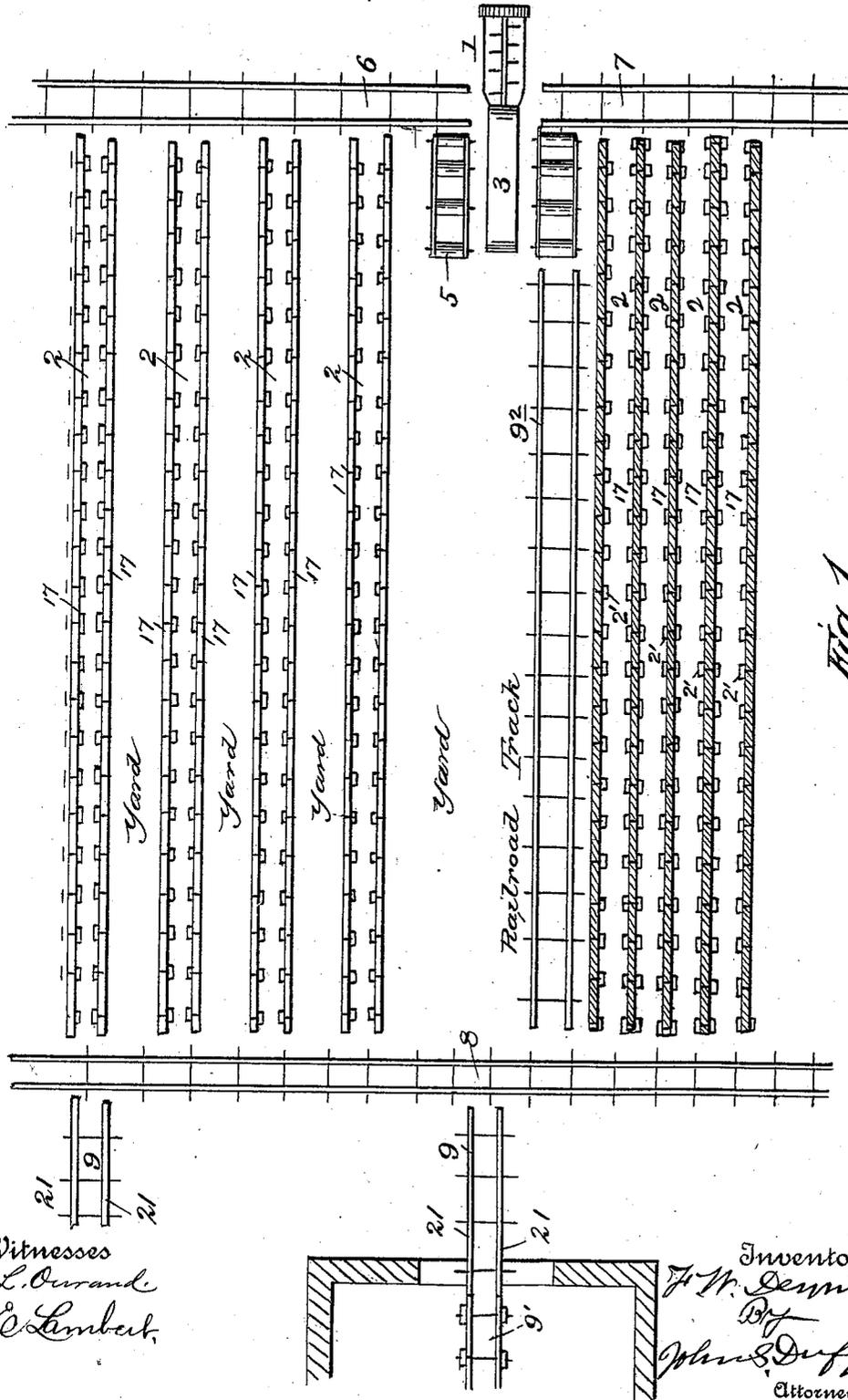


F. W. DENNIS.  
SYSTEM FOR HANDLING AND DRYING BRICK.

APPLICATION FILED NOV. 20, 1902.

NO MODEL.

3 SHEETS—SHEET 1



Witnesses  
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3 SHEETS—SHEET 2.

