

No. 779,780.

PATENTED JAN. 10, 1905.

J. HAUG.
CHARGING MACHINE FOR COKE OVENS.

APPLICATION FILED APR. 30, 1904.

2 SHEETS—SHEET 1.

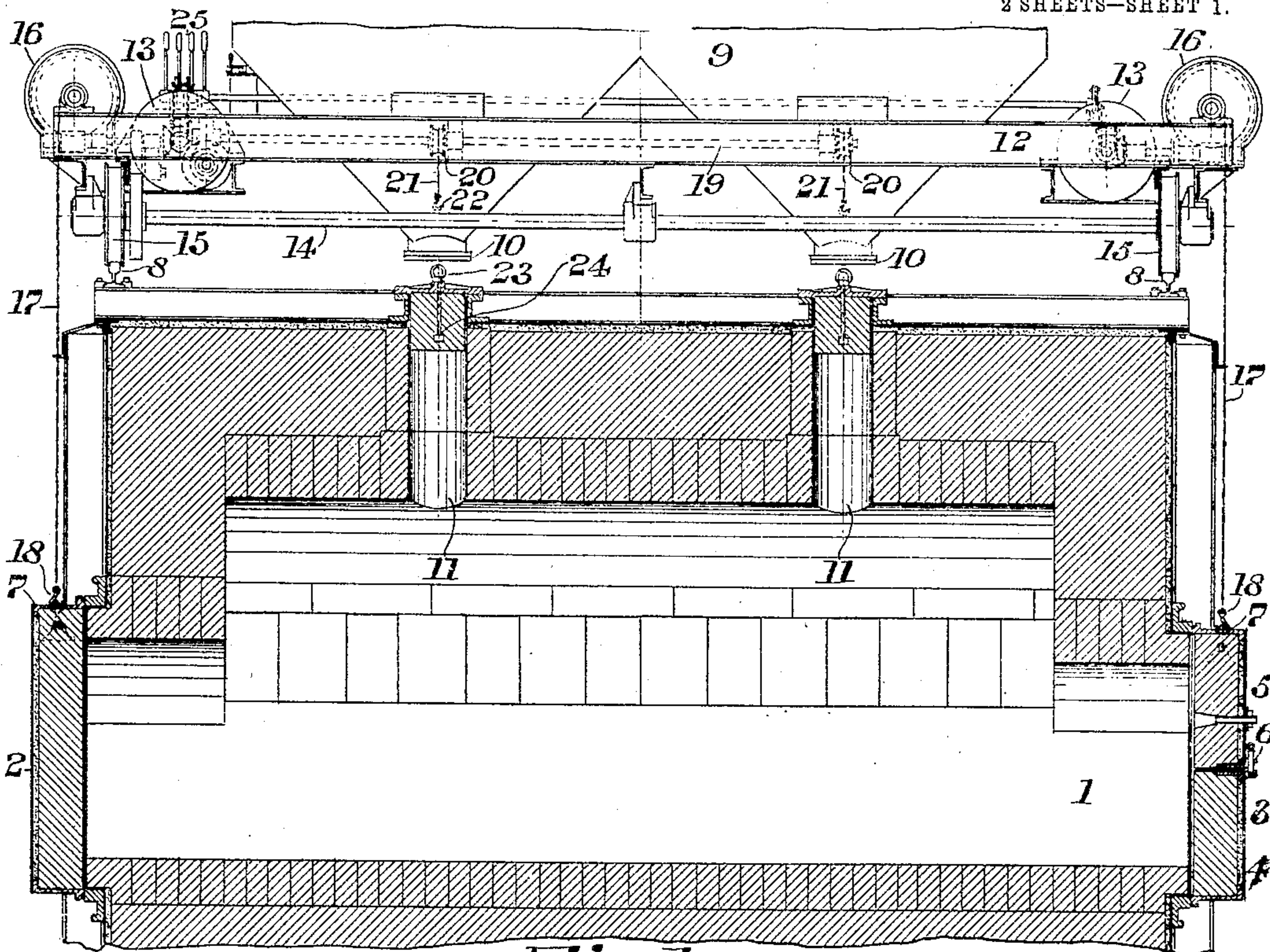


Fig. 1.

