

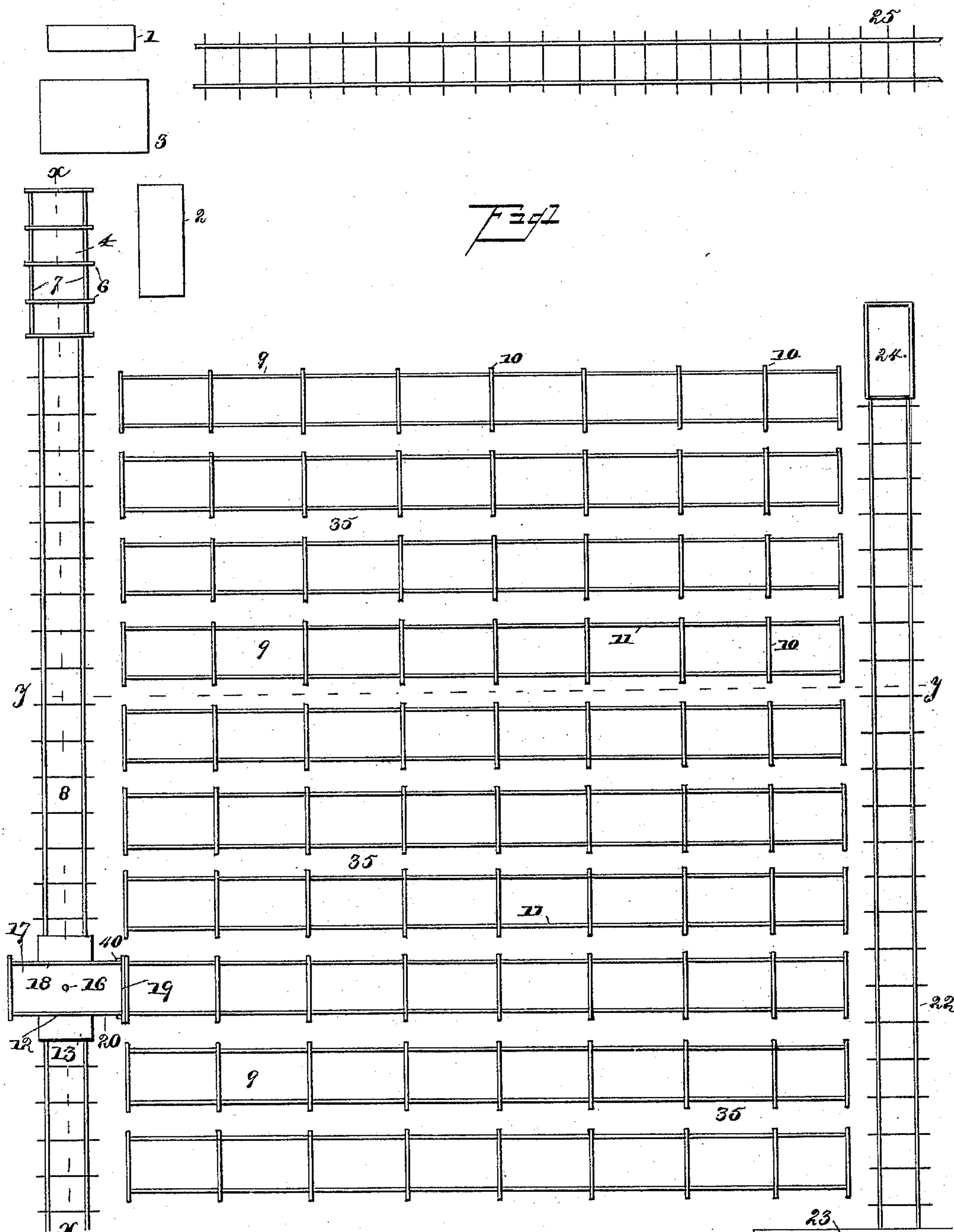
(No Model.)

3 Sheets—Sheet 1.

T. J. MONK.  
BRICK YARD PLANT.

No. 445,939.

