

No. 786,234.

PATENTED MAR. 28, 1905.

H. E. PARSON.

BLOWER.

APPLICATION FILED NOV. 28, 1903. RENEWED MAR. 6, 1905.

2 SHEETS—SHEET 1.

FIG. 2.

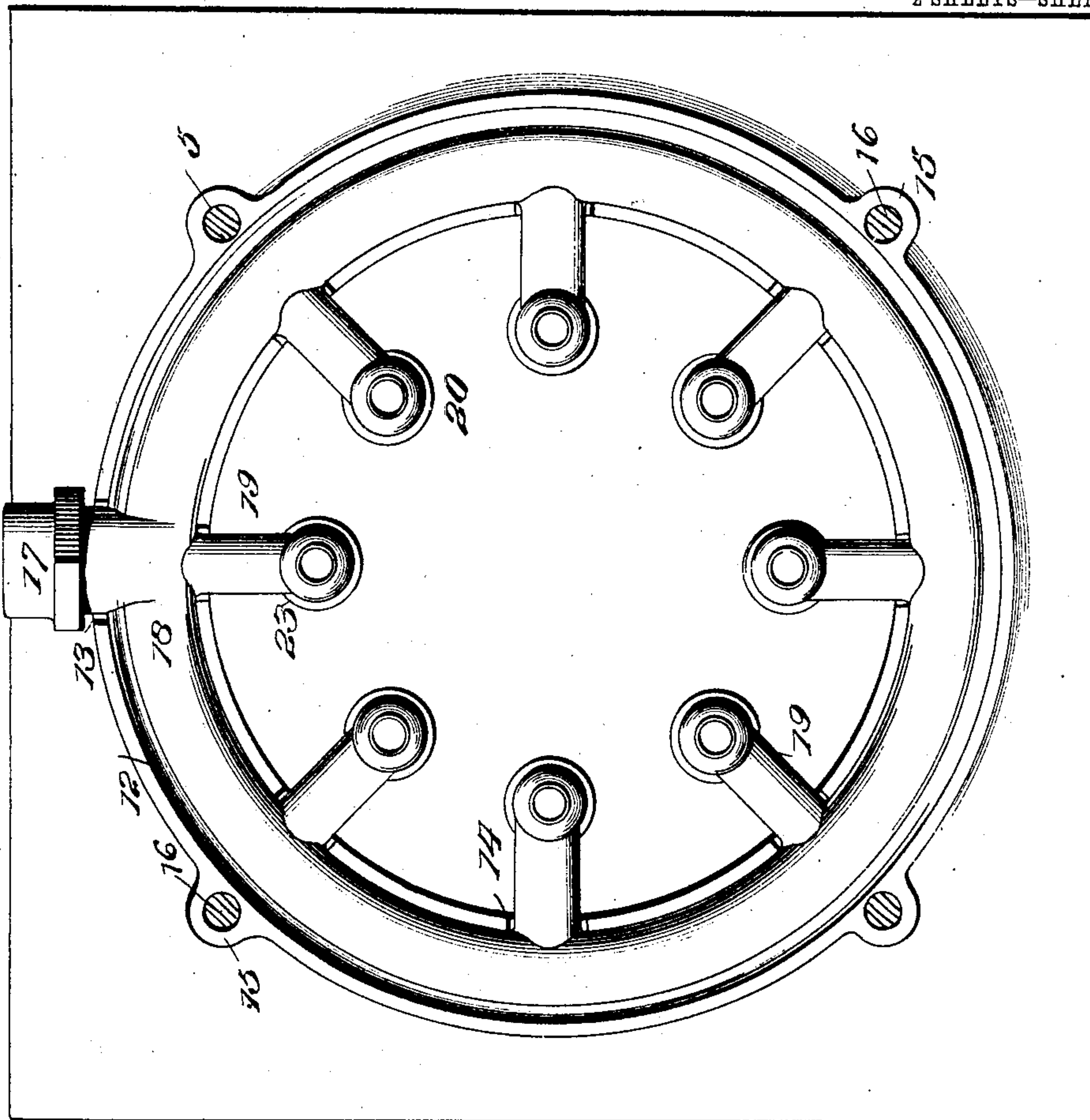
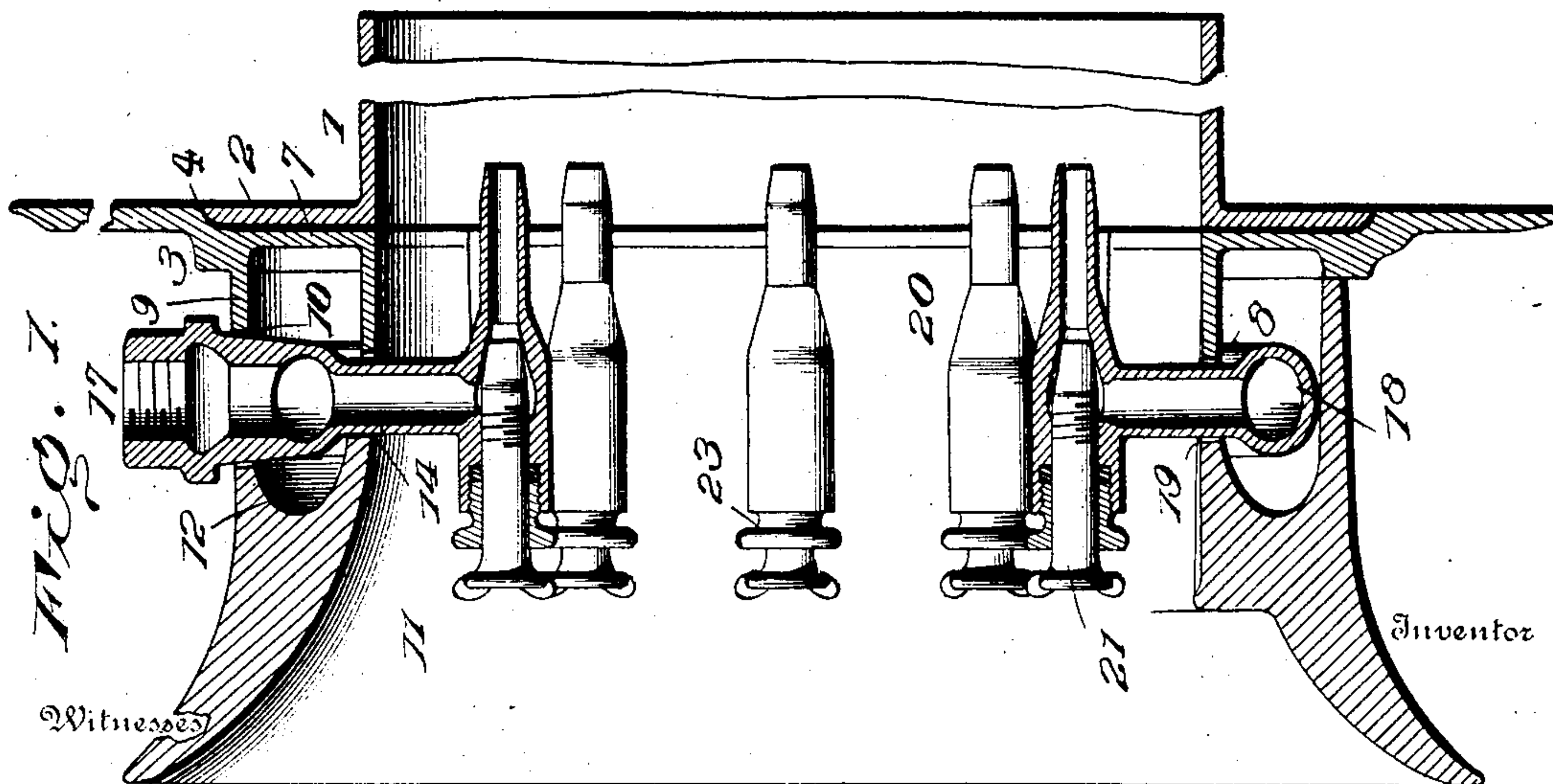