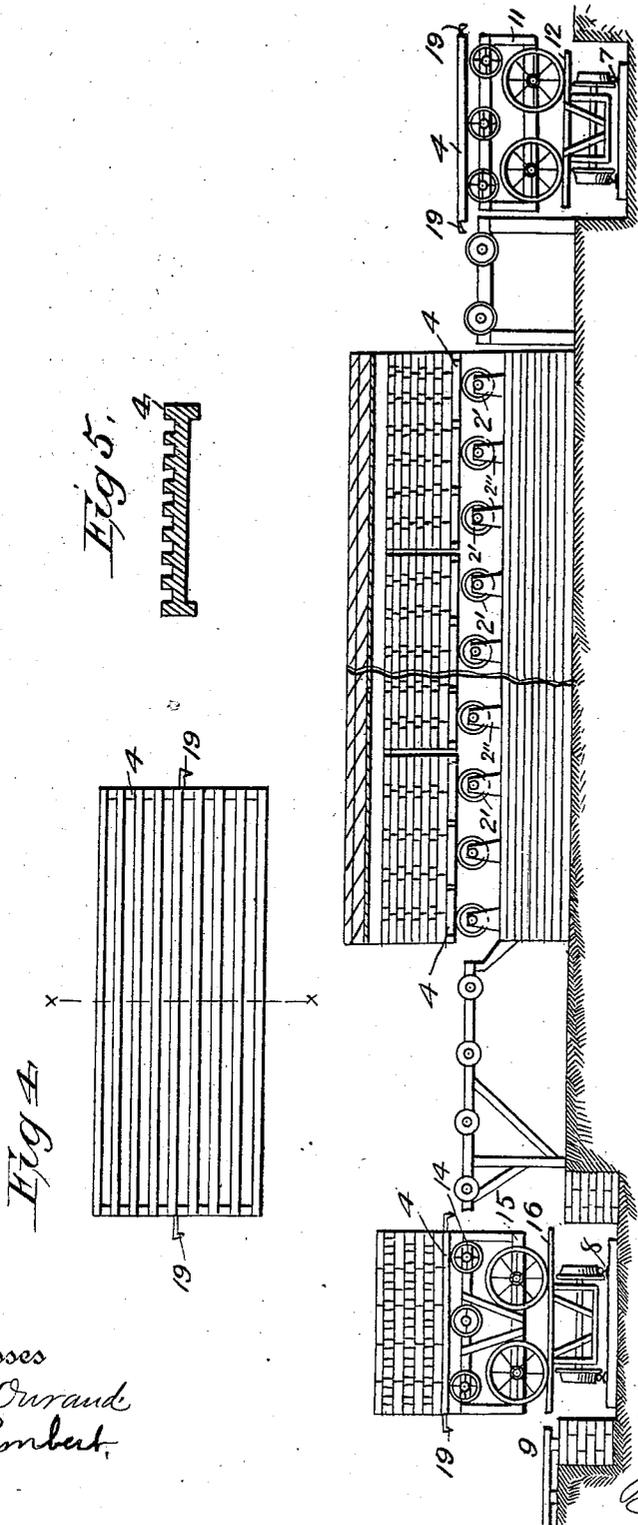


Fig. 2

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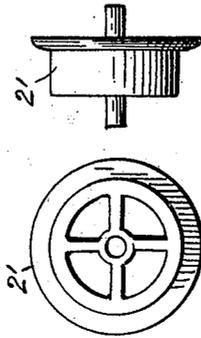
PATENTED APR. 14, 1903.

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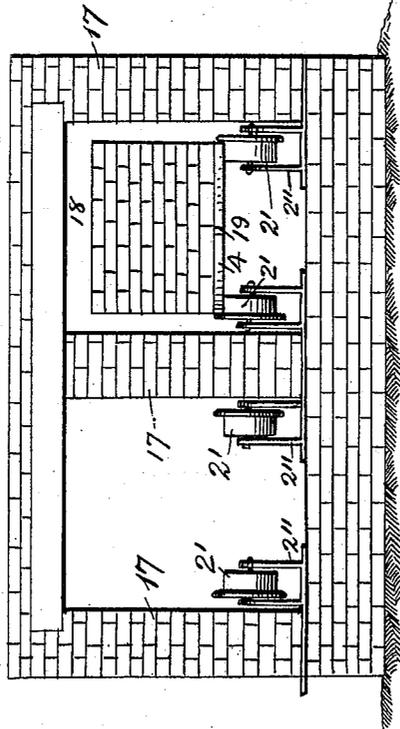
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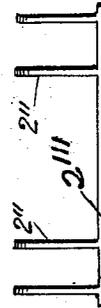
3 SHEETS—SHEET 3.



