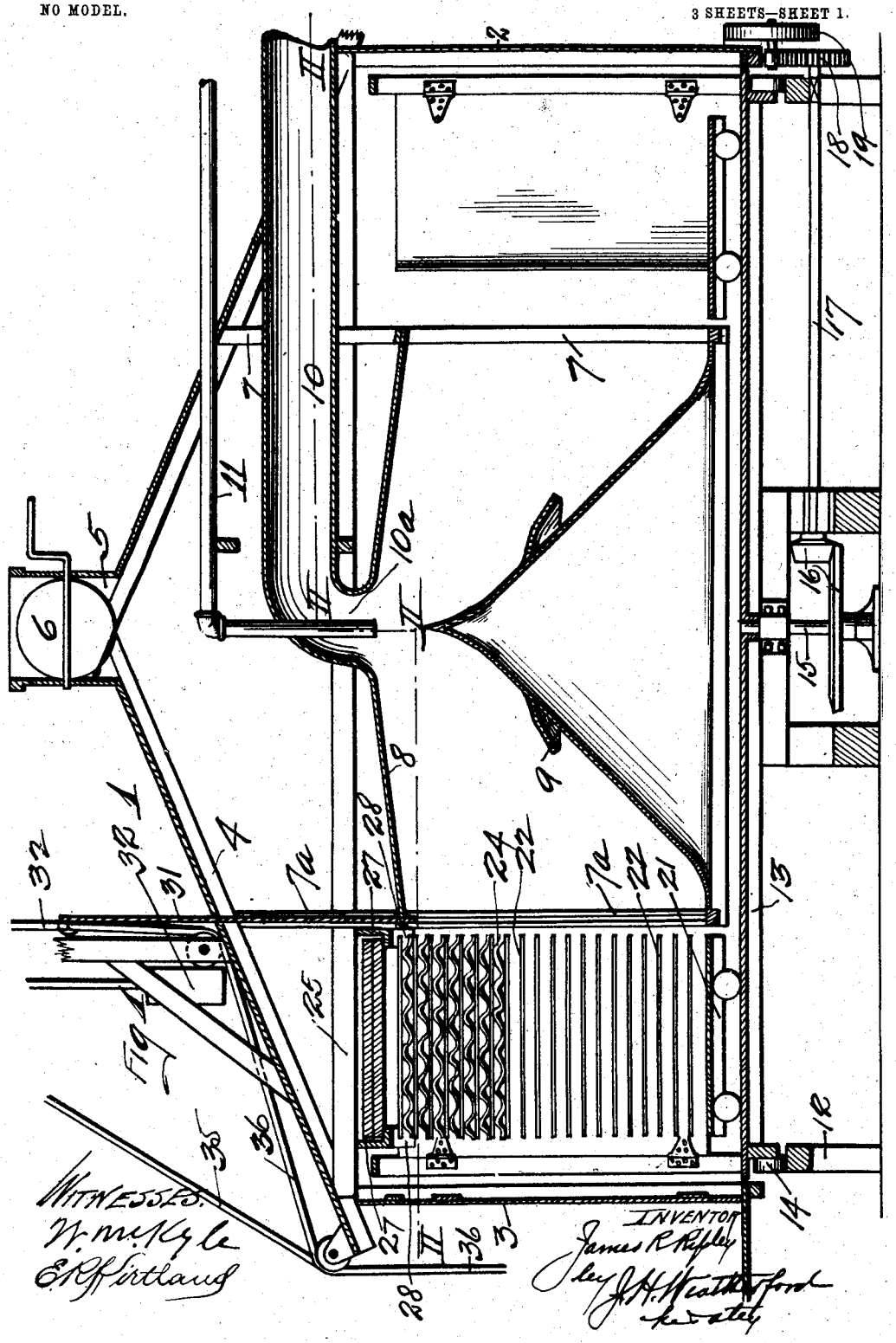
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J. R. RIPLEY.

LUMBER KILN.

APPLICATION FILED JUNE 15, 1904.

NO MODEL. 3 SHEETS—SHEET 1.