Patented Feb. 3, 1891.



Witnesses,

*John Smiley*  
*Wm. Bagger*

Inventor

*Thomas J. Monk*

By his Attorneys

*C. A. Snow & Co.*



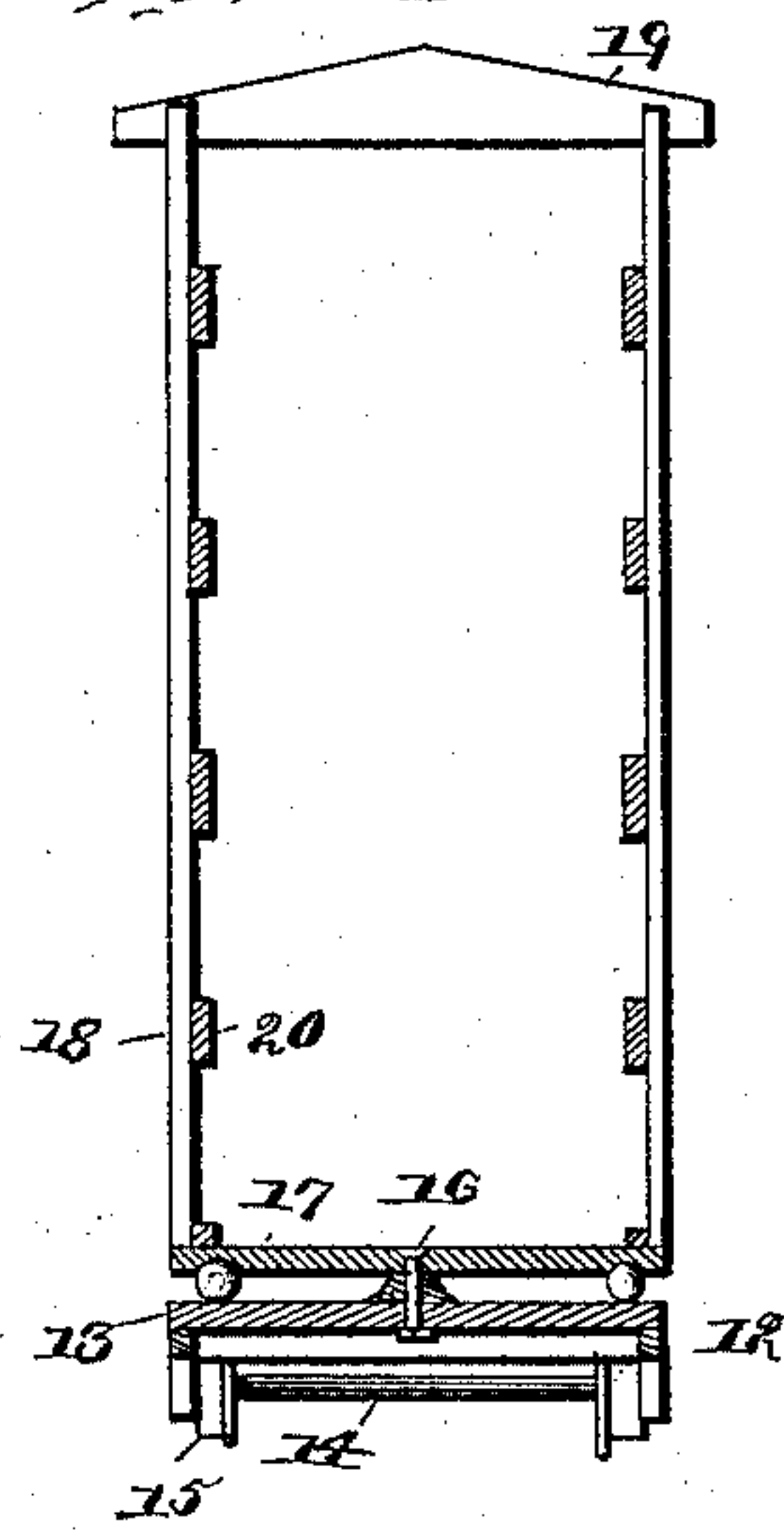
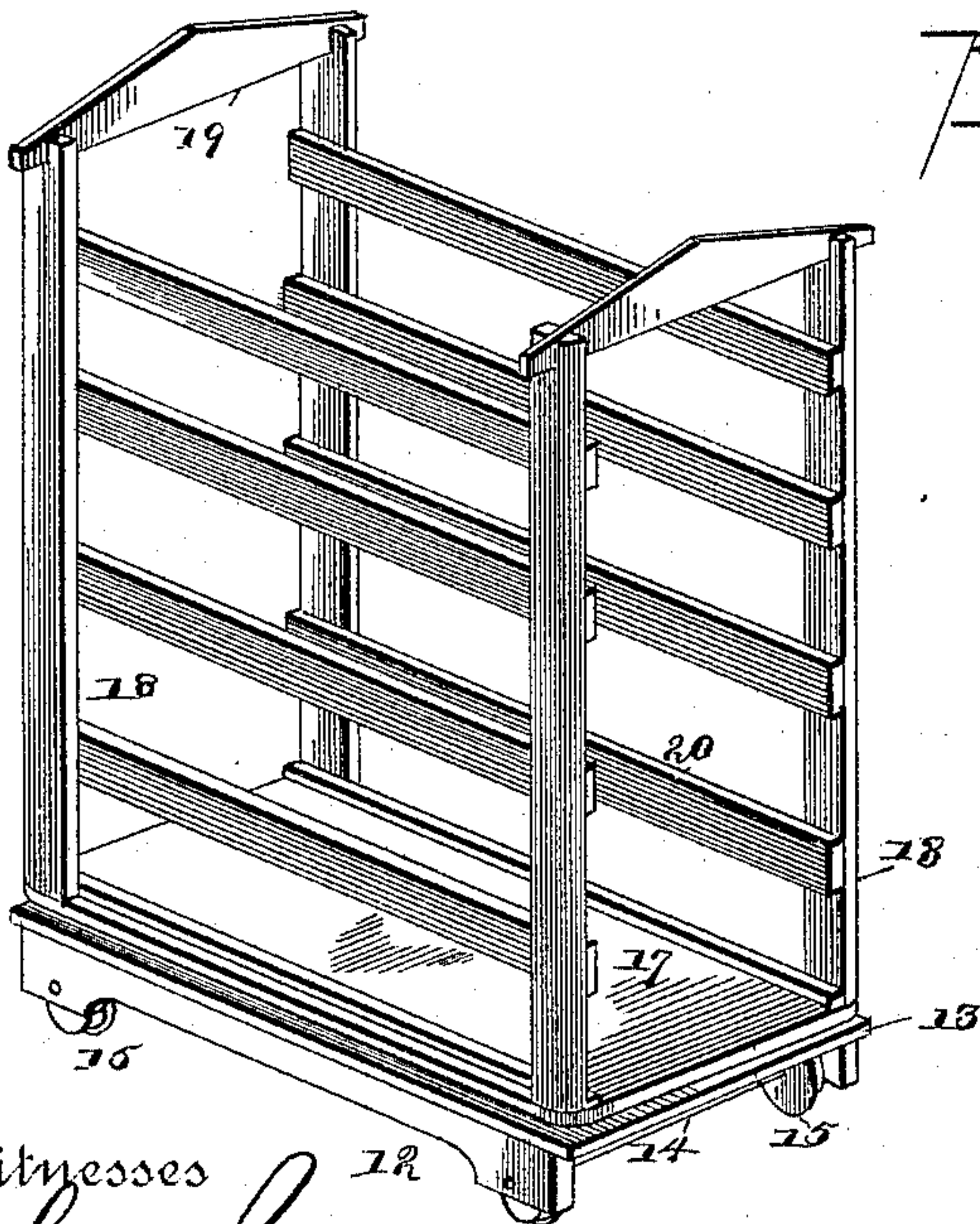
