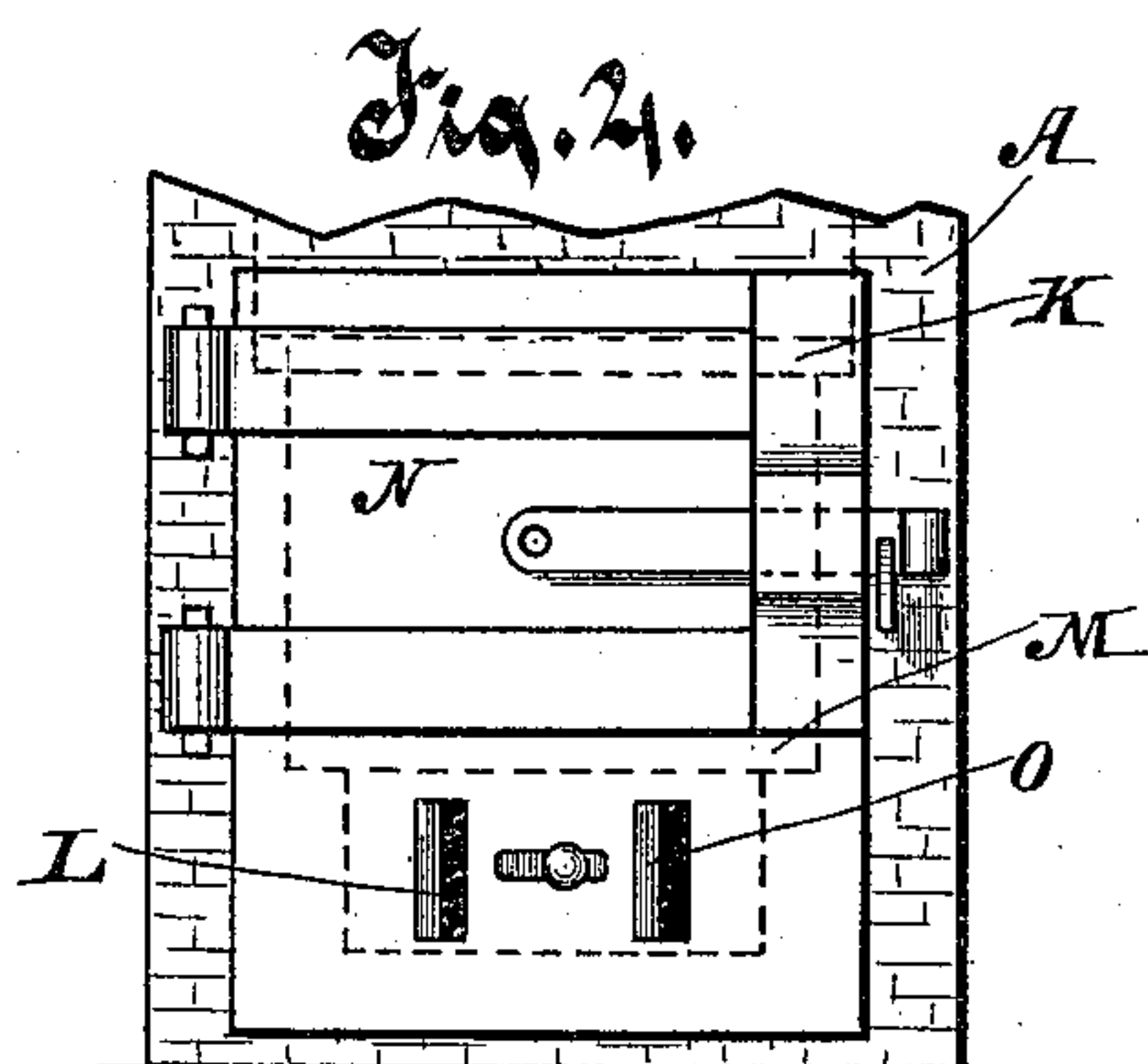