*Fig. 6.*



*Fig. 3.*



*Fig. 7.*

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# UNITED STATES PATENT OFFICE.

FREDERICK W. DENNIS, OF ATLANTA, GEORGIA.

## SYSTEM FOR HANDLING AND DRYING BRICK.

SPECIFICATION forming part of Letters Patent No. 725,323, dated April 14, 1903.

Application filed November 20, 1902. Serial No. 132,084. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK W. DENNIS, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Systems for Handling and Drying Brick, of which the following is a specification.

My invention is a new system for handling and drying brick; and it consists in having the drying-rooms divided into proper tunnels, each tunnel provided with rollers on which are placed pallets of green or undried brick, which pallets are loaded at the brick-machine on a set of rollers, which rollers are stationary on an off-bearing table; also, a transfer-car with a set of rollers on top of the car. These rollers on the car are on a level with the rollers on the off-bearing table, so that a pallet of brick when loaded stands on a transfer-track at right angles with the drier-tunnels, so that you can transfer the pallet of brick to each tunnel. In the tunnels are a set of rollers about thirty inches apart the full length of the tunnels. These rollers in the tunnels are on a level with the rollers which are on top of the transfer-car on the transfer-track. The tunnels are one hundred and fifty-one feet long, and there is a fall of twenty-four inches in the one hundred and fifty-one feet, so that the pallets of brick can be rolled easily. At the lower end of the drier-tunnels there is a transfer-track running at right angles with the drier-tunnels. There is a transfer-car on this track, but no rollers on this car; but there is another common car with rollers on it which sets on the transfer-car, and when it is on the transfer-car it is on a level with the rollers at the lower end of the tunnels to receive a pallet of dry brick to go to the brick-kiln. This car, with the pallet of brick, is on the transfer-car and can be pushed along the transfer-track 8 on the transfer-car 16 until it gets on right angles with track 9 running into kiln. Then the car 15 is rolled off the transfer-car 16 into the kiln.

In the kiln I have a bench or table with stationary rollers on top. These rollers on the table are on a level with the rollers 14 on the car 15, with a pallet 4 of brick. This pallet 4 of brick is rolled off the top of the car 15

onto the bench or table, so that the operator may go back and bring another pallet of brick, and so on. The empty pallets are taken back to the brick-machine on a car for that purpose on a track which runs to the brick-machine.

In the accompanying drawings, Figure 1 is a bottom plan view of my drying-room, the location of a few of the rollers, the brick-machine, the drying-tunnels, the kiln-track, the roller-walls, a few of the rollers and the transfer-tracks and the kiln-tracks, and the rollers on the off-bearing table, where the brick are loaded onto the pallets ready to go on the transfer-car to the drying-tunnels. Fig. 2 is a longitudinal view of the drying-room cut through near its center, showing at one end the transfer-track. Transfer-car with rollers on frame and pallet of green brick and at the other or lower end a transfer-track and car with rollers and a pallet of dry brick. Fig. 3 is a sectional view cut through two of the tunnels, showing the rollers and a pallet loaded with green brick on one pair of the rollers. Fig. 4 is a plan view of pallet. Fig. 5 is a cross-sectional view of Fig. 4 on the line *x x*. Fig. 6 is an elevation of one of the rollers. Fig. 7 is an end view of one of the bearings for the rollers to set in.

All tunnel driers or dry-kilns have had to use a car with pallets. I use the pallets, but have done away with the cars, which were very expensive. I use a system of rollers of any convenient size, which may be made of wood, iron, or any suitable material. My rollers 2' revolve in stationary bearings 2'', which are about thirty inches apart the full length of the tunnels and can easily be put in any drier.

My invention is described as follows: The brick-machine 1 is situated at one end of the drier-tunnels 2. The brick are taken off the belt 3 of the brick-machine and loaded onto the pallets 4. (See Figs. 4 and 5.) These pallets are placed on rollers 5 on off-bearing tables near the brick-machine. At the end of the pallets when loaded with brick are situated two transfer-tracks 6 and 7. The transfer-track marked 6 is used for transferring green brick for open-air drying. The transfer-track marked 7 is used for transferring green brick into the drier-tunnels, and at

