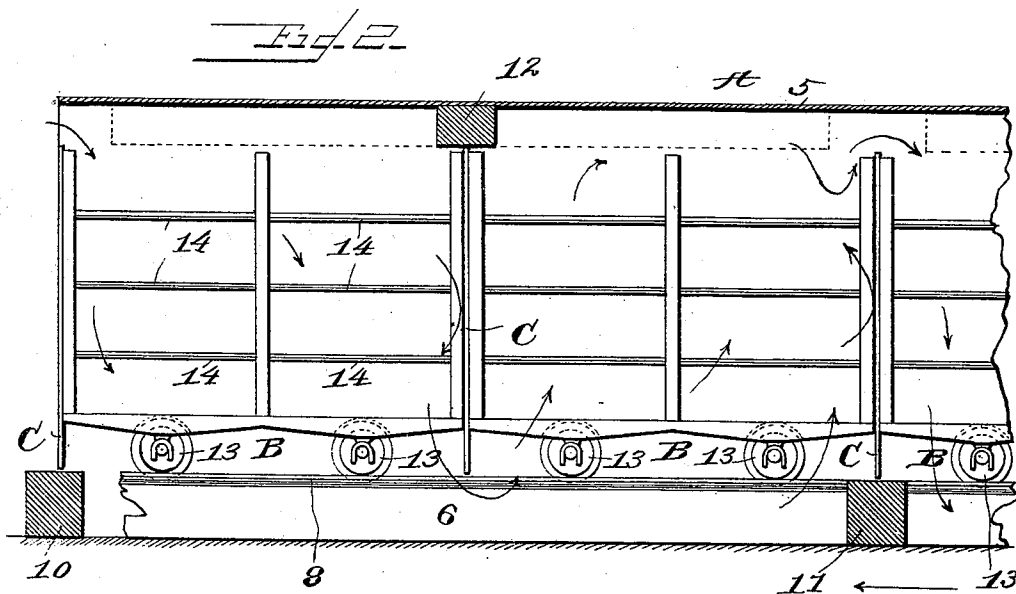
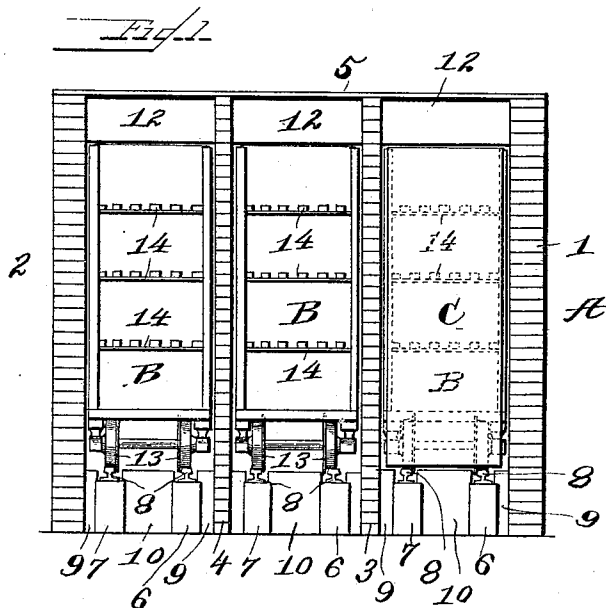


(No Model.)

J. C. TITUS.
DRY KILN FOR POTTERY.

No. 520,869.

Patented June 5, 1894.



WITNESSES:

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JOHN C. TITUS, OF NEW BREMEN, OHIO, ASSIGNOR OF ONE-HALF TO W. C. SCHMIDT, OF SAME PLACE.

DRY-KILN FOR POTTERY.

SPECIFICATION forming part of Letters Patent No. 520,869, dated June 5, 1894.

Application filed February 19 1894. Serial No. 500,664. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. TITUS, a citizen of the United States, residing at New Bremen, in the county of Auglaize and State of Ohio, have invented certain new and useful Improvements in Dry-Kilns for Pottery, Clayware, Lumber, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in drying-kilns for pottery, clay-ware and lumber; and the object is to provide improved means or apparatus for continually drying any of the articles or product mentioned, fully, completely and expeditiously.