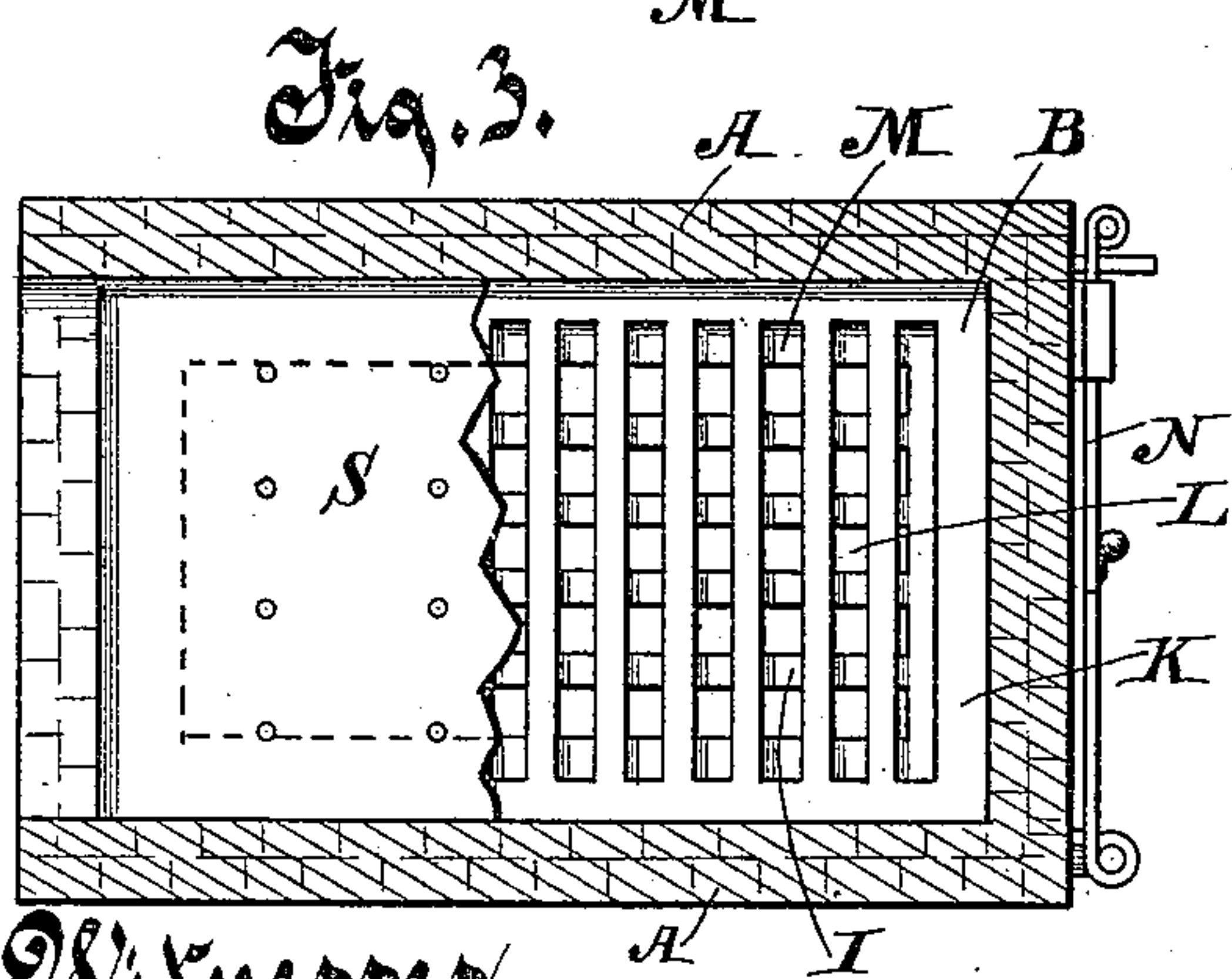
