(No Model.)

L. SIMMONS.

APPARATUS FOR HEATING TIRES.

No. 426,741. Patented Apr. 29, 1890.

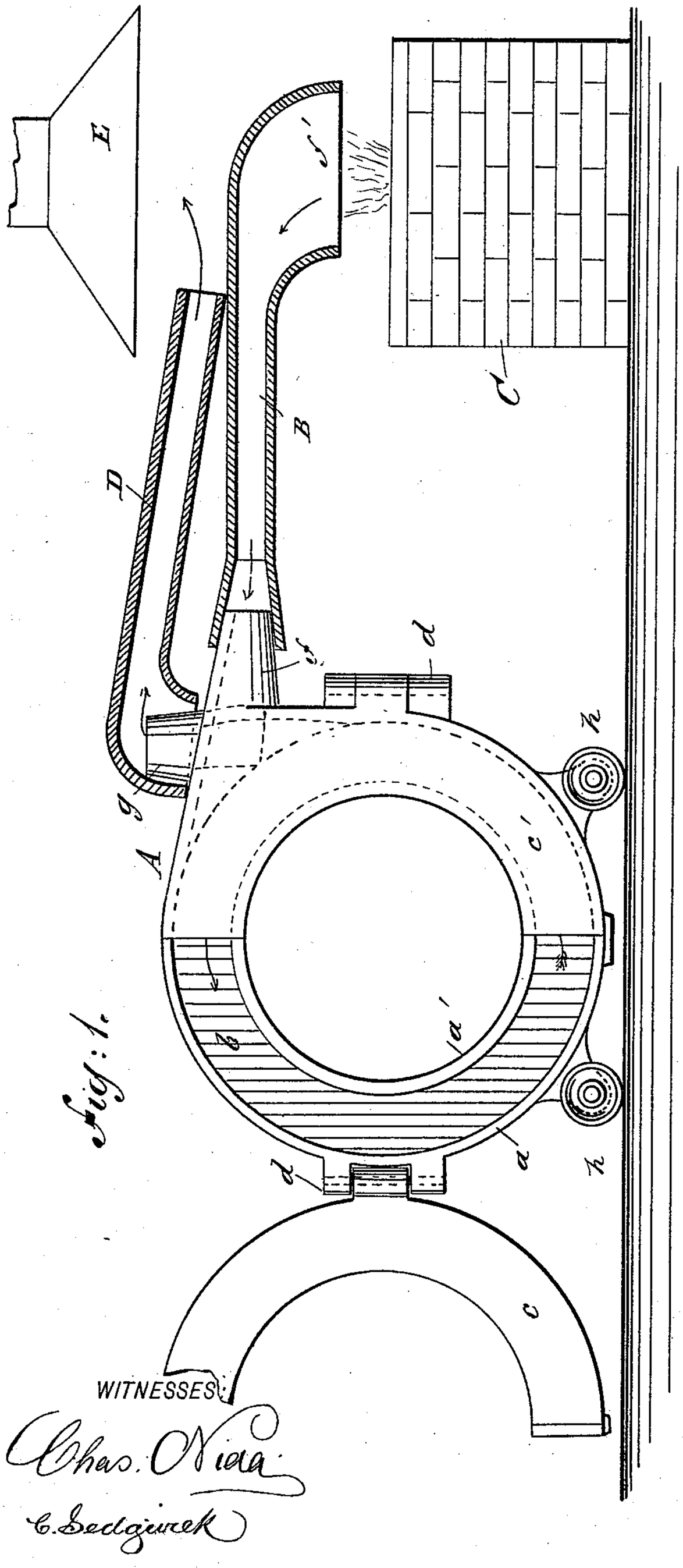

Fig: 1.

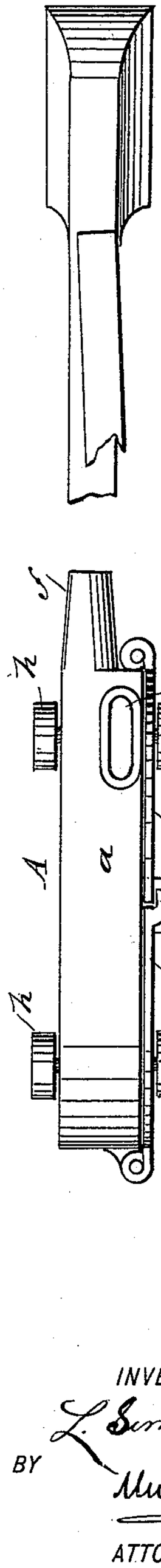

Fig: 2.

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LUTHER SIMMONS, OF BUCKNER, MISSOURI.

APPARATUS FOR HEATING TIRES.

SPECIFICATION forming part of Letters Patent No. 426,741, dated April 29, 1890.

Application filed January 7, 1890. Serial No. 336,142. (No model.)

To all whom it may concern:

Be it known that I, LUTHER SIMMONS, of Buckner, in the county of Jackson and State of Missouri, have invented a new and Improved Apparatus for Heating Tires, of which the following is a full, clear, and exact description.

