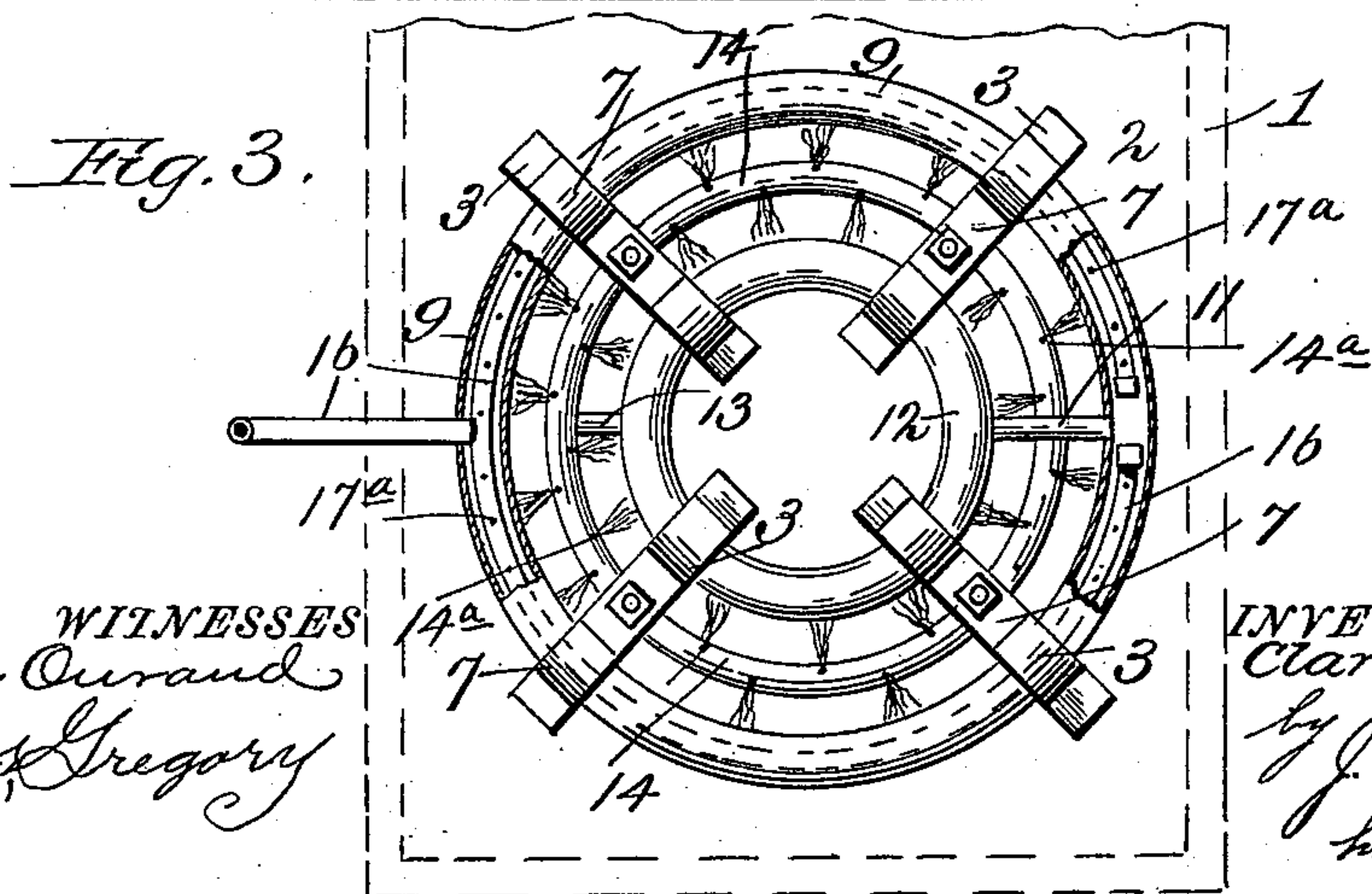
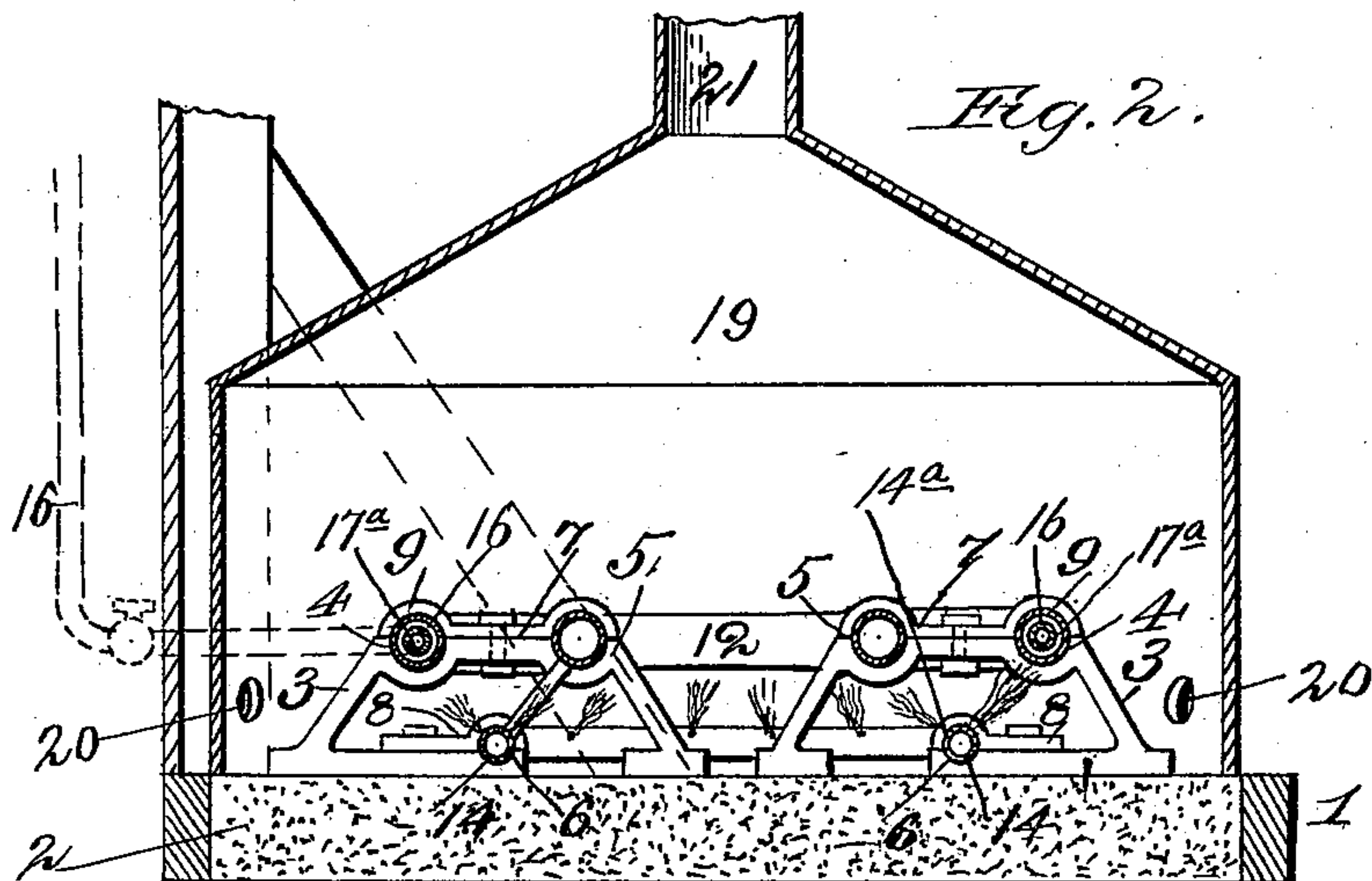