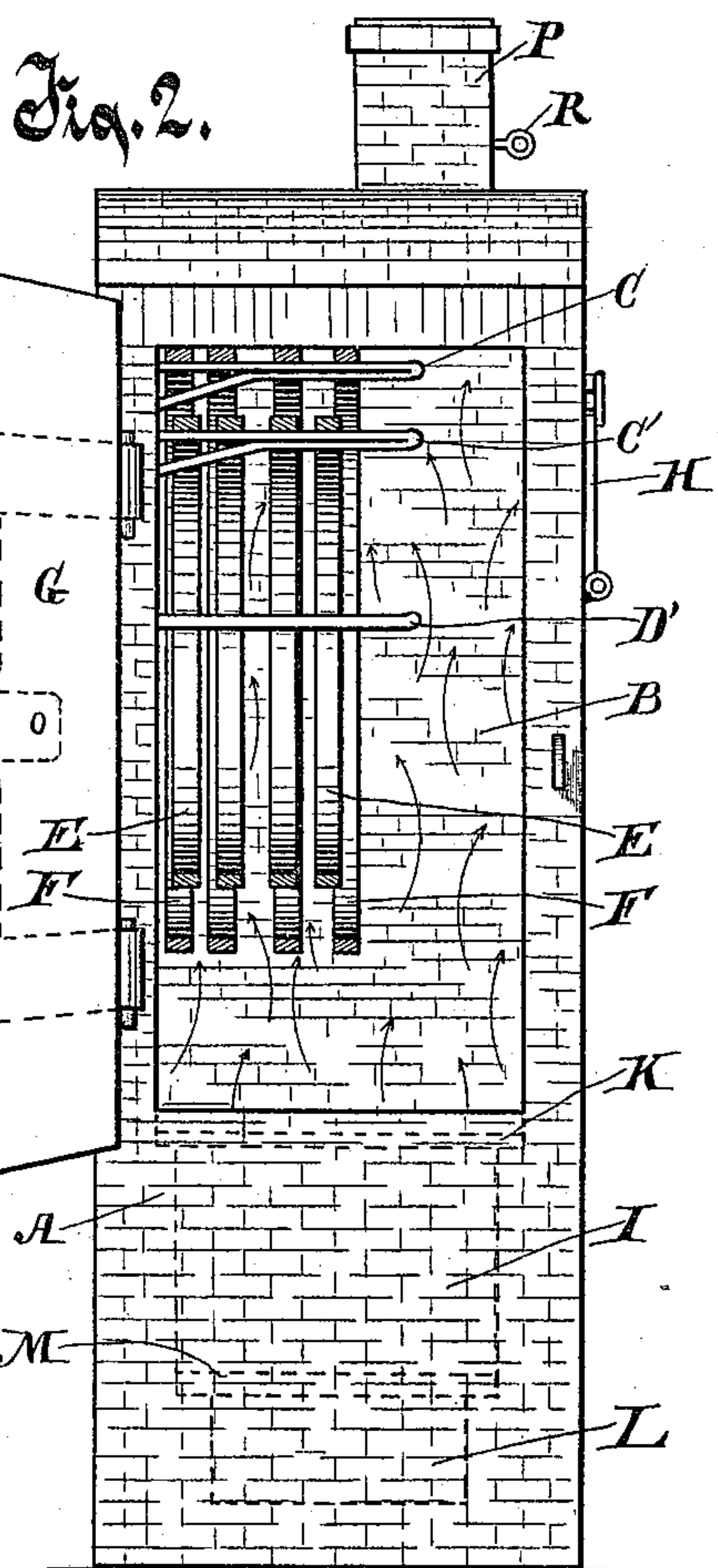
