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C. J. SHELLENBERGER.

DEVICE FOR BOILING WHEELS.

APPLICATION FILED APR. 24, 1902.

NO MODEL.

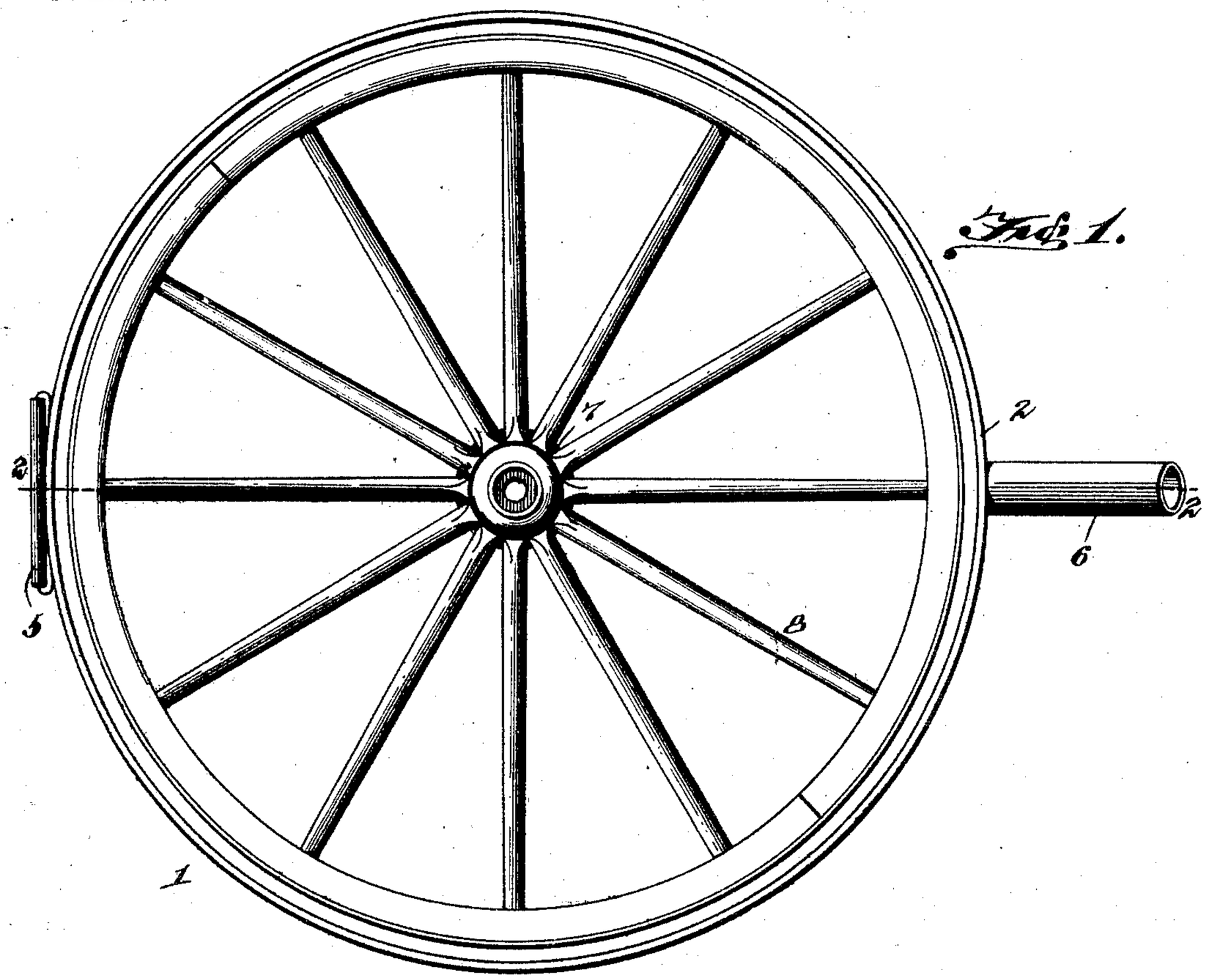

Fig. 1.