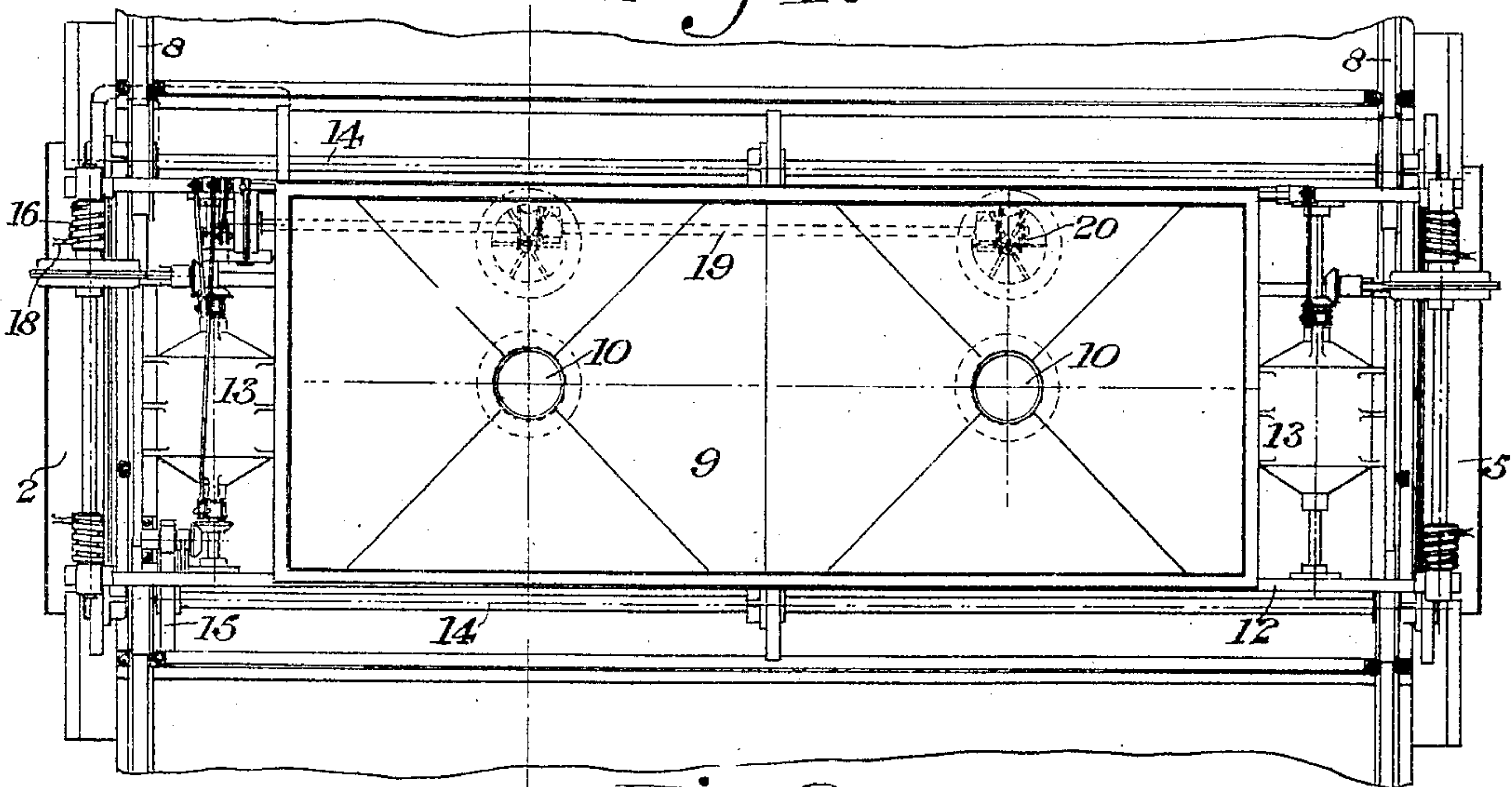


Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 5.