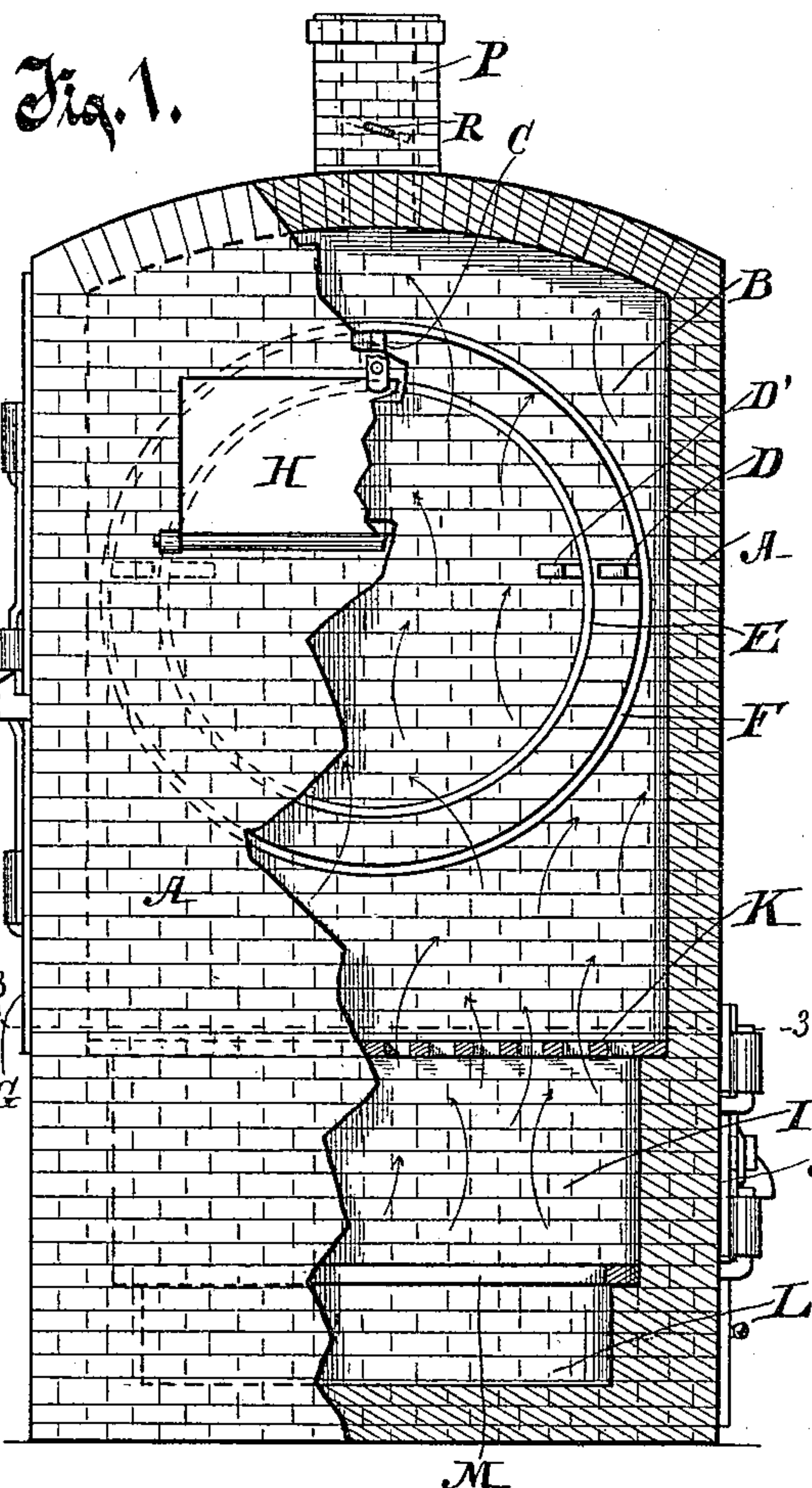


