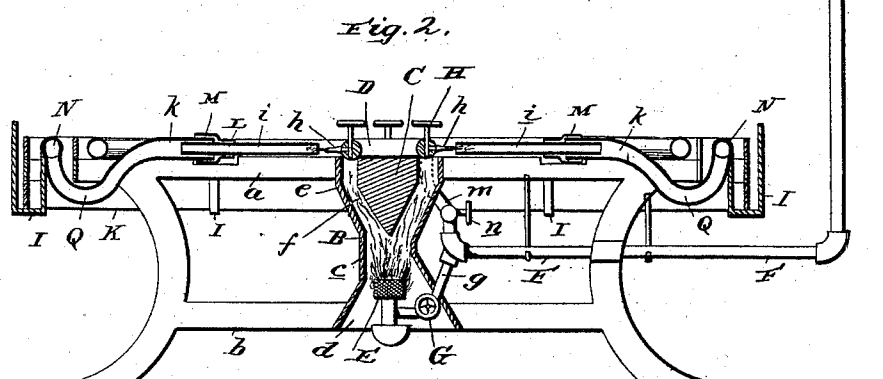
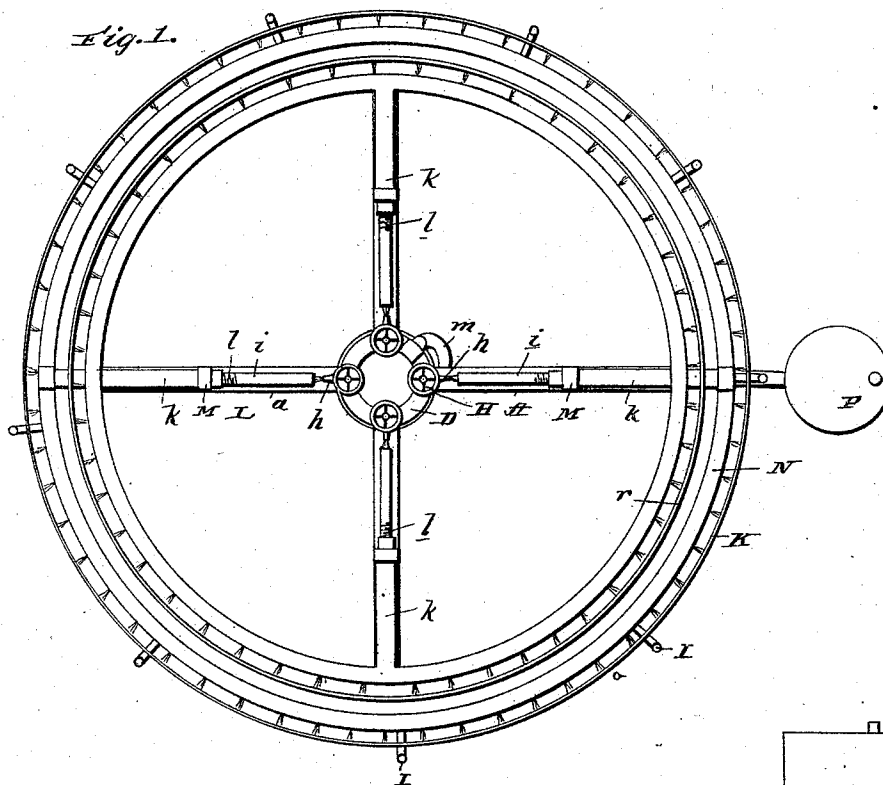


S. M. JENKS.  
TIRE HEATER.

No. 470,678.

Patented Mar. 15, 1892.