the other or lower end of tunnel is another cross transfer-track 8 to transfer the dry brick to another longitudinal track 9, which tracks are used to roll a pallet of brick on a car, with  
 5 rollers on top, which pallet of brick sets on the transfer-car to be taken to the kiln. Standing on the transfer-track 7 is a car 12, with a set of rollers having a frame 11 mounted on it, and on said rollers is mounted a pallet  
 10 4. This transfer-car 12 takes the pallet of brick 4, with the roller-frame and rollers 11, to the end of either one of the tunnels marked 2. These tunnels 2 have one-eighth of an inch fall to the foot toward the kiln.  
 15 At the other or lower end of the tunnel, Fig. 2, is a pallet 4, loaded with dry brick. Under this pallet is another roller-frame and set of rollers 14, mounted on another car 15, and this car 15 is mounted on a transfer-car  
 20 marked 16. These cars are moved along to the track 9 and unloaded onto the roller bench or table 9', and then the car 15, with the roller-frames and rollers 14 and empty pallets 4 is again run back onto the transfer-car 16 and the pallets onto the track 9<sup>2</sup>, (marked "Rail-  
 25 road track,") and thence back to the off-bearing tables 5. These empty pallets are taken back on a special car eight or ten at a time. The brick are taken right from the brick-machine and are rolled in at the upper end of the  
 30 tunnels just as fast as pallets of dry brick are rolled out at the other or lower end of the tunnels, thence to the kiln on the pallets, and as soon as said pallets are unloaded are taken  
 35 back to the brick-machine to be used again. It will be noticed that on the left-hand side of the machine I use the same system of rollers for open-air drying as I do in the tunnels for hot-air drying, or I can use sheds or  
 40 covers and use the same roller system to handle and dry the brick.

By reference to Fig. 3 it will be seen that a four-inch wall 17 is built between each tunnel, and in said figure there is shown in one  
 45 of the tunnels a pallet 4, carrying a load of brick, which I number 18. Each pallet has a catch 19 on each end, so that all the pallets may be hooked together while they are in the drier-tunnels. The rollers 2' are set in  
 50 bearings 2'', which bearings are set on a base-plate 2''', which is built into said walls 17. It will also be seen on the end where the brick are taken from the brick-machine that there is a set of rollers at right angles with the  
 55 transfer-track and the rollers are on a level with the rollers on the transfer-car frame. Then you push the transfer-car along the transfer-track in front of either tunnel, and the rollers at the end of the tunnels are on a  
 60 level with the rollers on the transfer-car, which the pallet of green brick are set on, to be rolled off onto the rollers in the tunnels, and on the other or lower end of the tunnel the rollers are on a level with the rollers of  
 65 the car 15, which set on a transfer-car 16, to transfer said car and pallet of brick until it

gets on right angles with whichever kiln you are setting brick in. Then said car 15 is rolled off the transfer-car 16 into the kiln on track 9. The transfer-car 16 takes brick  
 70 from any one of the tunnels to either kiln-track 9. It will be seen that the transfer-track 8 on the lower end of the drier is two feet below grade, which brings the rails of the transfer-car 16 on a level with the rails  
 75 21 of the right-angle track 9.

This system can be used out of doors as well as in when it is dry weather. Also lumber or anything can be dried this way, and this roller system can be put in any drier  
 80 which is already built and can be used instead of cars.

At the kiln I have shown two benches or tables with rollers, and these rollers are on a level with the rollers on the car, so the man  
 85 that pushes the car of brick rolls the pallet of brick off the car onto the rollers on the bench or table and goes back after another loaded pallet of brick, and so on.

In considering the above description it is  
 90 to be understood that the right-hand end of the sheets, where the brick-machine is supposed to be situated, is to be considered the upper end, and the left-hand end of the sheets, where the brick-kilns are supposed to  
 95 be situated, are the lower ends of the tunnels.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a new system for handling and drying  
 100 brick, a drying-room divided into tunnels by walls; bearings mounted on said walls; rollers journaled in said bearings, adapted to carry pallets from one end of said tunnels to the other; a brick-machine situated at the  
 105 upper ends of the tunnels; rollers situated on off-bearing tables on each side of the brick-machine; transfer-tracks running at right angles to, and at the upper ends of said tunnels, one on each side of the brick-machine;  
 110 a transfer-track running at right angles to, and at the lower ends of said tunnels; a transfer-track running from the lower transfer-track to the brick-machine; a transfer-track running at right angles from the lower trans-  
 115 fer-track to the kiln, substantially as shown and described and for the purposes set forth.

