

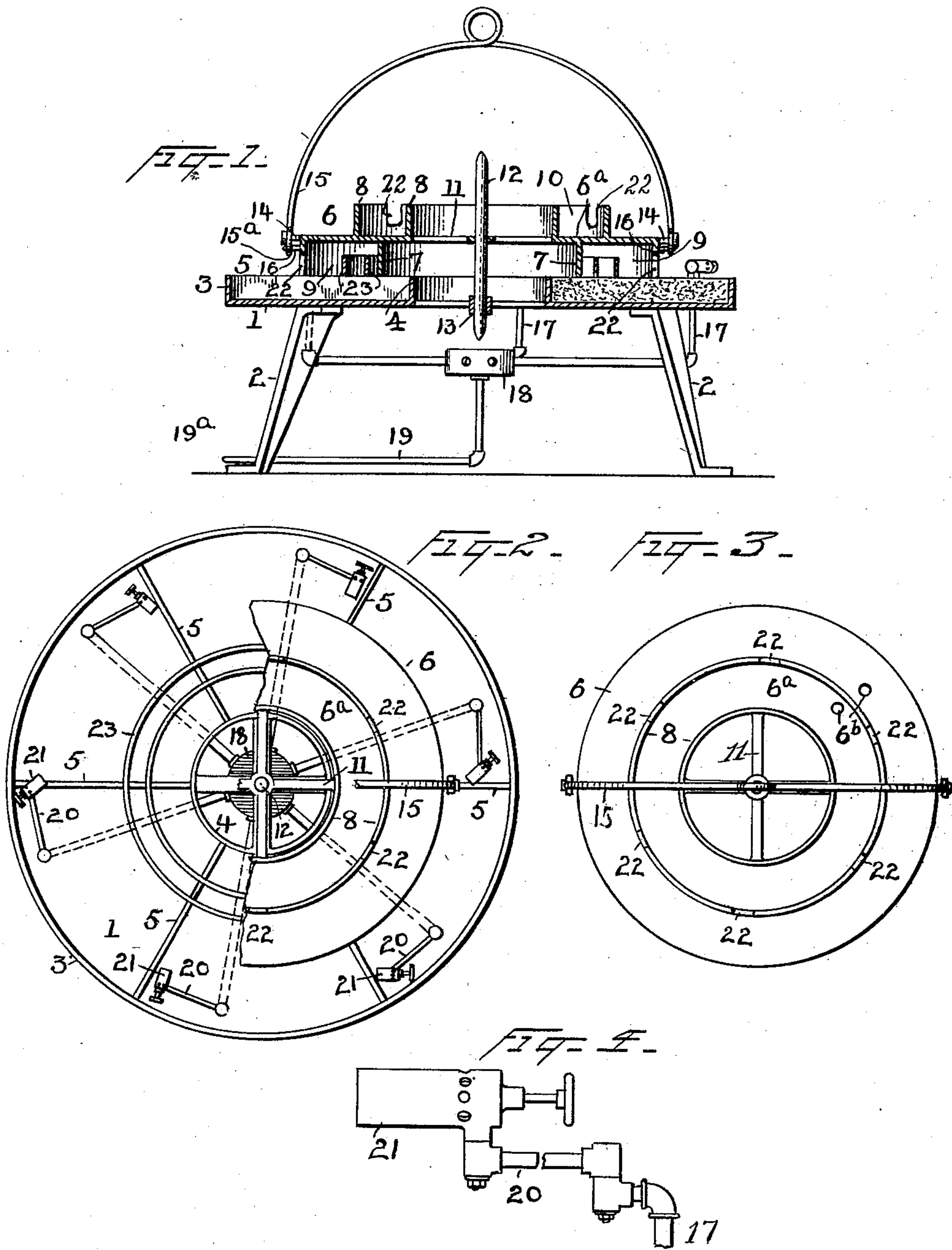
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Patented July 22, 1902.

J. GOGEL.
TIRE HEATER.

(Application filed Mar. 26, 1902.)

(No Model.)



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JACOB GOGEL, OF TOLEDO, OHIO.

TIRE-HEATER.

SPECIFICATION forming part of Letters Patent No. 705,340, dated July 22, 1902.

Application filed March 26, 1902. Serial No. 100,106. (No model.)

To all whom it may concern:

Be it known that I, JACOB GOGEL, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have
5 invented certain new and useful Improvements in Tire-Heaters; 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 ap-
10 pertains to make and use the same.

This invention relates to a device which is especially designed for heating tires of different diameters preparatory to setting them upon the rim or felly of a wheel.

15 The object of my invention is to provide for economically and effectively heating tires of larger and smaller diameters with the least possible waste of heat or fuel; and more particularly the object is to provide a conveniently-reversible cover having upper and
20 lower annular channels of different diameters adapted for confining the heat closely around tires of different diameters, thereby economizing fuel and obtaining improved results.

25 The matter constituting my invention will be defined in the claims.

The details of construction of my improved tire-heater are illustrated in the accompanying drawings, in which—

30 Figure 1 represents a vertical section of the device with parts in elevation. Fig. 2 represents a top plan view of the heater with a portion of the cover broken away. Fig. 3 represents a top plan view of the reversible
35 cover containing the annular heating-channels.

The circular table 1, forming a heat-retaining hearth, is supported on the legs 2 and is provided with the upwardly-turned rim or
40 flange 3, the interior annular flange 4, and a series of upwardly-projecting radial ribs 5, which latter are suitably spaced apart and extend radially between the flanges 3 and 4. The compartments between these flanges and
45 radial ribs are in practice filled with crushed coke, sand, charcoal, or any suitable refractory material for retaining the heat and giving improved results in quickly and evenly heating the tire.