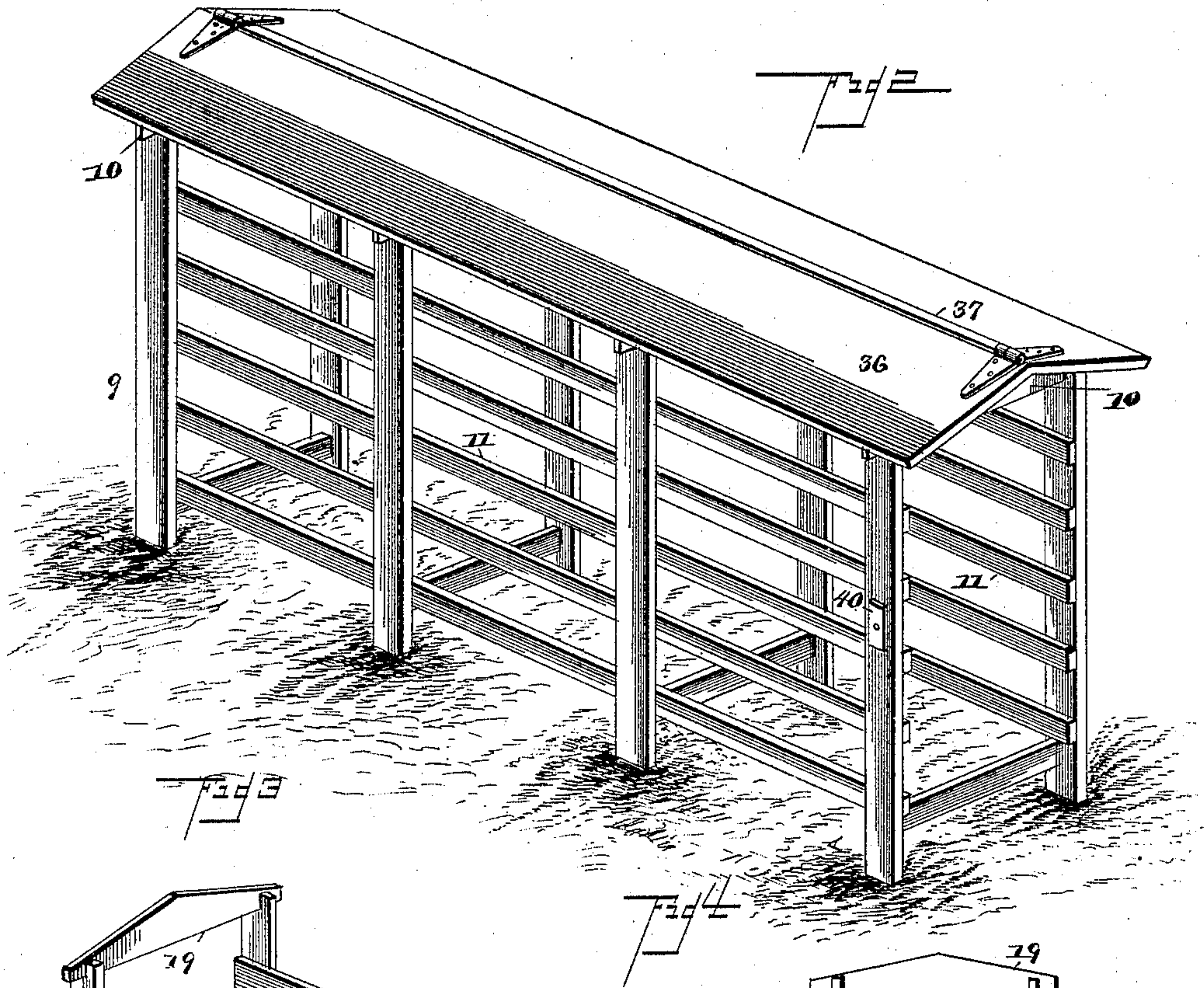
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