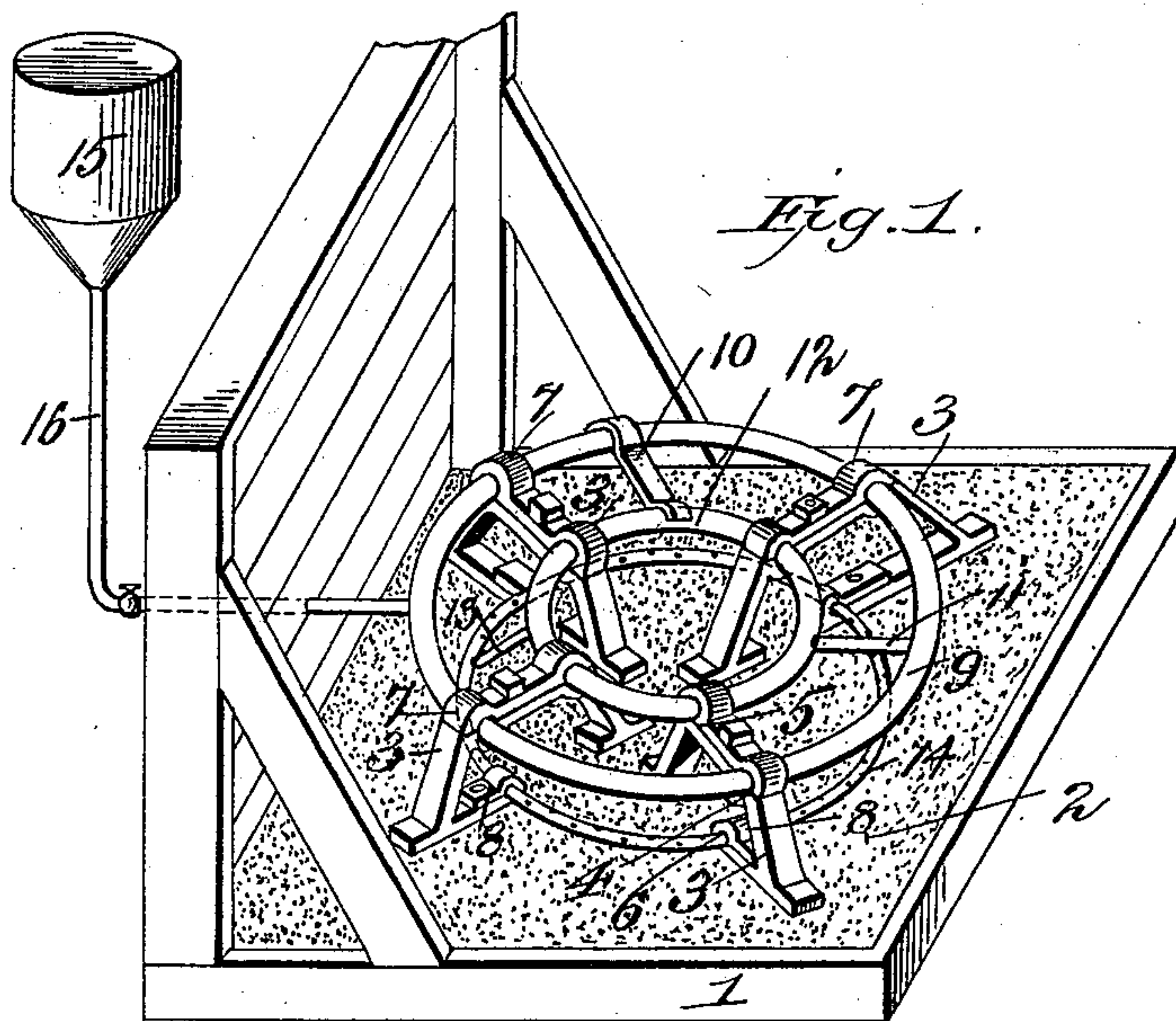