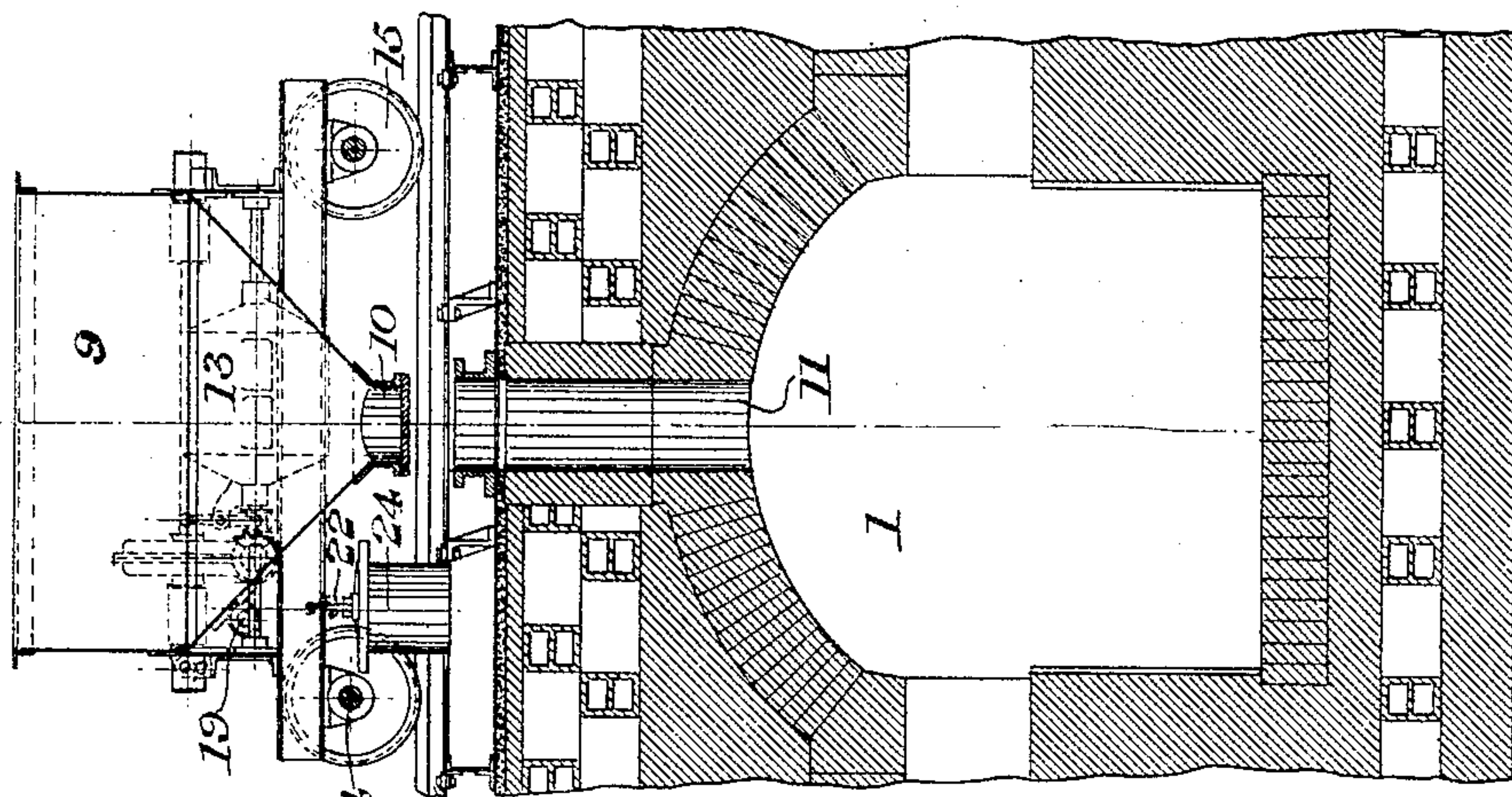


Fig. 4.