50 The reversible cover 6 is constructed of a broad flat circular plate or ring 6^a, having on one side the downwardly-projecting annular

flanges 7 7, forming the larger heating-chamber 9, and at the other side the upwardly-projecting annular flanges 8 8, forming the
55 smaller heating-chamber 10. These heating-chambers are substantially U-shaped in cross-section. The cover may be strengthened by the intersecting rods or castings 11, having centrally secured thereto the double-ended
60 spindle or pin 12, which is adapted to enter the opening 13 in a bracket or spider at the center of the table, as shown in Fig. 1. The double-ended spindle 12 projects at each side of the cover a sufficient length to enter the
65 central opening 13. One of the rods 11 projects at the opposite edges of the cover, forming the pivots 14, which engage with suitable eyes in the bale 15. The bale has an extension 15^a on one side to engage with a spring-
70 catch 16, attached to the outer flange in the cover to hold the cover level, but which may be disengaged when the cover is to be turned over. The cover may be provided with a
75 draft-vent 6^b for the escape of products of combustion.

Disposed at equal distances around the table are the upwardly-projecting pipes 17, connecting below the table with the central distributing-chamber 18, with which connects a
80 supply-pipe 19, having a valve 19^a for liquid or gaseous fuel. Each of the pipes 17 is provided at its upper end with a swiveled horizontal pipe 20, carrying at its outer end a suitable burner 21 for gas or naphtha, which
85 may within certain limits be swung horizontally into any desired position, as described in my previous patent, No. 680,455. In the outer flanges 7 and 8 of the cover are formed vertical slots, as 22, corresponding in num-
90 ber and arrangement with the swinging burners 21. The arrangement of the burners and the slots in relation to each other is such that each of the burners may be swung into and out of the slotted opening 22, so that the
95 flame from the burner may be projected into the annular heating-chamber formed by the flanged cover and the table or hearth 1. The swiveled burners are preferably arranged at
100 such an angle that their flames are projected substantially in a direction tangential to the walls of the annular chamber and tangentially against the tire, thus producing within the annular chamber a continuous circuit or

vortex of flame, as described in my above-mentioned patent.

The operation of heating tires may be conducted as follows: The tire 23 which is to be
 5 heated is placed upon the radial ribs 5 concentric with the annular flange 4 of the table. The cover 6 is swung above the table and lowered into position so that the tire is inclosed in the annular chamber formed by
 10 the cover and the table. The lighted burners 21 are swung into position so that the flames are projected through the openings 22 into the chamber and tangentially against the tire. The compartments between the
 15 flanges and radial ribs on the table being filled with crushed coke or some refractory material retains the heat, and the chamber soon becomes a hot furnace with the flame and gases confined closely around the tire,
 20 which in a short time becomes heated to the desired temperature. The cover may now be lifted and swung out of the way without disturbing the burners, as the slotted openings 22 extend through the lower margin of the outer flanges 7 and 8. The tire may now
 25 be removed, another put in its place, and the cover lowered without rearranging the burners in case the same-sized tire has been placed upon the table. The work of heating tires
 30 can thus be rapidly conducted. Supposing that tires of the larger diameter were first heated and that it was desired to heat tires of the smaller diameter, the cover would be reversed or turned over in the bale, so as
 35 to bring the annular chamber 10 of smaller diameter downward, and then the projection 15^a of the bale is engaged with a spring-catch 16 for holding the cover level. The tire being placed in position on the table, the cover is
 40 again lowered into position by engaging the projecting end of the spindle 12 with the opening 13 in the table. The burners will again be swung into the slotted openings and the heating operation allowed to proceed as
 45 above described. It will thus be seen that tires of different diameters may be economically heated within the chambers 9 and 10 of the cover when properly adjusted on the table or hearth 1. No matter what the size
 50 of the tire within the limit of the table the burners may be swung into proper operative position in the slotted openings of the flanges 7 or 8 to heat the tire.

Having described my invention, what I claim, and desire to secure by Letters Patent, 55 is—

1. In a tire-heater, the combination with a table or hearth for supporting the tire, of a reversible cover having in its opposite faces annular heating-channels adapted for closely
 60 confining the heat around tires on the hearth, and means for heating the channels and tires, substantially as described.

2. In a tire-heater, the combination with a table or hearth for supporting the tire, of
 65 a reversible cover having in its opposite faces heating-channels of different diameters adapted for closely confining the heat around tires of different diameters and means for heating the tires and channels, substantially
 70 as described.

3. In a tire-heater, the combination with a table or hearth for supporting the tire, of a reversible cover having in its opposite faces annular heating-channels, a swinging bale
 75 pivotally connected with said cover and means for centering the cover and holding it in place on the hearth, substantially as described.

4. In a tire-heater, the combination with a
 80 table or hearth for supporting the tire, of a cover having annular heating-channels and a spindle secured centrally thereto for engagement with a central opening in the table, substantially as described. 85

5. In a tire-heater, the combination with a table or hearth for supporting the tire, of a removable cover having annular heating-channels of different diameters adapted for closely confining the heat around tires of
 90 different diameters and means for heating said channels, substantially as described.

6. In a tire-heater, the combination with a table or hearth for supporting the tire and containing heat-retaining material, of a re-
 95 movable cover having annular heating-channels of different diameters adapted for closely confining the heat around tires of different diameters and means for heating said channels, substantially as described. 100

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

JACOB GOGEL.

Witnesses:

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