(No Model.)

C. ROBINSON.
TIRE HEATER.

No. 527,541.

Patented Oct. 16, 1894.



WITNESSES
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UNITED STATES PATENT OFFICE.

CLARK ROBINSON, OF HARTLEY, IOWA.

TIRE-HEATER.

SPECIFICATION forming part of Letters Patent No. 527,541, dated October 16, 1894.

Application filed April 5, 1894. Serial No. 506,500. (No model.)

To all whom it may concern:

Be it known that I, CLARK ROBINSON, a citizen of the United States, residing at Hartley, in the county of O'Brien and State of Iowa, 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention consists in a new and improved tire heater, which utilizes the principle set forth in my application for heating device filed November 9, 1893, Serial No. 490,479; using for fuel oil which is contained in an elevated tank or reservoir which forms a part of the device, the gas generated from the oil being burned in a curved perforated burner-tube beneath the tire, which is so constructed that it heats the tire and at the same time heats the generating cylinders of the device: and my invention will be hereinafter fully described and claimed.

Referring to the accompanying drawings, in which the same numerals of reference indicate corresponding parts in the several figures, Figure 1 is a perspective view of my improved tire heater. Fig. 2 is a central vertical sectional view of the same, with the cover in position. Fig. 3 is a top plan view, partly in section.