Witnesses:  
*C. H. Raeder*  
*H. F. Matthews.*

Inventor  
*Samuel M. Jenks*

by *James J. Shulby*  
Attorney

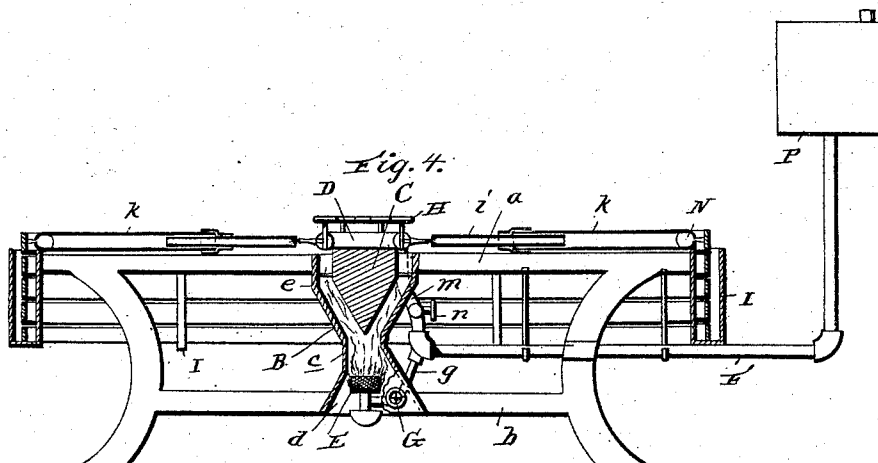
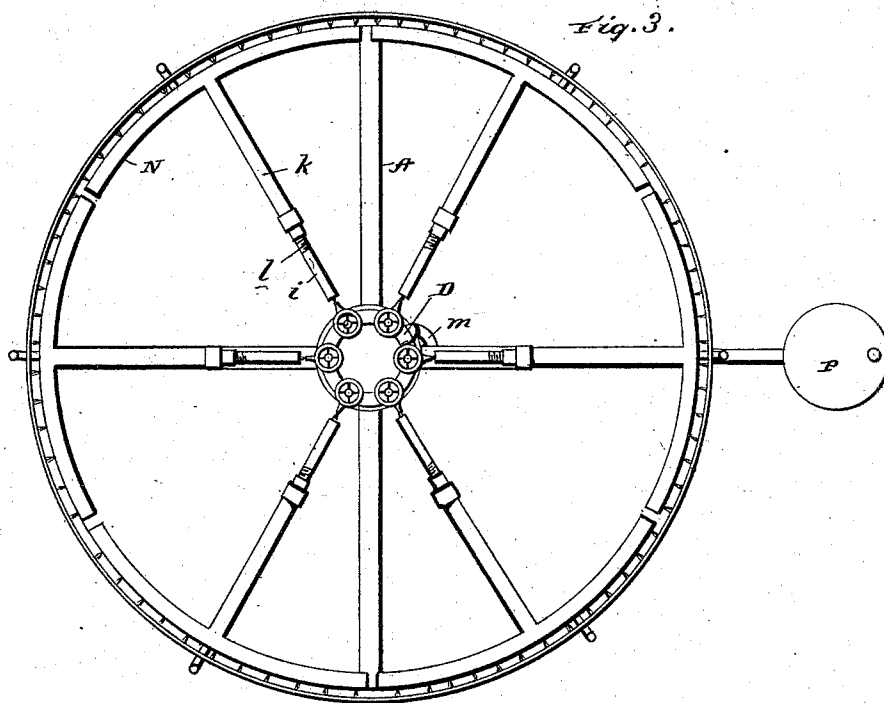
(No Model.)

2 Sheets—Sheet 2.

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# UNITED STATES PATENT OFFICE.

SAMUEL M. JENKS, OF MADISON, SOUTH DAKOTA.

## TIRE-HEATER.

SPECIFICATION forming part of Letters Patent No. 470,678, dated March 15, 1892.

Application filed January 5, 1892. Serial No. 417,115. (No model.)

### *To all whom it may concern:*

Be it known that I, SAMUEL M. JENKS, a citizen of the United States, residing at Madison, in the county of Lake and State of South Dakota, have invented certain new and useful Improvements in Tire-Heaters; and I do 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.