2. In a new system for handling and drying  
 120 brick, a drying-room divided into tunnels by walls; bearings mounted on said walls; rollers journaled in said bearings, adapted to carry pallets from one end of said tunnels to the other; a brick-machine situated at the upper ends of the tunnels; rollers situated on off-bearing tables on each side of the brick-  
 125 machine; transfer-tracks running at right angles to, and at the upper ends of said tunnels, one on each side of the brick-machine; a transfer-track running at right angles to, and at the lower ends of said tunnels; trans-  
 130 fer-tracks running from the lower transfer-track to the brick-machine; transfer-tracks

running at right angles from the lower transfer-track to the kilns, substantially as shown and described and for the purposes set forth.

3. In a new system for handling and drying  
5 brick, a drying-room divided into tunnels,  
having about one-eighth of an inch fall to the  
foot, by walls; said walls running lengthwise  
between each tunnel; bearings built in said  
walls; rollers journaled in said bearings,  
10 adapted to carry pallets from one end of said  
tunnels to the other; a brick-machine hav-  
ing a brick-bearing belt at the upper ends of  
the tunnels; rollers situated on off-bearing  
tables on each side of the brick-machine belt;  
15 transfer-tracks running at right angles to,  
and at the upper ends of said tunnels; a trans-  
fer-car adapted to run on said transfer-track;  
a frame situated on said transfer-track, and  
carrying rollers on a line with the rollers in  
20 the bearings on the walls, between the tun-  
nels, substantially as shown and described  
and for the purposes set forth.

4. In a new system for handling and drying  
brick, a drying-room divided into tunnels,  
25 having about one-eighth of an inch fall to the  
foot, by walls; said walls running lengthwise  
between each tunnel; bearings built in said  
walls; rollers journaled in said bearings,  
adapted to carry pallets from one end of said  
30 tunnels to the other; a brick-machine having  
a brick-bearing belt at the upper ends of the  
tunnels; rollers situated on off-bearing ta-  
bles on each side of the brick-machine belt;  
transfer-tracks running at right angles to, and  
35 at the upper ends of said tunnels; a transfer-  
car adapted to run on said transfer-track; a  
frame situated on said transfer-track, and  
carrying rollers on a line with the rollers in  
the bearings on the walls, between the tun-  
40 nels; a transfer-track running at right angles  
to, and at the lower ends of said tunnels, a  
transfer-car adapted to run on the lower trans-  
fer-track, its platform being on a level with  
the tracks that transfer to the brick-machine;  
45 a car situated on said last-mentioned trans-  
fer-car; a frame bearing rollers situated on  
the last-mentioned car; said rollers being on  
a line with the rollers in the bearings in the  
walls, between the tunnels; transfer-tracks

at right angles to the lower transfer-track, 50  
and adapted to carry the last-mentioned car  
to the kilns, a brick-machine situated at the  
upper ends of said tunnels, and a railroad-  
track adapted to carry pallets from the lower  
track to said brick-machine, substantially as 55  
shown and described and for the purposes  
set forth.

5. In a new system for handling and drying  
brick, a drying-room divided into tunnels,  
having about one-eighth of an inch fall to the 60  
foot, by walls; said walls running lengthwise  
between each tunnel; bearings built in said  
walls; rollers journaled in said bearings,  
adapted to carry pallets from one end of said  
tunnels to the other; a brick-machine having 65  
a brick-bearing belt at the upper ends of the  
tunnels; rollers situated on off-bearing tables  
on each side of the brick-machine belt; trans-  
fer-tracks running at right angles to, and at  
the upper ends of said tunnels; a transfer- 70  
car adapted to run on said transfer-track; a  
frame situated on said transfer-track, and  
carrying rollers on a line with the rollers in  
the bearings on the walls, between the tun-  
75 nels; a transfer-track running at right an-  
gles to, and at the lower ends of said tunnels, a  
transfer-car adapted to run on the lower trans-  
fer-tracks, its platform being on a level with  
the tracks that transfer to the brick-machine;  
80 a car situated on said last-mentioned transfer-  
car; a frame bearing rollers situated on the  
last-mentioned car; said rollers being on a line  
with the rollers in the bearings on the walls,  
between the tunnels; transfer-tracks at right  
85 angles to the lower transfer-track, and adapt-  
ed to carry the last-mentioned car to the  
kilns; a brick-machine situated at the upper  
ends of said tunnels, and a railroad-track  
adapted to carry pallets from the lower track  
90 to said brick-machine, substantially as shown  
and described and for the purposes set forth.

In testimony whereof I affix my signature  
in presence of two witnesses.

FREDERICK W. DENNIS.

Witnesses:

EMMETT McELREATH,  
S. E. BOMAR.