Dec. 9, 1924.

1,518,516

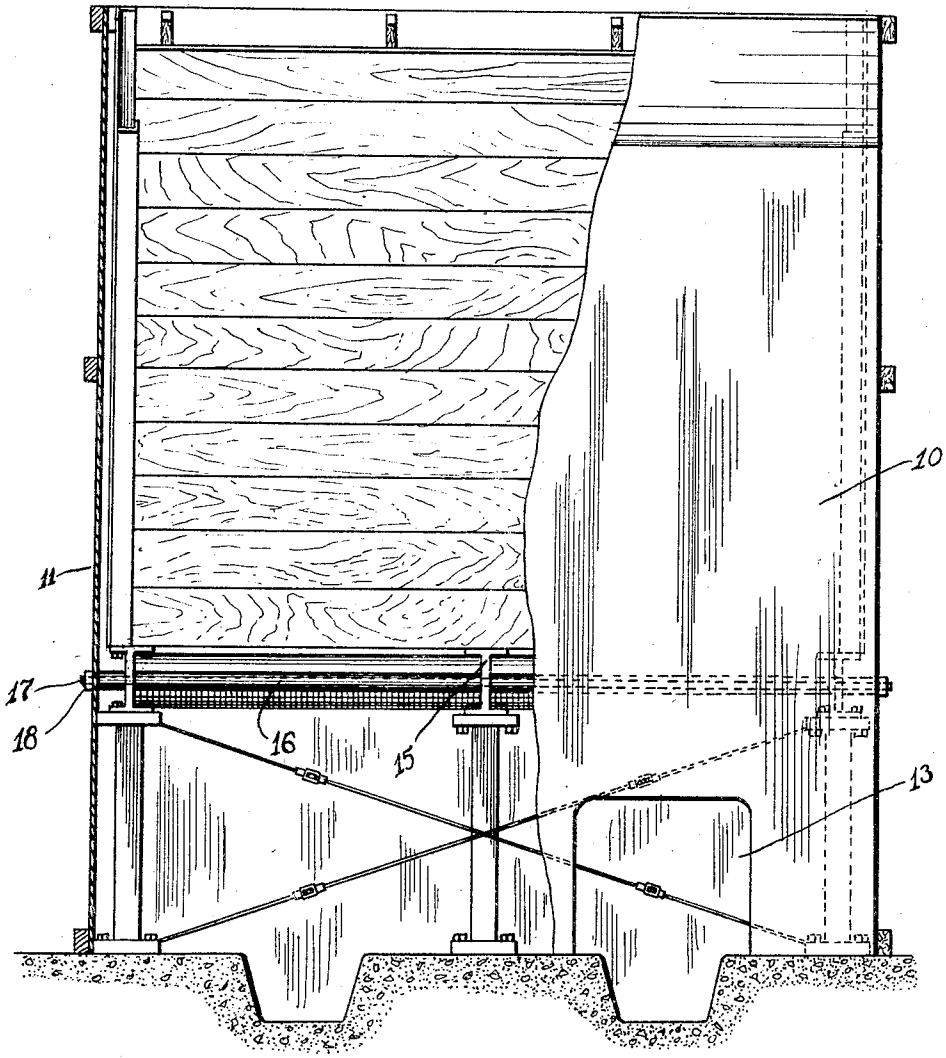
P. T. JONES ET AL

LUMBER DRY KILN

Filed Dec. 8, 1923

2 Sheets-Sheet 1

Fig. 1.



