for the purpose set forth.

10. In a pallet for drying bricks, the combination of the slat, or slats, and the end-frames secured thereto, each of said frames consisting of a single strip of metal bent into shape, and having its meeting ends provided with an interlocking tongue and groove, respectively, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature this 22d day of August, A. D. 1888.

CYRUS CHAMBERS, JR.

Witnesses:

MARY P. CHAMBERS,

ISABEL CHAMBERS.