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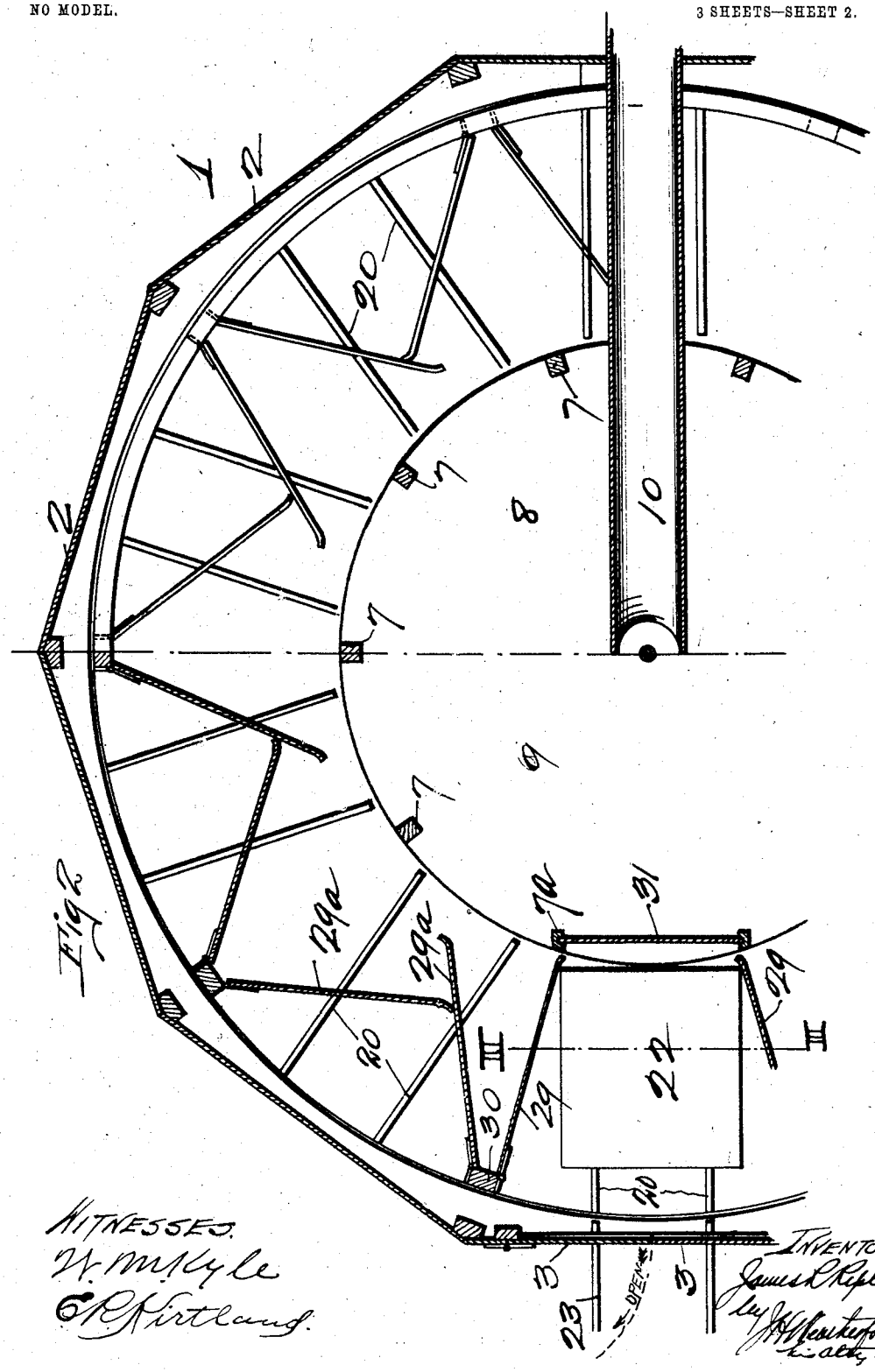


Fig 2

WITNESSES.