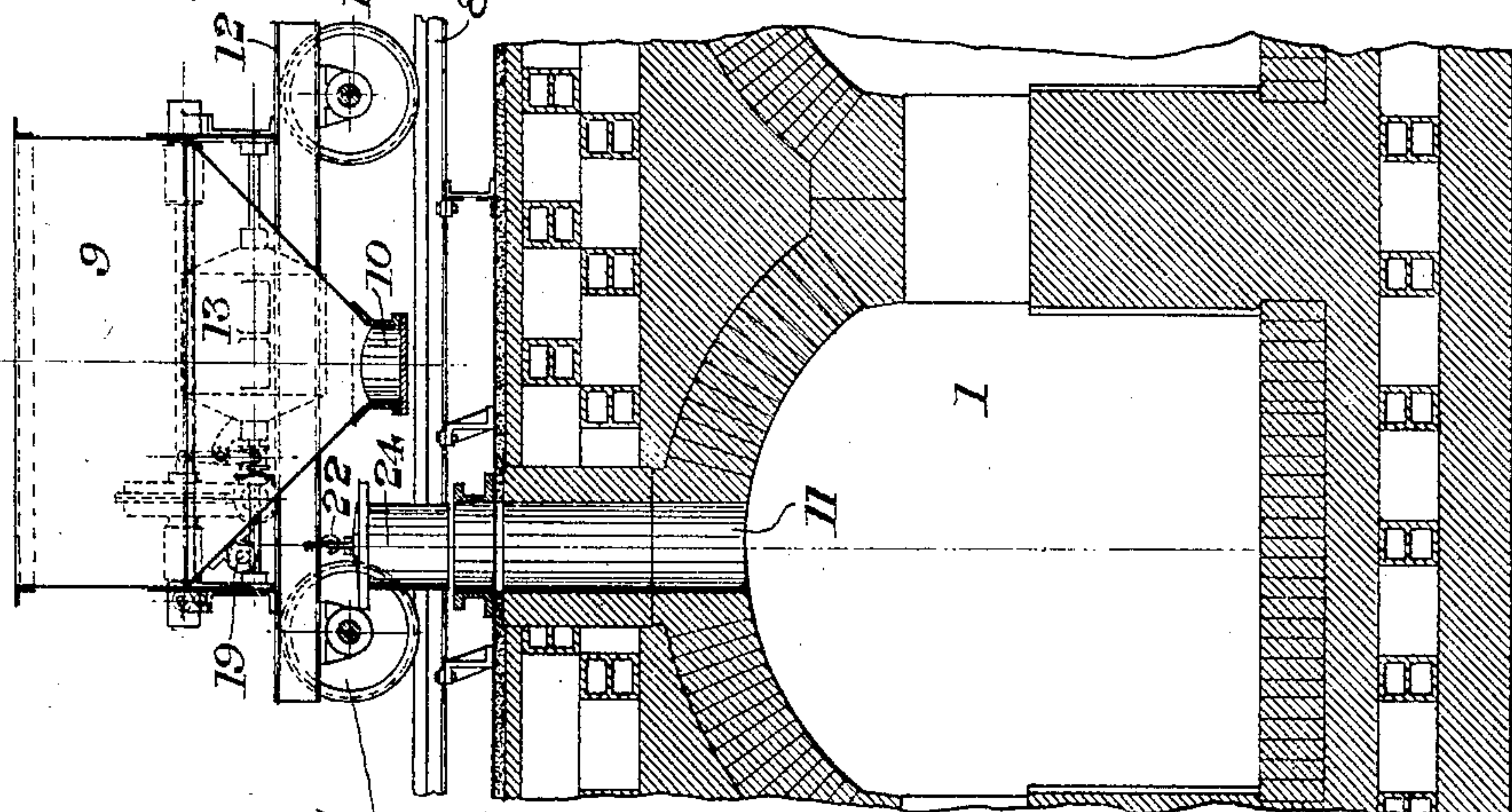