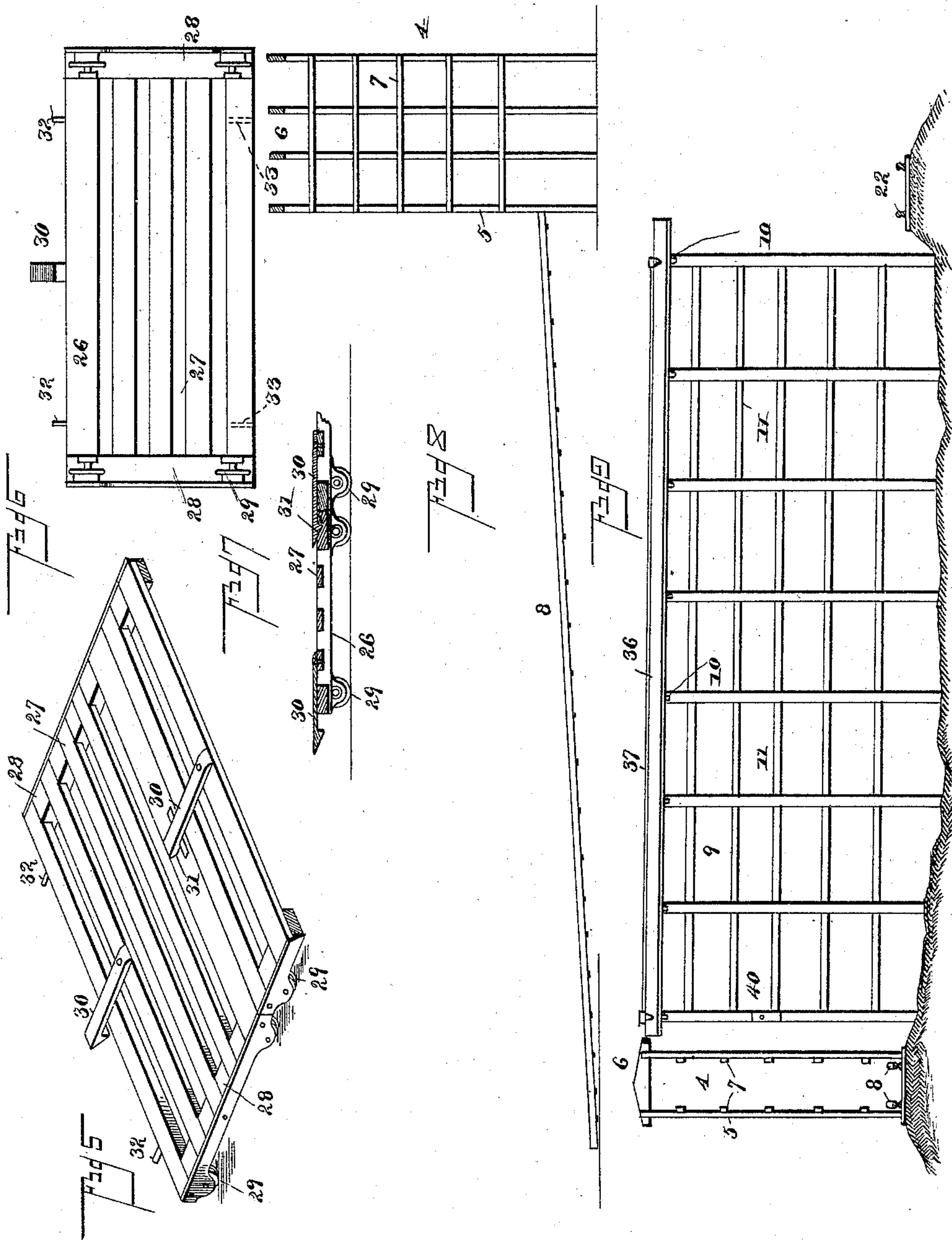
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# UNITED STATES PATENT OFFICE.