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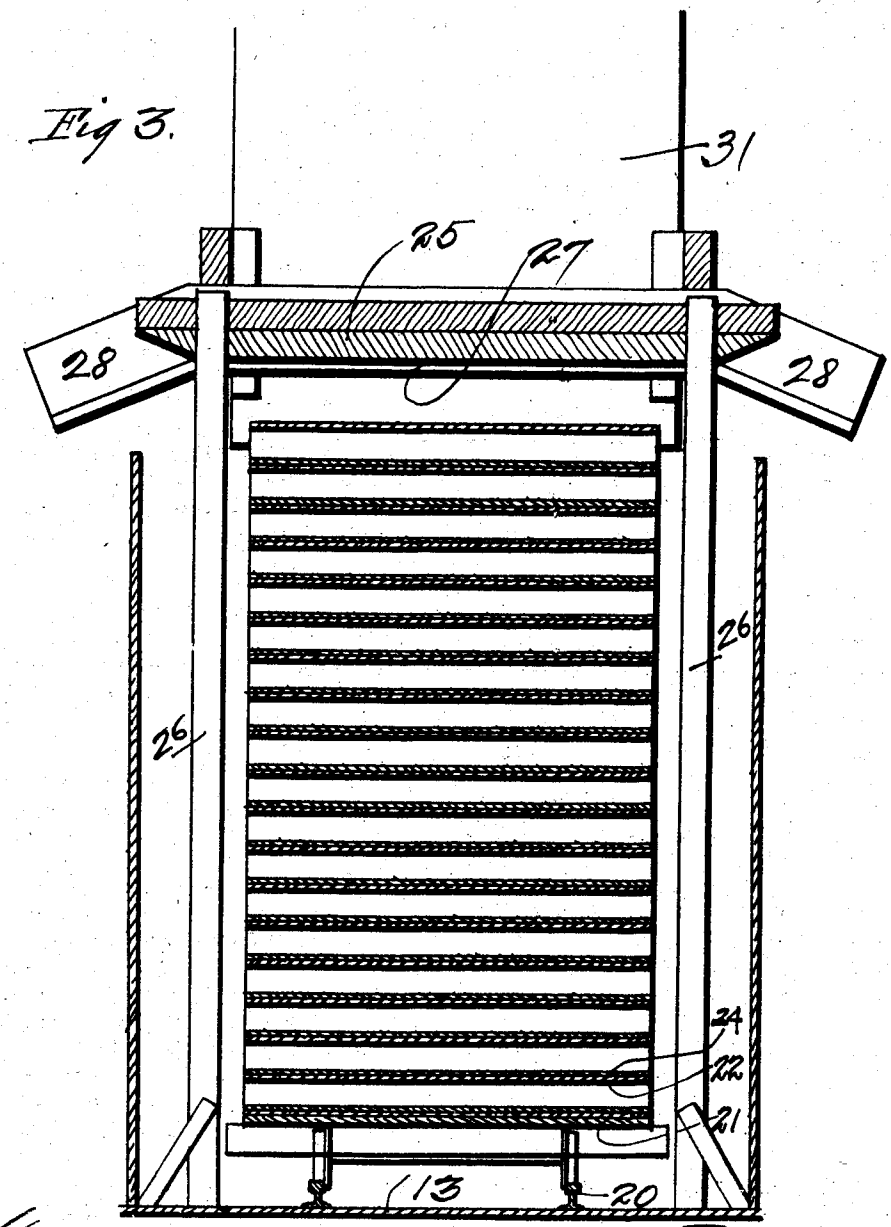
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NO MODEL. 3 SHEETS—SHEET 3.

Fig 3.



WITNESSES.

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No. 772,962. Patented October 25, 1904.

UNITED STATES PATENT OFFICE.

JAMES R. RIPLEY, OF MEMPHIS, TENNESSEE.

LUMBER-KILN.

SPECIFICATION forming part of Letters Patent No. 772,962, dated October 25, 1904.

Application filed June 15, 1904. Serial No. 212,686. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. RIPLEY, a citizen of the United States, residing at Memphis, Shelby county, State of Tennessee, have invented certain new and useful Improvements in Lumber-Kilns, of which the following is a specification.

My invention relates especially to improvements in kilns for drying veneer, staves, hoops, &c., and is designed for practically continuous operation.

The object of my invention is to provide a kiln in which lumber may be placed and treated to a continuous flow of hot air or steam, the steam to act as a protection against fire as well as for drying purposes. I accomplish this object as will be more fully hereinafter set forth in the drawings, specification, and claims.

In the drawings, Figure 1 is a sectional elevation on the center line, showing my kiln complete. Fig. 2 is a sectional plan taken on the line II II of Fig. 1. Fig. 3 is an enlarged section on the line III III of Fig. 2, showing the mechanism for lifting the top off the lumber on the car.

Referring now to the drawings, in which the parts are indicated by numerals, the kiln comprises a house 1, preferably pentagonal in shape, having permanently-framed sides 2, except that one side is provided with doors 3, hinged to the said sides, which doors may be swung open to permit charging and emptying the kiln. The roof 4 is supported by the sides 2, and 5 is the air-outlet, through which all hot air and steam from the kiln must pass. This outlet is regulated by an exhaust-valve 6, which is preferably of the butterfly type shown. From the roof 4 posts 7 7^a depend, which posts support upper and lower cone-shaped shields 8 and 9, which distribute the air, causing an even and thorough circulation of air.

10 is the air-inlet pipe, which is brought in from one side of the kiln through the roof and is curved downward at right angles at 10^a and joined into the cone 8. 11 is a steam-inlet pipe, also brought in through the roof and then turned downward at right angles concentric with the center of the shield 8 and the air-inlet pipe at 10^a where it enters the shield.