My invention relates to an improved device for heating wheel-tires preparatory to setting them on the wheels.

Heretofore the usual method for heating tires has been to place them in a tier on or near the ground in the open air and build a wood fire around the same. This plan is wasteful of fuel and takes time to properly effect the even heating of one or more tires.

The object of my invention is to produce a simple compact portable apparatus which can be employed to utilize the heat of an ordinary smith's forge, whereby one or more tires can be speedily and evenly heated and the operation be inspected as it progresses.

To this end my invention consists in certain features of construction and combinations of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a partly-sectional side elevation of the apparatus in position to receive the products of combustion from a forge-fire, one door of the tire-receiving chamber being open and partially broken away; and Fig. 2 is a plan view of the device partly broken away and removed from the forge-fire.

A represents the tire receiving and holding chamber, and consists of two concentric rings or walls *a a'*, that are held spaced apart by side plates *b* thereto attached, and these rings, being of equal width, are adapted to form tight joints on their free edges with the doors *c c'*, which are hinged at *d* to the outer wall *a* of the annular chamber A. As it is essential that the door-joints should all be tight, their edges are made to impinge against each other when closed, and an overlapping joint-piece *e* is formed on or secured to the door *c*, as shown in Fig. 2.

At *f* a conical nozzle is laterally projected from the outer wall *a* of the chamber A, upon which is fitted the flaring end of a horizontal pipe B, which is enlarged to produce a capacious throat-piece at *f'*, that is located over a coal fire on the ordinary smith's forge C, as shown in Fig. 1.

The throat-piece *f'* is located in close proximity to the fire on the forge C, which fire may be raised some from the top surface of the forge-bed, so that the force of the blast which intensifies combustion of the coal or coke used for the fire will drive a strong current of hot gases of combustion and rarefied air into the pipe B, and thence into the tire-heating chamber A. It is feasible to use the fire of the forge for light work while the tire is being heated, it being intended that the front of the forge be left unobstructed and the heating device located at one side or at the rear of the forge-bed C, so as to permit free access to the fire.

A discharging-thimble *g* is placed near to the inlet-nozzle *f*, but not in line with it. Said thimble *g* projects upwardly and is in connection with the bent end of a waste-pipe D, that is of sufficient length to convey the waste heat and gases into the hood E, which is the usual means provided to transfer the waste products of combustion thrown off from the forge-fire to an upright draft-flue.

The chamber A is furnished with wheels *h*, whereon it rests, and may be transported from one locality to another. While two doors are preferably used to close the open side of the chamber A, one door will answer the purpose, and other means may be adopted to adjust the door or doors in place and dispense with hinges; hence I do not limit the scope of my claims to the employment of these adjunctive features, although they are preferred as convenient and facilitate the operation.

In putting the apparatus into service there is a good fresh fire started in the forge by fan-blast or the ordinary bellows, (not shown,) and the chamber A wheeled into position near the forge, so that the pipes B and D may be properly located. The tire to be heated is now placed in the chamber A and the doors *c c'* closed and secured by a latch-piece c^2. (Shown in Fig. 2.) Both of the pipes B D are now attached to the chamber A and the air-blast started, which will create an intense fire, the heat from which will traverse the pipe B in

the direction indicated by the arrows therein and pass around the tire located in the chamber, heating the same evenly, the doors *c c'* affording access to the interior for inspection of the work as it progresses. After the heated products of combustion have circulated from the point of inlet at the nozzle *f* to the discharge-thimble *g* they are transmitted to the flue of the forge, as previously indicated. As the discharge-nozzle *g* is out of line or at the side of the inlet *f*, the current of hot gases will be driven forward into the chamber A, which is sealed by its doors *c c'*, making the circuit of said chamber before discharge, the natural draft of the chimney of the forge, of which the hood E is the lower portion, causing the escape-pipe D to remove the hot products of combustion, which, by their contact with the tire in the chamber A, have heated the same.

It is claimed for this apparatus that it will quickly and evenly heat one or more tires and dispense with the usual waste of fuel incidental to the ordinary method of heating tires.

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

1. The combination, with a portable chamber adapted to receive a tire and allow circulation of hot air around it and a means to seal the open side of said chamber, of an inlet for heat, an escape-orifice for waste heat, and a heat-supply from a forge-fire, substantially as set forth.

2. The combination, with an annular chamber having four wheels and adapted to be opened and sealed, of a heat-induction pipe and a waste-pipe for heat, so connected that the heat will traverse the chamber before it is discharged, and a forge-fire which is closely connected to the heat-induction pipe, substantially as set forth.

3. The combination, with an annular chamber, four revoluble wheels at its base for transportation of the chamber, having an adjustable door and an inlet and an outlet for heat an induction-pipe for heat, and a waste-pipe adapted to remove the heat after the same has traversed the annular chamber, of a forge-fire which furnishes heat for the chambers A under blast-pressure and may be employed to heat metal also, substantially as set forth.

LUTHER SIMMONS.

Witnesses:
NOAH VEST,
LUTHER SHAFER.