THOMAS JEFFERSON MONK, OF GIBSLAND, LOUISIANA.

## BRICK-YARD PLANT.

SPECIFICATION forming part of Letters Patent No. 445,939, dated February 3, 1891.

Application filed November 7, 1889. Serial No. 329,516. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS JEFFERSON MONK, a citizen of the United States, residing at Gibsland, in the parish of Bienville and State of Louisiana, have invented a new and useful Brick-Yard Plant, of which the following is a specification.

This invention relates to brick-yard plants; and it has for its object to so construct and arrange the plant of the brick-yard as to facilitate the manufacture of bricks to the greatest possible extent and proportionately lessen the cost of production.

The invention consists, mainly, in an improved arrangement of drying-racks and tramway-tracks, by means of which said racks are accessible for the purpose of conveying the bricks from the molder's table and to the burning-kiln.

The invention further consists in the improved construction of the said racks, of a tramway-car for conveying the pallets to and from the said racks, and incidentally in the construction of the pallets, all as will be hereinafter more fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a diagram of a portion of a brick-yard equipped with my improvements. Fig. 2 is a perspective view of one of the drying-racks. Fig. 3 is a perspective view of one of the tramway-cars used in connection with my invention. Fig. 4 is a transverse sectional view of said tramway-car. Fig. 5 is a perspective view of one of the pallets. Fig. 6 is a bottom plan view of the same. Fig. 7 is a longitudinal sectional view of one of the pallets. Fig. 8 is a sectional view taken on the line *xx*, Fig. 1. Fig. 9 is a sectional view taken on the line *yy*, Fig. 1.

Like numerals of reference indicate like parts in all the figures.

The brick-yard which is to be equipped with my invention may either be open or inclosed by means of a temporary or permanent shed, according to the size of the yard and to the circumstances of the case.

In the diagram Fig. 1 of the drawings, 1 designates the molder's table, 2 the sand-box, and 3 the brick-machine, all of which are of ordinary construction.

4 designates a stationary rack composed of

uprights 5 5, (see Fig. 8,) connected at the top by cross-bars 6 and provided on their inner sides with a series of longitudinal ledges 7, adapted to support the pallets. This stationary rack should be so located at one corner of the yard as to be convenient to the molder's table and to the brick-machine and sand-box, so as to enable the the pallets to be conveniently deposited upon the ledges thereof as they are being filled with bricks.

8 designates a tramway-track, starting at the rack 4 and running down along one side of the yard. This track should be slightly inclined, the downgrade commencing at the rear end of the rack 4 and ending at the terminal end of the track.

9 9 designate a series of drying-racks arranged at right angles to the tramway-track 8. Each of these racks is composed of a series of uprights arranged in pairs and connected at their upper ends by cross-bars 10. To the inner sides of these uprights are secured longitudinal ledges 11, adapted to support the pallets. These ledges 11 correspond in number to the ledges 7 of the rack 4, but each of the racks 9 may be of a length considerably exceeding the length, and consequently the capacity, of the said rack 4. For reasons which will hereinafter appear it may, however, be stated that the racks 9 should not be made excessively long.

12 designates the car, which is arranged to travel upon the tramway 8. This car is composed of a low bed or base 13, mounted upon axles 14, having wheels 15, and having a central vertical stem or spindle 16, upon which a turn-table 17 is mounted to revolve. Said turn-table is provided at its four corners with uprights 18, the upper ends of which are connected by cross-bars 19. The uprights are also secured longitudinally upon the inner sides by means of the ledges 20. It may be here stated that the uprights of the racks 4 and 9 and those of the platform or turn-table 17 upon the car 12 should be located at exactly the same distance apart, thereby enabling pallets of the same width to be supported upon their ledges or shelves. It will also be understood that the several tiers of ledges 7, 11, and 20 are to be mounted at exactly the same height and at the same distance apart, this being for the obvious purpose of



enabling the loaded pallets to be easily transferred from the rack 4 to the tramway-car, and from the latter to the racks 9. The racks 9 or the ledges 11 thereon should be slightly inclined from the tramway-track 8 toward their opposite or discharge ends, this being for the purpose of enabling the pallets to be conveniently moved along the said racks. A tramway-track 22, which may be parallel to the track 8, is constructed along the discharge ends of the racks 9, and is inclined downwardly in the direction of the kiln, which may be located at the point indicated by 23. A tramway-car 24, of suitable construction, is arranged to travel upon the track 22, the ledges or shelves of the said car being arranged to register with the discharge ends of the ledges 11 of the racks 9.