My invention consists in the novel construction of parts and their combination, as herein-after fully specified, and particularly pointed out and distinctly claimed.

I have fully and clearly illustrated my invention in the accompanying papers, wherein—

Figure 1 is an end view of the kiln divided in compartments, and having the drying-cars run therein; one of the detachable and removable partitions being shown arranged on the end of one of the cars. Fig. 2 is a longitudinal section through the kiln, showing the cars arranged therein.

A designates the kiln, in this instance shown as composed of side walls 1, 2, and intermediate walls 3, 4. It will be perceived that the kiln may be composed of only the side walls, in the constructions consisting of but one compartment, the additional compartment being made by the interposition of the longitudinally interposed partitions, the whole being topped out by a suitable cover 5. In the bottom of the kiln are arranged track-sills 6, 7, having rails 8 fastened thereon in the usual manner. The spaces between the sills and the walls are filled in by stop-pieces 9, to prevent the currents from following through the spaces between the sills and the walls. The kiln may be of any length desired, and at the length of each two cars, between the sills of each track are interposed draft-stops 10, 11, to deflect or turn the currents up through the cars, and intermediate of the stops 10, 11, in the top of the kiln is an air-stop 12,

which when the cars abut rests over the abutting ends of the cars as shown in Fig. 2 of the drawings, and turns the currents down, as indicated by the arrows in Fig. 2.

B designates the drying-cars mounted on wheels 13, having axles as usual. The cars B are provided with shelves 14 composed of slats arranged with spaces between them, through which the air currents have passage. The sides of the car fill the spaces between the walls, but do not fit so snugly, as not to move freely in the compartments. On the end of each car are detachably secured plates C closing the ends, and reaching down to the rails of the track substantially as seen in Fig. 2 of the drawings. These plates stop the progress of the currents from flowing directly from one car to the other, but force or deflect the currents down as indicated in the drawings, to escape through the open space between the sills of the tracks under the lower end of the plate C, and then rising up through the next car, as shown. The upper ends of the plates C rest under the lower face of the upper air-stop and the lower ends of alternate plates rest over or on the air stops in the bottom of the kiln between the sills as shown in Fig. 2 of the drawings.

The system of drying herein contemplated is known as the tunnel or perpetual drying system, and in my improved kiln is accomplished as follows:—The wares, or other material, are loaded on the cars and the cars run into one end of the kiln, and hot or dry air introduced at the opposite end by any suitable blast or means. As the first car-load is run in it is stopped with its partition or plate directly over the first air stop, the second car has its closing-plate directly under the upper air stop in the top of the kiln, and so on until the kiln is filled. The drying current enters over the plate of the first car, and as the second closing plate is in contact with the upper air stop, the current is forced down through the ware on the first car and escapes through the passage between the sills and lower end of the closing plate to the second car and rises up through the ware on that car and passes over the upper end of the next closing plate and down through the next car. When the material on the first car has become suf-

ficiently dry, it is run out of the kiln, and the whole train correspondingly moved up to take the place, and a car loaded with green material run in from the other end of the kiln, and so on in succession. It will be observed that the cars enter the kiln at the end opposite to the ingress of the currents, and that the green wares come in contact only with saturated or damp air and the wares gradually advanced to a hotter and drier temperature; this gradual advancement preventing the wares from cracking. The currents are forced up and down alternately through all the wares, on adjacent cars. There may be one or more closing plates or partitions to each car to suit circumstances, with stops arranged to correspond.

What I claim is—

1. In a drying kiln, the combination with the side walls and roof thereof, of tracks laid

in the bottom of the kiln, cars on the track, transverse air stops located in both bottom and top of kiln, and closing plates at the end of each car alternately abutting against said air stops, substantially as described.

2. In a drying kiln, the combination with the side walls thereof, of tracks laid in the bottom of the kiln, cars on the track, transverse air stops located in both bottom and top of kiln, and detachable deflecting closing plates at the end of each car alternately abutting against said air stops, substantially as described.

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

JOHN C. TITUS.

Witnesses:

HENRY J. C. LANE,
HERBERT SCHULENBERG.