Inventor

P. T. Jones &
E. Roy Taylor

By J. Clarkson

Attorney

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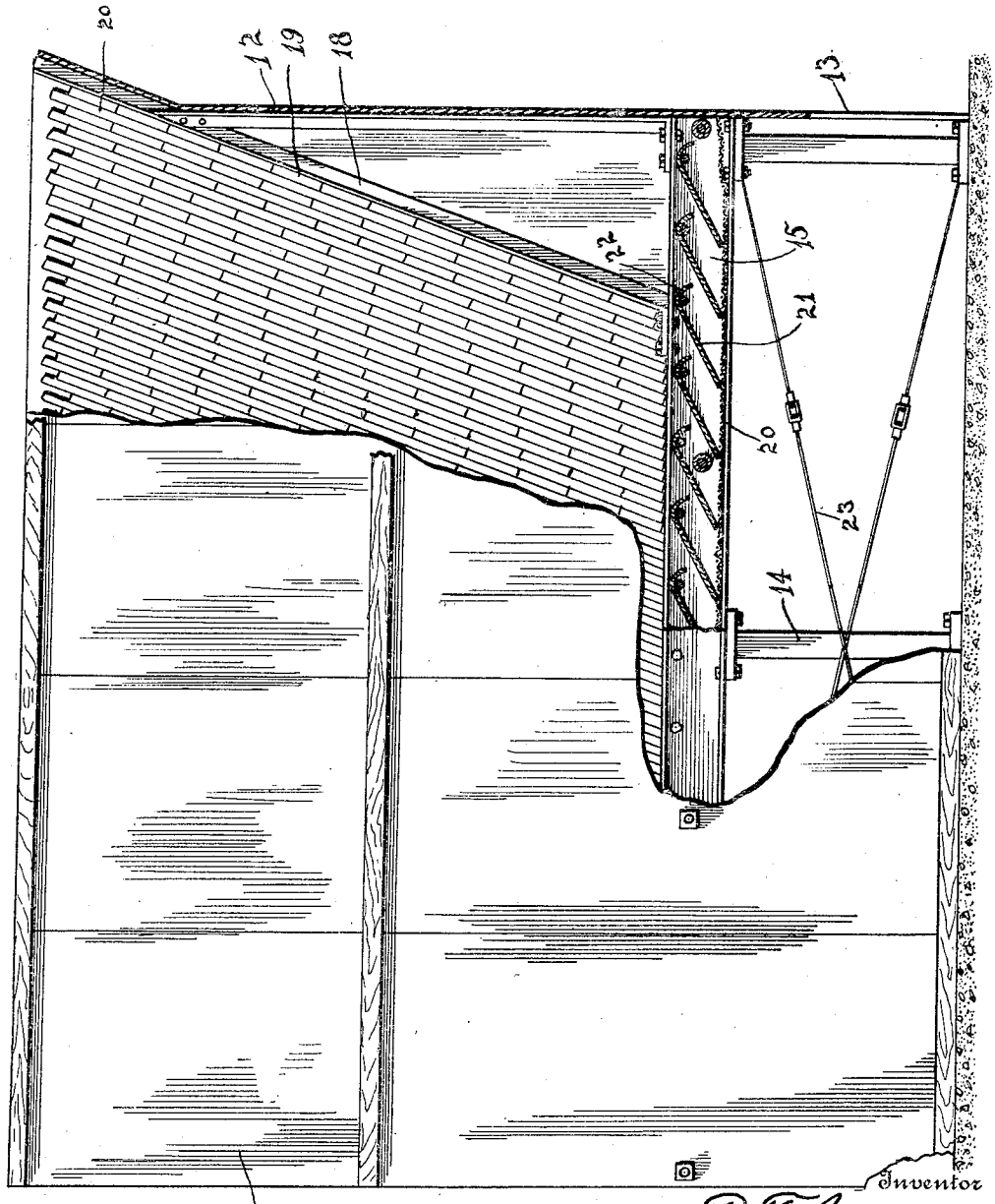


Fig. 2.

Inventor
P. T. Jones &
E. Ray Taylor.
By J. Clarkson
Attorney

Patented Dec. 9, 1924. 1,518,516

UNITED STATES PATENT OFFICE.

PAUL T. JONES, OF CORINTH, MISSISSIPPI, AND EDWARD ROY TAYLOR, OF TEXAS, ALABAMA.

LUMBER DRY KILN.

Application filed December 8, 1923. Serial No. 679,378.

To all whom it may concern:

Be it known that PAUL T. JONES and EDWARD ROY TAYLOR, citizens of the United States of America, residing at Corinth, county of Alcorn, and State of Mississippi, and Texas, county of Marion, Alabama, respectively, have invented certain new and useful Improvements in Lumber Dry Kilns, of which the following is a specification.

This invention relates to lumbering and has special reference to drying kiln for lumber.

More particularly the invention relates to a lumber kiln wherein the products of combustion from the usual burning of the slab pile are utilized for drying the lumber, the kiln being termed a smoke kiln.