This invention has relation to an apparatus for heating tires for carriage and wagon wheels for the purpose of setting or resetting the same; and the novelty will be fully understood from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1 is a plan view of my improved apparatus with two sets of tires therein. Fig. 2 is a vertical cross-sectional view of the same. Fig. 3 is a plan view of the apparatus designed for receiving but one set of tires and provided with segmental and adjustable burners, and Fig. 4 is a vertical cross-sectional view of Fig. 3.

This invention is designed as an improvement upon the devices shown and described in an application which I have filed even date herewith.

Referring by letter to said drawings, A indicates a horizontal frame, which is suitably constructed and composed of metal or other suitable material of a circular or rectangular form. This frame, which is designed to receive and support the various parts of the apparatus, is provided in its vertical center with a generating-chamber B. This chamber, which is sustained and braced in position by the upper and lower cross-bars *a* and *b*, is preferably contracted at about its horizontal center, as shown at *c*, and flares downwardly from such point, as shown at *d*, and thence upwardly from the contracted portion, as shown at *e*. Arranged in the upper enlarged or flaring section of this generating-chamber is a spreader C, which is of a form substantially as shown, having its lower end directed toward the contracted portion of the chamber and tapering, as shown, so as to form a flame-passage *f* between the inner walls of said chamber and the spreader. Fixed to or

formed with the spreader and on its upper horizontal side is a ring D, which extends laterally from the spreader, as shown, so as to cover or nearly cover the top of the flame-passage *f*, for a purpose which will be presently explained.

E indicates a burner. This burner is arranged within the generating-chamber at a suitable point below the spreader and may be of any suitable construction. This burner is connected with the fuel-supply pipe F by means of a branch pipe *g* of comparatively small diameter and carries a stop-cock or regulating-valve G, whereby the supply of gasoline or vapor-fuel may be shut off or regulated in its passage to the burner. The ring D, arranged on the generating-chamber, is provided with jet or needle points or apertures *h*, and at each point a valve or cock H is provided, the number of needle-points or jet-apertures corresponding to the number of feed-pipes to be used, as will be presently described.

The frame A is provided at suitable points around its margin with depending hooks I, which are designed to receive a suitable number of tires K, as shown.

L indicates the feed-tubes. These feed-tubes are of a telescopic construction, being composed of inner sections *i* and outer sections *k*, which are of a greater diameter. These sections are connected by a coupling or union M, although it is obvious that other means might be employed for this purpose. In using the coupling M one or both of the sections may be threaded, as shown at *l*, and the smaller section is designed to pass into one end of the large section, as better shown in Figs. 3 and 4, so that said feed-tubes may be lengthened or shortened, as desired, and the burners consequently adjusted. The outer sections *k* have formed therewith or fixed thereto burners N, and these burners may be composed of rings, as shown in Fig. 1, or the rings may be divided up into segments, as shown in Fig. 3, having holes or perforations for the discharge of the gas where it is to be united and sprayed in a jet against the tire or tires.

P indicates the supply-tank, which is designed to hold gasoline or other fuel to be used, and is arranged at such an elevation

with respect to the apparatus that said fuel will be automatically fed to the burners by gravity, and leading from this tank is the supply-pipe F, composed of a vertical and a horizontal branch. This supply-pipe, as before described, connects with the burner in the generating-chamber by means of a branch g, and said pipe also connects by means of a branch m, carrying a controlling valve or cock n, with the ring D arranged above the generating-chamber.

As illustrated, I have shown an apparatus by which one set or series of tires may be acted upon and the feed-tubes and burners made laterally adjustable, and I have also illustrated an apparatus by which a series of large tires and small tires may be simultaneously heated.

In providing the apparatus to receive two sets or series of tires I depress or bend one pair of the outer sections k of the feed-tubes, as shown at Q, so as to pass the inner burners, as better shown in Fig. 2 of the drawings.