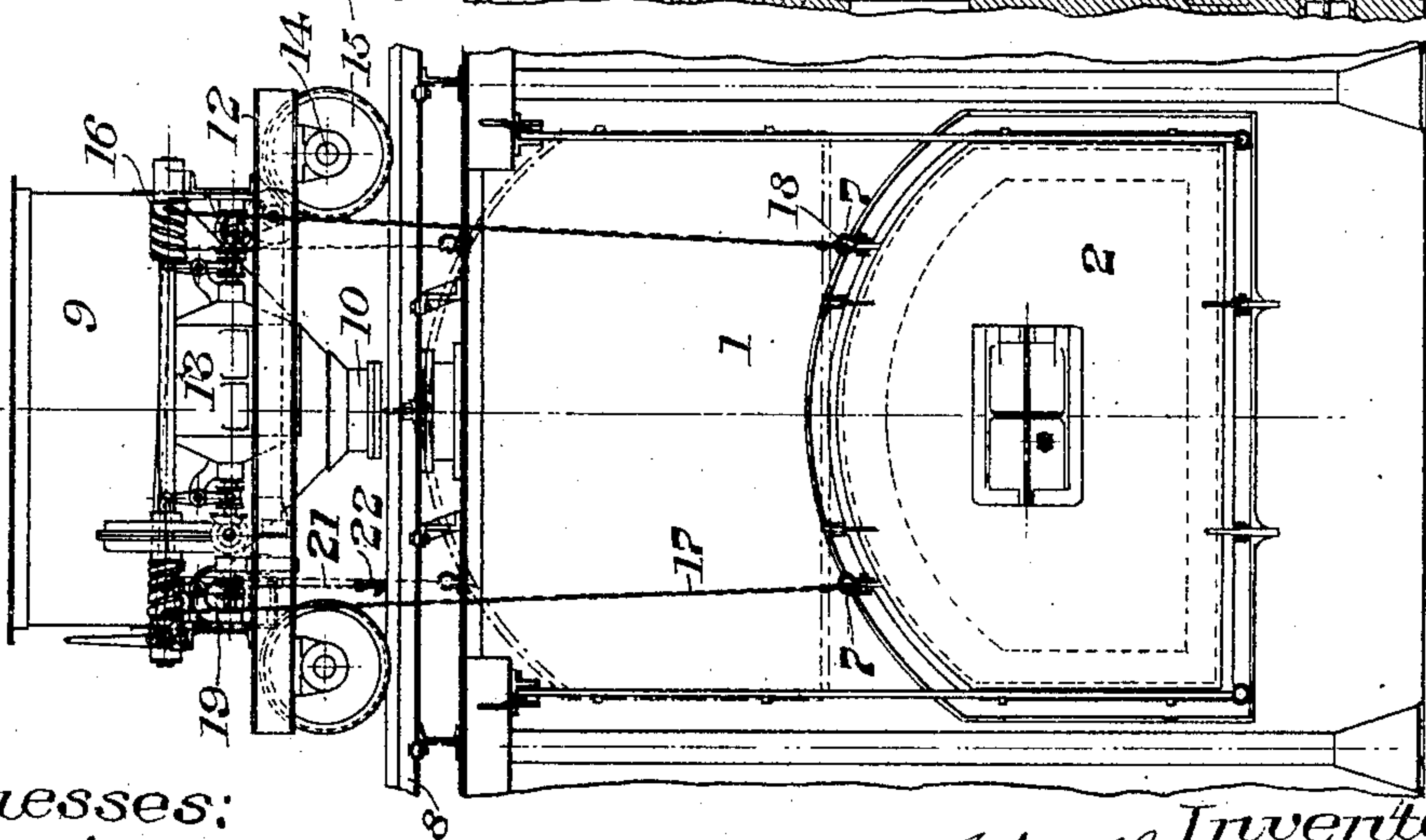