25 designates a tramway over which the wet clay may be conveyed to the molder's table.

Fig. 5 shows one of the pallets which is used in connection with my invention. Said pallets may be constructed of solid boards; but I prefer to construct them each of a series of slats 27, connected by end pieces 28, which have bearings for the flanged wheels or rollers 29, whereby the said pallets are adapted to travel upon the ledges of the several racks and of the cars, which are used for conveying the said pallets from place to place. Each of the pallets is provided at its front end with a spring catch or latch 30, adapted to engage a beveled recess 31 at the rear edge of the adjacent pallet, and the meeting edges of the pallets are provided, respectively, with dowel-pins 32 and recesses 33 to assist in making the connection between the same. These dowel-pins and recesses may, however, be dispensed with when desired.

In the operation of my invention the bricks as fast as they are being made are deposited upon the pallets, which are in turn arranged upon the ledges or shelves of the rack 4. When the said rack has been filled, the tramway-car 12 is backed up in contact therewith, and the pallets may then easily be shoved from the ledges 7 of the rack 4 onto the ledges 20 of the said tramway-car. The latter is then carried down the track until it reaches the rack 9, upon which it shall be desired to deposit the pallets. The platform or turntable 17 of the tramway-car 12 is swung so as to bring the ledges 20 into alignment with the ledges 11 of the rack 9, and each tier of pallets may then be readily shoved off the tramway-car and onto the supporting-rack. The first pallets, which are deposited upon each of the supporting-racks, are moved down to the discharge end of said rack, and the operation is repeated until the rack in question has been filled, after which the next rack is to be filled in like manner. The apportionment of work should be such as to enable the molders to fill the receiving-rack 4 by the time the tramway-car has been discharged of its load and returned to the receiving-rack. The bricks are air-dried upon the racks 9

with or without turning the bricks, according to whether the pallets have been constructed of solid boards or of slats. Lanes or alleys 35 are left open between the drying-racks of sufficient width to permit of access being had to any part of the same. Each of the drying-racks 9 is provided with a cover 36, composed of two parts hinged together at the center and provided with a strip 37 to cover the joint between said parts, which are normally supported upon the cross-bars connecting the uprights of said racks. These roofs or covers on either side thereof may be raised for the purpose of admitting heat and light. In rainy weather they may be lowered, and the sides of the racks may then in addition be protected by tarpaulin covers. When the process of air-drying the bricks has been completed, the pallets may be discharged from the racks 9 onto the tramway-car 24, whereby they may be conveyed to the kiln, where the bricks are burned in the usual manner.

The advantages of my invention will, it is thought, be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. The principal advantage gained is the saving in room, which will be found to be very considerable. It has been customary to dry the bricks upon the surface of the ground, and necessarily a very considerable area has been required in order to afford room for the output of a large brickyard. By my invention twelve or more tiers may easily be piled in the drying frames or racks, thereby very materially reducing the area required for the purpose of drying the bricks. This feature of my invention will be found of great importance in the vicinity of large cities, where the ground is expensive.

Another important advantage of my invention is the facility with which the bricks may be handled. It has been customary to carry the pallets from the molder's table one by one to the spot where the bricks have been deposited for drying. By my invention a very large number of pallets may thus be transferred at one time with but little more labor than has been heretofore required to transfer a single pallet. The relative arrangement of the receiving-rack, the drying-racks, and the tramway-tracks is such that the pallets when loaded are constantly moved on a downgrade, thereby greatly facilitating the transfer of the loaded pallets. The ends of the receiving and drying racks are to be provided with pivoted catches, (shown at 40,) by means of which the tramway-cars may be held in alignment with the said racks while the pallets are being transferred.

It will be understood that in practice numerous modifications in the construction of the details of the invention may be made, and I reserve the right to any such changes and modifications as may be made without departing from the spirit of my invention. Thus, for instance, may the spaces or alleys 35 between the drying-racks be used for support-



ing pallets for drying bricks when slat-pallets, which do not necessitate the turning of the bricks, are used.