In the construction of my tire heater, I first preferably make a square frame 1, of two by six timber, which rests upon the earth or floor, and the space inside of which is filled with sand or brick, as at 2, in Fig. 2. Upon the frame and platform thus formed are placed cast-iron supporting brackets, 3, which are arranged equidistantly apart around the center of the device, as shown; four of these brackets being preferably used, to hold the circular generating and heating pipes in their proper positions; the bracket being formed with the seats, 4, 5, and 6, in which the pipes set and in which they are held by the clamps 7 and 8.

In the seats 4 of the brackets is mounted the outer upper circular pipe 9, which is preferably formed of one-inch pipe, and which is

connected at the point shown by a one-fourth-inch connecting pipe 11 with the inner one-inch circular pipe 12, which rests in the seats 5 and is connected at the point farthest from the connecting pipe 11, by a one-fourth-inch connecting-pipe 13 with the burner tube or pipe 14, which forms a circle and is mounted in the lower part of the brackets, in the seats 6, beneath and midway between the two upper generating pipes 9 and 12, as shown.

Upon the elevated part of the frame 1 is mounted the oil tank, 15, from which a feed pipe 16 leads down beneath frame 1 and up through the sand or brick filling of the same to the outer pipe 9, which it enters at what may be termed the rear of the heater. The feed pipe is continued in a circle within the outer pipe 9, with its ends closed by caps as shown in Fig. 3, and is formed within this cylinder or outer pipe 9 with the series of small apertures 17^a. The annular burner-pipe 14 is formed with the series of gas-apertures 14^a which are inclined, alternately, to either sides so that the flames will be projected up and out on each side up against both the outer and inner upper pipes 9, 12, as shown in the drawings.

In operation, the cock controlling the flow of oil from the tank being opened, and a little of the oil ignited at the burner until the generator pipes become heated, it will be seen that the oil flowing into the circular inner part 17 of the feed pipe will drop through its apertures 17^a on the interior of the hot outer pipe 9, when gas is generated from the oil. This gas and any oil which may not yet be generated into gas will flow from the outer pipe 9 through the connecting pipe 11 into the inner pipe 12, and passing around through the length of this heated pipe the gas which is then thoroughly generated passes down through connecting-pipe 13 into the circular burner-pipe 14, where it burns at the inclined gas-openings of said burner, which throw the flames up and outward to both sides against both the outer and inner generating pipes, 9, 12, and also against the tire, which is supported on the small metal tire-supports over the circular burner, the hooked ends of said supports engaging over the outer and inner pipes 9, 12. It will be seen that the oil flowing both to the right and left through the

outer pipe 9, and then through the length of the heated inner pipe 12 before passing to the burner becomes thoroughly heated and vaporized before passing in the form of gas to the burner. To insure a perfect draft for the flames, and to save all heat and prevent any waste, I employ a conical cover, 19, which fits down over the bed of the heater, and has air inlet openings 20 formed in its straight rim to supply air to the fire; the center of the conical cover having a smoke pipe or opening, 21. This cover may, however, be dispensed with when desired, and a band, twelve inches in height, be substituted for it, which will rest upon the sand or brick around the burner in the same position as the rim of the cover shown.

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

1. The tire heater consisting of the outer and inner upper circular pipes, forming generators and connected by the small pipe, the oil feed pipe extending from a tank or reservoir and having the circular inner part within the outer generator pipe, formed with the series of small oil apertures, the circular burner pipe arranged between and below the upper generator pipes, connected with the inner generator pipe by a small pipe, and formed with the series of apertures inclined to both sides, and devices for supporting tires above said circular burner pipes; substantially as set forth.

2. In a tire heater the combination of the pipe-supporting brackets formed with the outer and inner upper seats and the lower central seat, and having the pipe-clamps, the circular outer and inner generator pipes and burner pipe mounted in said seats, and having the connecting-pipes as specified, the oil feed pipe leading from an oil tank and having the circular perforated inner part extending within the outer generator pipe, and the tire supports having the hooked ends to engage the upper pipes; substantially as set forth.

3. The herein-described tire heater, consisting of the supporting frame formed with the elevated end and having a suitable filling of sand or brick, the metal supporting brackets formed with the pipe-seats and clamps, the circular outer and inner generator pipes and burner pipe mounted in said seats, and having the connecting-pipes as specified, the elevated oil-tank, the feed pipe leading from said tank and having the circular perforated inner part extending within the outer circular generator pipe, the tire supports, and the conical cover formed with the rim-openings and the central pipe; substantially as set forth, for the purposes specified.

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

CLARK ROBINSON.

Witnesses:

FRANK PATCH,
D. C. PECK.