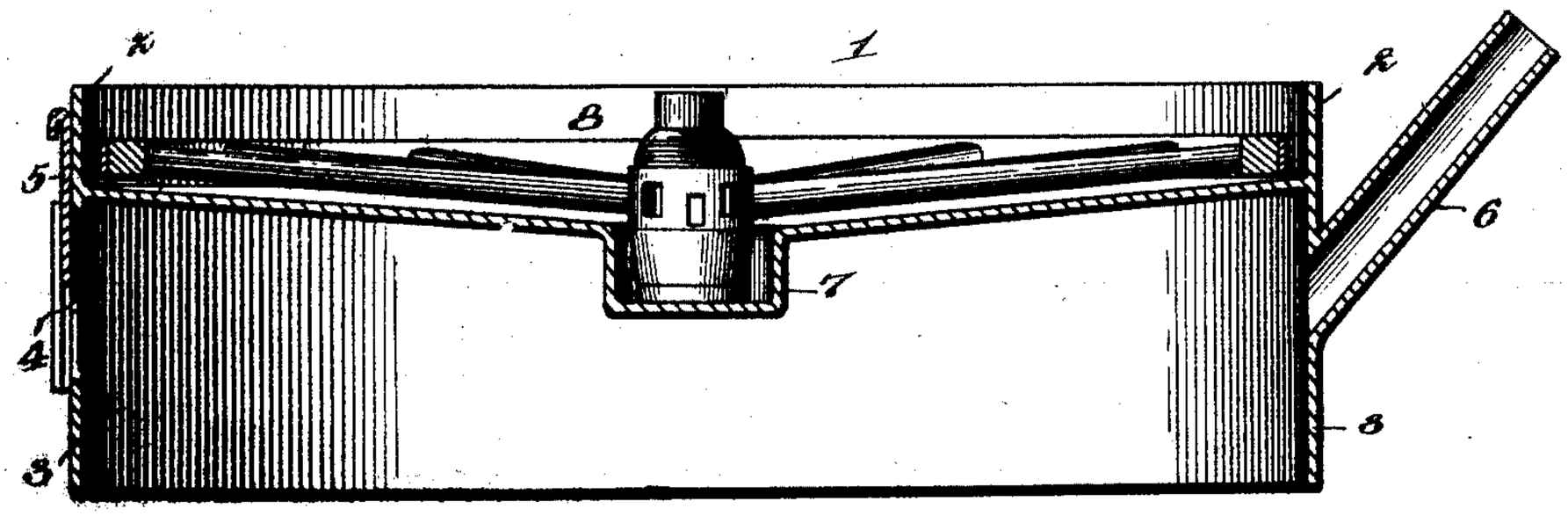

Fig. 2.

Witnesses
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No. 776,268. Patented November 29, 1904.

UNITED STATES PATENT OFFICE.

CHARLES J. SHELLENBERGER, OF MARIETTA, INDIAN TERRITORY.

DEVICE FOR BOILING WHEELS.

SPECIFICATION forming part of Letters Patent No. 776,268, dated November 29, 1904.

Application filed April 24, 1902. Serial No. 104,519. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. SHELLENBERGER, a citizen of the United States, residing at Marietta, in the Chickasaw Nation, Indian Territory, have invented a new and useful Device for Boiling Wheels, of which the following is a specification.

This invention relates to the art of treating wooden vehicle-wheels so as to expand and tighten the same after they have become dry and shrunken.

The object of the invention is to provide an improved device for supporting a wooden vehicle-wheel submerged in a boiling liquid, whereby the dry porous wood may take up the liquid, and thereby become expanded and hardened, so as to increase the life thereof. It is furthermore designed to provide for effectually treating all parts of the wheel, and in particular the hub thereof, and also to simultaneously treat all parts of the wheel so as to obviate turning or moving the same for the purpose of alternately bringing different parts of the wheel into contact with the bath.

Another object is to arrange the device so as to form a fire-box beneath the wheel-support in order that the liquid bath may be conveniently and effectively heated without damage to the wheel.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a plan view of a wheel-boiling device constructed and arranged in accordance with the present invention. Fig. 2 is a sectional view thereof on the line 2 2 of Fig. 1.

Like characters of reference designate corresponding parts in both figures of the drawings.

In carrying out the present invention I employ a shallow metallic pan 1, which is circular in shape and of a size to receive the largest size of wheel in a horizontal position, the bottom of the pan being dished or inclined inwardly toward the center from all directions. The outer edge of the pan is provided with an upstanding rim 2 and a pendent peripheral flange 3, extending entirely around the pan and forming a foot flange or support for the pan, the space bounded by the bottom of the pan and the flange 3 forming a fire-box for heating the liquid bath which is designed to be contained within the pan.