(No Model.)

H. ASMUS.
TIRE HEATING FURNACE.

No. 451,103.

Patented Apr. 28, 1891.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY ASMUS, OF PINE CITY, MINNESOTA.

TIRE-HEATING FURNACE.

SPECIFICATION forming part of Letters Patent No. 451,103, dated April 28, 1891.

Application filed December 20, 1890. Serial No. 375,299. (No model.)

To all whom it may concern:

Be it known that I, HENRY ASMUS, of Pine City, in the county of Pine and State of Minnesota, have invented a new and useful Improvement in Tire - Heating Furnaces, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to a device constructed and arranged particularly for use as a furnace in which to heat and thereby expand metal wheel-tires for the purpose of setting them on the felloes of wheels. The device may be used for other purposes, such as a heater or as a smoke-house.

In the drawings, Figure 1 is a side elevation of the complete device, a portion of the front side wall being broken away and the top, bottom, and front end wall being shown in section. Fig. 2 is an elevation of the rear end wall, the door thereon being swung open, showing the heating-chamber and wagon-tires therein in central vertical section. Fig. 3 is a top plan view of the furnace-grates, the walls being shown in horizontal section. Fig. 4 is a detail of the fire-chamber door hung on the front end wall of the furnace.

The walls A A of the furnace are constructed of brick or other material adapted to withstand a great heat and support the load of a number of tires hung thereon in the heating-chamber B. The heating-chamber B is located in the upper part of the furnace and is of sufficient size to receive therein the tires that are to be heated for the purpose of setting them. Metal pins C C' and D D' are fixed in one side wall of the heating-chamber B and project therefrom into the chamber, the pins C and C' being located near the top of the chamber centrally, and the pins D and D' being located near the edges of the chamber at such point as to be just within the greatest horizontal diameter of tires hung on the pins C and C'. The pins D and D' are arranged to receive small or front-wheel tires E thereon within the circle of the larger or hind-wheel tires F, hung on the outer pins C and C'. These pins are of sufficient length to receive thereon several tires on each set of pins. This heating-chamber is provided with a door G of sufficient size to permit the tires

to be placed in and removed from the heating-chamber therethrough.

In the drawings the door G is shown as on the rear end wall of the furnace; but the door may be made into this chamber through the side wall in front of the tire-supporting pins, if desired. A small swinging door H is hinged on the side wall of this heating-chamber, closing an aperture through the wall into the chamber adapted for ventilating purposes. In locating the main door G in the side wall of the chamber it will be found convenient to put the ventilating-door H' onto the larger door G, provided with a similar ventilating-aperture.

Below the heating-chamber B is the fire-chamber I, the fire-chamber being separated from the heating-chamber by a metal grate K, which rests on a ledge therefor in the walls of the furnace at the bottom of the heating-chamber. Below the fire-chamber I there is an ash-pit L, which is separated from the fire-chamber by the fire-grate M, resting on a ledge therefor in the walls of the furnace at the bottom of the fire-chamber. A metal door N, provided with draft-openings closed by a slide O, is hinged on the front end wall to close the aperture therethrough forming the outer ends of the fire-chamber and ash-pit. A short chimney or smoke-flue P, provided with a damper R, opens outwardly from the top of the heating-chamber.

My furnace is adapted for the use therein of either wood or coal as fuel with which to produce the necessary combustion and heat for expanding the tires. In use several small tires are put into the heating-chamber through the door G and hung upon the hooks D D', and larger tires are hung on the hooks C and C'. Thereupon the doors G and H are closed and a fire is built in the fire-chamber, the heat from which, rising into the heating-chamber B, causes the tires to sufficiently expand to be set in the usual way on the felloes of wheels. The aperture closed by the door H is also adapted to serve as a sight-aperture through which the tires can be viewed to ascertain when they are sufficiently hot.

A removable bottom S, having small apertures, is provided, which is adapted to be placed upon and over the grate K when the fur-

nace is to be used as a smoke-house. In such use a low smoldering fire is built in the fire-chamber I, the smoke from which passes upwardly through the perforations in the bottom S, filling the heating-chamber B with smoke, which chamber is for this purpose used as a receptacle for the articles to be smoked.

What I claim as new, and desire to secure by Letters Patent, is—

1. A furnace comprising a fire-chamber, a heating-chamber above the fire-chamber, the heating-chamber being provided with an outlet for smoke and gases, so that the products of combustion in the fire-chamber can pass into and to a limited extent through and out of the heating-chamber, pins fixed in the wall and projecting into the chamber, adapted to support thereon the articles to be heated, and a door opening into the heating-chamber of sufficient size to admit tires therethrough, substantially as described.

2. The combination, with the walls of a furnace having a suitable fire-chamber and a heating-chamber above the fire-chamber, of a grate interposed between the heating-cham-

ber and the fire-chamber, pins set into the wall of the furnace and projecting into the heating-chamber, which pins are arranged to receive and support a plurality of wagon-wheel tires thereon, and a door closing a large and suitable aperture into the heating-chamber for the passage of the tires therethrough, substantially as described.

3. The combination, with the walls of a furnace having a heating-chamber above a fire-chamber, of pins inserted in the wall of the furnace and projecting into the heating-chamber, a large aperture having a corresponding door adapted for the passage of wagon-wheel tires therethrough into the chamber, and a small aperture closed by a door in the wall of the heating-chamber opposite the walls in which the tire-supporting pins are fixed, substantially as described.

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

HENRY ASMUS.

Witnesses:

FRED A. HODGE,
HERMANN BORCHERS.