Immediately below the floor of the building 1 is a circular track 12, (shown only in Fig. 1,) concentric with the building, which track carries a circular floor 13, mounted on wheels 14, which run on the track. This floor 13 is revolved by means of a shaft 15, driven by bevel-gears 16, which gearing is driven by a shaft 17, extending to one side of the kiln and operated by gears 18 and a pulley 19.

On the floor 13 are radial tracks 20, on which cars 21, carrying the lumber 22 to be dried, are run. A track 23 of the same gage as the tracks 20 enters the building 1 through the doors 3 to permit placing and removing the cars 21. The lumber 22 on the cars 21 is separated by sheets of corrugated metal 24 to permit free access of the air to all points of the pile.

25 is a top, made of wood or metal, which is placed on the top of the piles of lumber to hold them flat during drying. This top may be held down in any manner desired, but is preferably made of sufficient weight to hold the lumber flat by its weight alone. In order to permit removal of the car of lumber, this top must be raised clear of the lumber, as shown in the views, and with this purpose in view the top is made free to slide up and down on posts 26, which extend upward from the floor 13 on each side of the car, and tracks 27, having incline approaches 28, supported from the roof 4, are provided, which tracks engage the under side of the beveled ends of the top 25 as the car is brought toward them by turning the floor 13 and raise the said top clear of the lumber, leaving the car free to be removed through the doors 3 when same are opened.

In order to confine the passage of air from the cones 8 and 9 outward to the piles of lumber 22, I provide doors 29, hinged in pairs to posts 30 on the revolving floor 13, which doors normally swing into the positions 29^a across the tracks 20 and which are swung back from this position by the lumber on the car as it is pushed into the kiln, so that when a car of lumber is in place they occupy the position

shown in Fig. 2 by the numeral 29. Air is thus shut off from passing outward and against the ends of the lumber from the cones 8 and 9 except at such points as cars of lumber may be in place and at such places is forced to pass through them.

In order to shut off the air to remove a car of lumber and replace it with another, a sliding door 31 is provided, which may be raised or lowered to cut off the passage of air to the car-space opposite the doors 3. This door is preferably counterbalanced by a weight 32, fastened to a rope 33, which passes over a pulley, (not shown,) which pulley is supported by a framing 34, extending upward from the roof.

35 is a rope which extends over the edge of the roof to raise the door 31, and 36 is a similar rope to lower it.

In operation one car after another is filled with lumber, as described, and run in at the door 3. After each car is placed the floor 13 is revolved to bring the next compartment into place for a car and to move the car just placed forward. This movement releases the top 25 and permits it to descend on the top of the lumber in the loaded car and hold it flat and at the same time raises the next top (not shown) into position for the next car. Air and steam are now turned on through the pipes 10 and 11, respectively, and permitted to flow outward through the loaded cars (all other spaces being closed by the doors 29) and thence upward inside the walls and up along the roof and out the outlet-flue 5. Each additional car placed advances the stock one space, and when all are filled the first car is ready to be removed.

I have described my kiln as having ten sides. It may of course be circular or if made with sides may have more or less, as may be desired, the number, preferably, being so determined that the charging and unloading may be made continuous. Minor details also not affecting the merits may be changed.

Having fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A continuous kiln comprising a stationary building, a door in said building, cone-shaped deflecting-shields supported within said building, a cut-off door for said shields opposite the door in said building, an air and steam pipe leading to the center of said deflecting-shields and a revolving kiln-floor, substantially as shown and described.

2. A kiln comprising a stationary building, a door in said building, cone-shaped deflecting-shields supported within said building, a door for said shields opposite the door in said building, an air and steam pipe leading to the center of said deflecting-shields, a revolving kiln-floor, a plurality of radial tracks on said floor and swinging doors arranged in pairs between said tracks, substantially as and for the purposes set forth.

3. A kiln comprising a stationary building of substantially circular shape, a door in one side of said building, cone-shaped deflecting-shields supported within said building a door to shut off said shields opposite said building-door, an air and steam pipe concentric with said shields, a revolving kiln-floor a plurality of radial tracks on said floor, swinging doors arranged in pairs between said tracks, a car on said tracks, a top for said car, and a track with an incline approach to raise said top, substantially as and for the purposes set forth.

4. A kiln comprising a stationary building of substantially circular shape, a door in one side of said building, cone-shaped deflecting-shields supported within said building a door to shut off said shields opposite said building-door, an air and steam pipe concentric with said shields, a revolving kiln-floor, a plurality of radial tracks on said floor, swinging doors arranged in pairs between said tracks, a top for said car, and a track to raise said top substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES R. RIPLEY.

Witnesses:
S. J. SHEPHERD,
B. F. LA CROIX.