In one side of the flange 3 is provided an opening or doorway 4 for the introduction of a lamp, a torch, or suitable fuel into the fire-box, and this opening is controlled by means of a door 5, preferably mounted to slide in a vertical direction upon the exterior of the flange. At the diametrically opposite point of the flange there is provided an upwardly-inclined tube or pipe 6, which pierces the flange and rises to a suitable distance above the top of the pan, so as to form a smoke-pipe for carrying off the smoke and giving the required draft to the fire-box.

At the center of the bottom of the pan there is a circular depression 7, which terminates short of the lower edge of the flange 3 and is designed to form a seat or bearing for the hub of a wheel.

From the foregoing description it will be noted that the present device is made up of an upstanding open-ended metallic cylinder, which constitutes the body of the device, and an intermediate substantially horizontal dished metallic partition or bottom, which closes the cylinder and is provided at its center with a circular depression for the reception of one end of a hub, the partition and that portion of the cylinder which projects above it forming a pan for the reception of the wheel to be treated and the space below the partition forming a fire-box.

In employing the present device for the treatment of a wheel which has become dry and shrunken a liquid bath, preferably water, is poured into the pan and the wheel 8 placed horizontally in the pan, with the lower end of its hub fitted in the depression or seat 7. It will of course be understood that the depth of

the bath in the pan should be sufficient to entirely cover the wheel, and the depression or seat 7 is designed to permit of the wheel lying as low as possible in the pan, thereby to reduce the amount of liquid required to cover the wheel and to insure the effective treatment of the hub as well as the rim or felly of the wheel. Heat is applied to the bottom of the pan by means of a lamp or torch, and, if desired, a fire may be built upon the ground and the pan placed thereover, whereby it is apparent that the flange 3 forms a fire-box, the necessary air being furnished by opening the door 5 and the smoke and products of combustion being carried off through the smoke-pipe 6. By reason of the fact that the wheel is disposed in a substantially horizontal position, and thereby entirely submerged in the liquid bath, it is not necessary to turn or move the wheel in order that all parts of the same may be subjected to the action of the bath, although it is possible to turn the wheel upon the bearing formed by the seat 7 should it be deemed desirable, although such turning of the wheel is not necessary, but is a matter of judgment, should it be desired to agitate the liquid to force the same violently into the cracks and interstices of the wheel to insure an effective taking up of the liquid by the wheel. After the wheel has been boiled for a sufficient time it is removed and the water drawn off from the pan, and then coal-tar or linseed-oil, together with red lead, is placed within the pan and the wheel replaced and again boiled until all of the water has been driven out and the filler, composed of the tar or oil and red lead, has taken the place of the water, and thereby effectually filled the wheel, so as to tighten and harden the hub and the rim thereof in a very simple and expeditious manner. The length of time to which the wheel is subjected to the second boiling may be readily determined by noting when the bath ceases to bubble, which is when the water has been driven out of the wheel by the oil. In practice I find it to be a very effective method to successively boil four wheels in the water-bath and then successively boil the same in the oil or filler bath in the order originally boiled, as one filling of the pan for each bath is sufficient to treat four wheels, and considerable time is saved by omitting the repeated filling and emptying of the pan for each wheel.

A very important advantage of the present device resides in the fact that all of the parts thereof are rigidly connected with the exception of the door, and therefore there is slight possibility of any derangement of parts by rough usage. Furthermore, all of the parts of the device are formed of metal, whereby it is very strong and durable and may remain out of doors without being materially damaged by the weather. Another very important advantage is that the fire-box afforded by the flange 3 is entirely open throughout its bottom, whereby the device may be placed over a fire built upon the ground and is therefore not dependent upon any particular character of fuel.

What I claim is—

A device for boiling wheels comprising an upstanding approximately cylindrical body open at the top and bottom and adapted to be placed over and removed from a fire, a substantially horizontal partition located between the top and bottom of the body and dividing the latter into a shallow upper wheel-receiving compartment and a deep lower fire chamber or compartment, said partition being inclined downwardly and inwardly from its periphery to its center and provided thereat with a depending cylindrical depression arranged to receive and form a support for the hub of a wheel, whereby the device is adapted to support a wheel in a horizontal position with its felly close to the bottom of the upper compartment, a smoke-pipe extending from the lower compartment, and means for controlling the draft, substantially as described.

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

CHARLES J. SHELLENBERGER.

Witnesses:

G. E. SULLIVAN,

J. G. BUTLER.