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN HAUG, OF PHILADELPHIA, PENNSYLVANIA.

CHARGING-MACHINE FOR COKE-OVENS.

SPECIFICATION forming part of Letters Patent No. 779,780, dated January 10, 1905.

Application filed April 30, 1904. Serial No. 205,724.

To all whom it may concern:

Be it known that I, JOHN HAUG, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Charging-Machines for Coke-Ovens, of which the following is a specification.

My invention relates to charging devices for coke-ovens and the like and to the method of discharging and charging such ovens.

It consists of a car traversing the set or range of ovens and provided with discharge-openings and with means for manipulating the oven-doors and the charging-plugs.

It further consists of novel features of construction, all as will be hereinafter fully set forth.

In the drawings, Figure 1 represents, partly in elevation and partly in longitudinal vertical section, a charging-car and coke-oven embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is an end view of the oven and car. Figs. 4 and 5 are sections through lines *xx*, Fig. 2, the car being shown in different position.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates a coke-oven provided with the usual doors 2 3 at its ends, the door 3 being made in two parts 4 5, united by a catch 6. Each door is provided with eyes 7, the function of which will hereinafter appear.

Mounted on the oven 1 are rails 8, on which runs a car 9, shown as provided with two bottom discharge-openings 10, corresponding in position with the charging branches 11 of the oven 1. On the frame 12 of the car 9 and preferably at each end thereof are provided motors 13, which may employ electricity, compressed air, or other source of power. The motors 13 are connected by suitable gear with the shafts 14 of the car, on which are mounted wheels 15. At each end of the frame 12 is mounted a winch hoisting or drum 16, from which depend chains 17, terminating in hooks 18, adapted to engage with the eyes 7. Suitably geared to one of the motors 13 is a shaft 19, carrying drums 20, on which wind chains

21, having hooks 22, adapted to engage with eyes 23 on the charging-plugs 24 of the oven 1.

The operation is as follows: The car 9 having been first filled by coal is run, by means of its motor, directly over one of the ovens 1. The hooks 18 are then engaged with the eyes 7 in the doors 2 and 3 at each end of the oven, as shown in Fig. 3, and the drums 16 are turned to raise the doors. The coke in the oven may then be discharged on a car or otherwise in any well-known or desired manner. The doors 2 and 3 are then lowered, the hooks 18 cast off, and the car 9 run a short distance, so as to bring the hooks 22 over the eyes 23 in the charging-plug 24, as shown in Fig. 4. The plugs are then raised and the car run back to the position shown in Fig. 5, when the car is dumped and the oven charged. The car is then run back to the position shown in Fig. 4 and the plugs 24 lowered into their normal position in the branches 11. While the car is still in the position shown in Fig. 5 it may be advantageous to loosen the catch 6 and raise the upper part 5 of the door 3 to permit the leveling of the coal in the oven. After the part 5 has been lowered it is locked into place. (The charging-plugs may be lowered into the branches, as above described.)

It will be seen that by means of the levers a single operator is enabled to handle the car 9, as well as the door-raising and plug-raising devices.

It will be evident that various changes may be made by those skilled in the art which may come within the scope of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction herein shown and described.

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

1. In combination with a coke-oven, a charging-car, a motor on said car, drums on said car operative to raise the oven-doors and the charging-plugs, and suitable connections between said motor and said drum and between said motor and the running-gear of the car.

2. In combination with a coke-oven, a charging-car, motors at the opposite ends of said

car, a drum at each end of said car operative
to raise the oven-door, a shaft running longi-
tudinally of the frame of said car and having
drums operative to raise the charging-plugs,
5 and connections between each of said motors
and one of said first-named drums, between
one of said motors and said shaft and between
one of said motors and the running-gear of the
car.
10 3. In combination with a coke-oven, a charg-
ing-car, a plurality of motors on said car,

drums on said car operative to raise the oven-
doors and a charging-plug, suitable connec-
tions between said motors and said drum and
between one of said motors and the running- 15
gear of the car, and means whereby an opera-
tor is enabled to simultaneously stop and start
said motors.

JOHN HAUG.

Witnesses:

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