Having thus described my invention, I claim—

1. In a brick-yard plant, a receiving-rack arranged in proximity to the molder's table, and having a vertical series of parallel and approximately horizontal shelves or ledges to receive and support the pallets, substantially as set forth.

2. In a brick-yard plant, the combination, with the receiving-rack, of the tramway-track extending from the discharge end of the same, and the drying-racks arranged at right angles to the said tramway-track, the said receiving-rack and drying-racks being provided with vertical series of parallel shelves or ledges arranged at equal distances apart for the purpose of supporting the pallets, substantially as set forth.

3. In a brick-yard plant, the combination, with the receiving and drying racks having shelves or ledges, of the tramway-track extending from the discharge end of the receiving-rack and passing at right angles to the drying-racks, and the tramway-car having a pivoted platform or turn-table supporting the rack having a series of shelves or ledges corresponding in number and location to those of the receiving and drying racks, substantially as set forth.

4. In a brick-yard plant, the combination of the tramway-track, the drying-racks constructed at right angles thereto and provided at their ends with pivoted catches, and the tramway-car having a pivoted platform or turn-table supporting a rack provided with shelves or ledges corresponding in number and location to those of the drying-racks, substantially as set forth.

5. The herein-described tramway-car, consisting of a base having a central upwardly-extending spindle, a platform or turn-table mounted pivotally upon the said spindle, and a rack constructed upon the said turn-table and provided with a series of ledges or shelves to support the pallets, substantially as set forth.

6. The combination, with the drying-racks, of the tramway-track constructed at right angles to the said racks and built on a downgrade to the kiln, and the tramway-car traveling upon said track and having a pivoted platform or turn-table supporting a rack provided with shelves or ledges to support the pallets, substantially as set forth.

7. In a brick-yard plant, the combination of a receiving-rack, the tramway-track extending on a downgrade from the discharge end of said receiving-rack, the drying-racks built at right angles to the said track and having

shelves or ledges inclined downwardly to their discharge ends, the tramway-track constructed at the discharge ends of the drying-racks and built on a downgrade to the brick-kiln, and the tramway-cars having pivoted platforms or turn-tables supporting racks having shelves or ledges to receive the pallets, substantially as set forth.

8. The combination, with the racks having shelves or ledges, of the pallets constructed of slats and provided with flanged wheels or rollers, substantially as set forth.

9. The herein-described brick-pallets, composed of slats the ends of which are connected by strips having bearings or perforations, and the flanged wheels or rollers mounted in the said bearings, substantially as set forth.

10. The herein-described pallets, provided with latches or catches whereby they may be separably connected, substantially as and for the purpose set forth.

11. In a brick-yard plant, the combination of the receiving-rack and the drying-racks having inclined ledges or shelves, with the tramway-cars having pivoted platforms or turn-tables and supporting racks having shelves or ledges, and the pallets having flanged wheels or rollers, and latches or catches whereby the said pallets may be separably connected, substantially as set forth.

12. A brick-pallet provided with flanged wheels or rollers and having at its front edge a spring latch or catch and at its rear edge a recess to receive the catch of the next adjoining pallet, substantially as set forth.

13. A brick-yard plant comprising the receiving-rack arranged in proximity to the molder's table and having inclined shelves or ledges, the tramway-track extending on a downgrade from the discharge end of the receiving-rack, the drying-racks constructed at right angles to the said track and having inclined shelves or ledges, the tramway-track constructed at right angles to the discharge ends of the drying-racks and built on a downgrade to the kiln, the tramway-cars having pivoted platforms or turn-tables supporting the racks having shelves or ledges, the pivoted catches upon the ends of the receiving and drying racks to hold the racks of the tramway-cars in alignment therewith, and the pallets having flanged wheels or rollers and provided with latches or catches, whereby they may be separably connected, substantially as and for the purpose herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS JEFFERSON MONK.

Witnesses:

J. M. DANNER,

J. W. WILLIS.