While I have described in detail the constructions shown, yet I do not wish to be understood as limiting myself in practice to the exact constructions described, as I am aware that many modifications may be made in the construction and adaptation of various parts of the apparatus without departing from the spirit of my invention. It is obvious that the flue or feed tubes and conductors may be decreased or multiplied in number, and in some cases the burners might be adapted to operate upon tires on the inner or outer sides thereof, or both at the same time, as the case may require, in which event the burners would of course be provided with holes on the inner side as well as the outer side, and the holes may be omitted on the outer side in some cases and placed in the inner side of the ring or burner. It is also obvious that the form of generator might be changed, according to the fancy or dictation of the mechanic.

In operation, when it is desired to heat a tire or any number of tires, said tires to be heated are placed in the depending hooks I, and when a smaller series is to be heated at the same time said smaller tires are placed in hooks similarly arranged in a less circular area. The regulating-cock n may be closed and the regulating-cock G opened. The burner or fuel at the burner E is then ignited, after which the fuel may be let into the ring D, and by the action of the burner E the fuel in said ring will become highly attenuated, when it may be let out in such highly-attenuated state to the needle-points or jet-discharges h into the feed-tubes, and from thence to the burners or rings, where said fuel should be ignited. It will be seen that while the supply is automatic, yet I have provided such regulating devices as to at all times retain perfect control of the flame and fuel. It is obvious that in order to maintain a perfect combustion and secure the best results the re-

ceiving ends of the flue-tubes or feed-tubes should be so proportioned with respect to the needle-points of the ring that a proper amount of oxygen will be admitted to mingle with the fuel, but not so large as to afford the induction of an undue quantity of the oxygen.

Another feature of construction, which may be varied, is the adjustable connections between the sections of the feed tubes or flues.

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

1. A tire-heating apparatus comprising a supporting-frame, a generating-chamber arranged centrally therein and having a burner, a burner arranged upon the frame for heating the tires, a ring arranged upon the generating-chamber, feed or flue tubes connecting the burner with said ring, and devices for regulating and controlling the gasoline or other fuel, substantially as specified.

2. A tire-heating apparatus having a burner conforming approximately to the tires to be heated and also having a generating-chamber, a ring above said chamber, feed or flue tubes connecting the ring with the burner, and suitable means for controlling the supply of fuel, substantially as specified.

3. The combination, with a supporting-frame, of a generating-chamber arranged therein, a spreader arranged above the burner in the chamber, a ring extending laterally from the spreader and above the chamber, feed or flue tubes leading from said ring, and a tire-heating burner at the outer ends of said feed or flue tubes, substantially as specified.

4. The combination, with a supporting-frame, of a generating-chamber arranged therein, a fuel-supply pipe, a supply-pipe leading therefrom, a burner in the base of the generating-chamber, a spreader in the upper portion of said chamber, a circular pipe or ring extending laterally from said spreader above the chamber, and valved pipes connecting the base-burner and also the ring, substantially as specified.

5. In an apparatus for heating tires, the combination, with a supporting-frame, of a burner adapted to discharge a flame against a tire, adjustable feed or flue tubes leading from said burner, and a suitable means for supplying gasoline or other fuel to the feed-tubes, substantially as specified.

6. An apparatus for heating tires, having inner fuel or feed tubes carrying at their outer ends burners adapted to project a flame against tires, in combination with the outer fuel or feed tubes bent to pass the inner burners and having burners at their outer ends, substantially as specified.

7. In a tire-heating apparatus, the combination, with a suitable frame having marginal depending hooks to receive tires, in combination with segmental burners adapted to project a flame against the tires, feed-tubes for said burners, composed of telescopic sec-

tions adjustably connected and adapted to receive gasoline or other fuel from a suitable source of supply, substantially as specified.

5 8. A tire-heating apparatus having a generating-chamber, in combination with a source of supply, a ring or pipe for conducting fuel arranged to be heated from said chamber, a valved pipe connecting the supply with said ring, and a valved pipe connecting the burner

in the generating-chamber with the supply- 10 pipe, substantially as specified.

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

SAMUEL M. JENKS.

Witnesses:

J. H. WILLIAMSON,

J. W. GOFF.