Smoke kilns have been used heretofore but they have generally been so constructed that there was considerable liability of fire, the kiln being made of wood and consequently the use of such smoke kilns, while very economical in construction and superior in many ways to steam kilns, has entailed frequent losses from the destruction of the kiln and its contents.

The principal and most important object of the present invention is to provide an improved construction of smoke kiln wherein the fire loss will be eliminated.

A second important object of the invention is to provide an improved kiln arrangement in which sparks from the smoke flue will be prevented from reaching the lumber in the kiln.

A third important object of the invention is to provide a novel kiln arrangement wherein accidental fire can be readily put out.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is an end view with part of the front broken away and disclosing the construction of the improved kiln.

Figure 2 is a side view with part of the side broken away for the purpose of showing the interior of the kiln.

In the present embodiment of the invention there is shown a kiln having a front wall 10, side wall 11 and rear wall 12. In the front and rear wall are provided flue openings 13 so that a suitable flue may be connected at one end to admit the products of combustion from the slab pile and a similar exhaust flue or stack may be connected at the other end, although this is not an essential feature as will be more clearly understood hereinafter.

Within the casing thus formed there are provided spaced columns 14 which may be of any desired shape or construction but are preferably what is known as pipe columns. These columns support longitudinal I-beams 15 and between these beams and also between the outer beams and the casing are pipe spacers 16 through which extend the transverse tie rods 17 having the nuts 18 on their ends. These beams 15 form the supports for the lumber to be dried and preferably at one end of the kiln there is provided on each beam an upwardly extending inclined rail or support 19 against which the sorted lumber will be stacked edge wise as shown in Figure 2, successive layers 19 of the lumber being held in spaced relation by spacing strips 20. In this way a free circulation of air and the flue gases may take place between the layers of lumber.

However, if no means were taken to prevent such action it is obvious that sparks would pass up in the spaces between the layer ends and set fire to the lumber in the kiln. In order to prevent this there is supported on the bottom flange of the beam a wire screen 20 and above this wire screen between the beams are inclined baffles 21 having upper and rearward ends curved downwardly as at 22 to constrict the passage between adajacent baffles. Now under these conditions it will be obvious that the wire screen will prevent practically all of the sparks from passing up to the lumber but if any of the smaller sparks do work through the screen then the baffles will catch these sparks and prevent them from setting fire to the lumber. Nevertheless, if ever a spark should work past both screen and baffle and set the lumber on fire the manner in which it is stacked in the kiln permits the fire being attacked from above with the usual extinguishing means and readily put out.

The entire structure may be held together with the tie rods or braces 23 and it will be obvious that such a kiln may be very economically constructed and that by the use of a screen the losses incident to the ordinary smoke kiln will be prevented.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without departing from the material spirit thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described, but it is desired to include all such as properly come within the scope claimed.

Having thus described the invention, what is claimed as new, is:

1. In a kiln of the class described, a casing, supports extending in said casing in spaced relation to the bottom of the casing, said supports constituting means to receive stacked lumber, and a wire screen extending across the casing between the supports to prevent upward passage of sparks.

2. In a kiln of the class described, a casing, supports extending in said casing in spaced relation to the bottom of the casing, said supports constituting means to receive stacked lumber, and a wire screen extending across the casing between the supports to prevent upward passage of sparks, inclined baffles provided with downwardly turned upper ends and extending between the supports in spaced relation to each other.

3. In a kiln of the class described, a casing, a plurality of longitudinally extending beams in said casing, means to hold said beams spaced above the bottom of the casing, a wire screen extending from beam to beam, and rearwardly inclined lumber supports at one end of the casing and having their lower ends carried upon the tops of said beams.

4. In a kiln of the class described, a casing, a plurality of longitudinally extending beams in said casing, means to hold said beams spaced above the bottom of the casing, a wire screen extending from beam to beam, rearwardly inclined lumber supports at one end of the casing and having their lower ends carried upon the tops of said beams, and baffle plates extending transversly of the casing from beam to beam and each having its upper edge turned downward towards the adjacent baffle and terminating in spaced relation thereto.

In testimony whereof, we affix our signatures.

PAUL T. JONES.
EDWARD ROY TAYLOR.