FIG. 1.



Witnessed

John Wheeler

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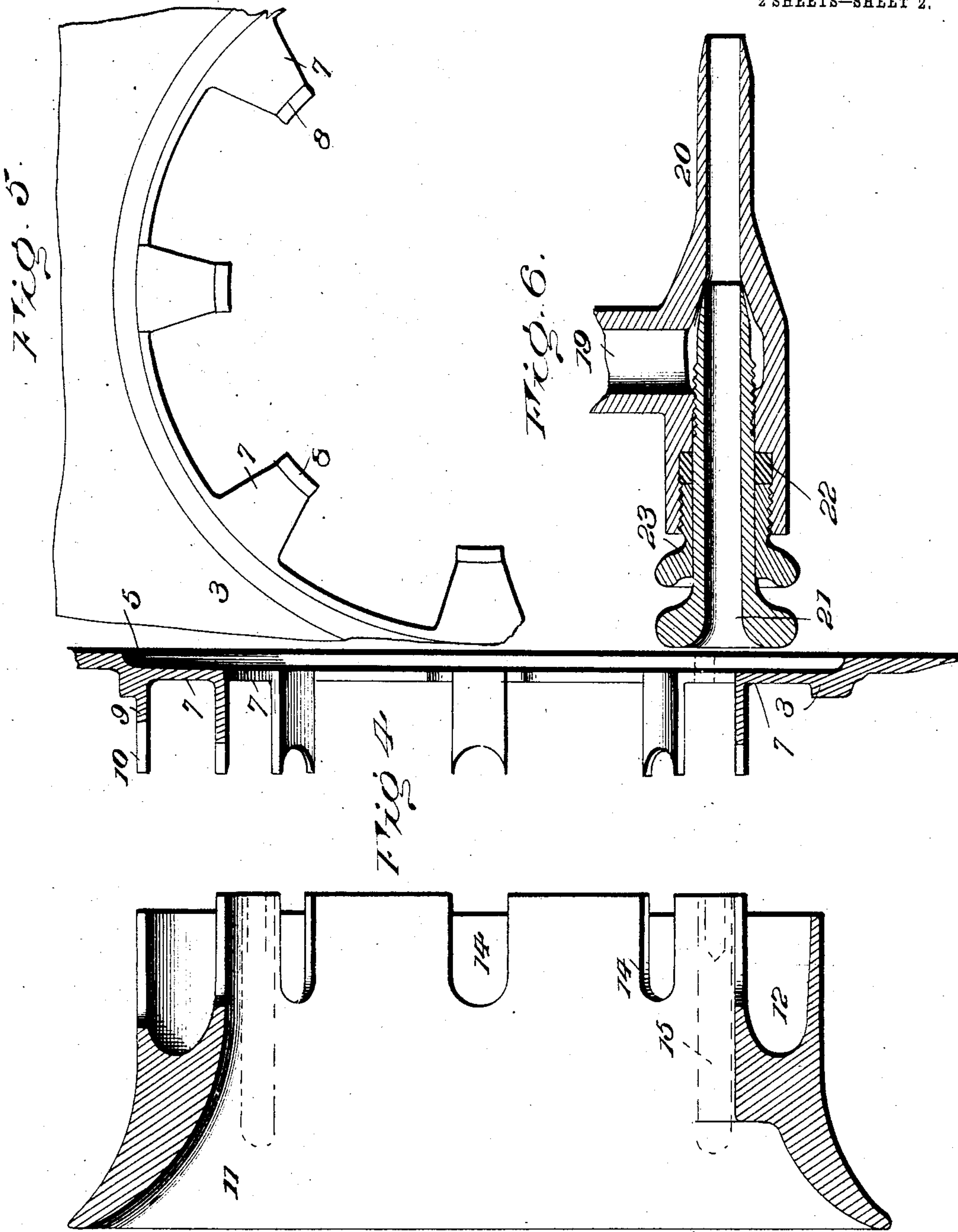
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Inventor

H. E. PARSON

Witnesses

John Wheeler.

Fig. 3.

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UNITED STATES PATENT OFFICE.

HENRY EDWIN PARSON, OF NEW YORK, N. Y.

BLOWER.

SPECIFICATION forming part of Letters Patent No. 786,234, dated March 28, 1905.

Application filed November 28, 1903. Renewed March 6, 1905. Serial No. 248,656.

To all whom it may concern:

Be it known that I, HENRY EDWIN PARSON, a citizen of the United States of America, and a resident of 320 Broadway, New York, State of New York, (whose post-office address is 320 Broadway, New York, N. Y.,) have invented certain new and useful Improvements in Blowers, of which the following is a specification.

My invention relates to a new and improved form of air-injecting mechanism, commonly called a "blower," which is used for the purpose of producing a forced draft under furnaces. In a device of this sort it is important that the angles in the pipes through which the air is to pass should, as far as possible, be reduced in number and that the path of the air should be as straight as the requirements of the structure will permit. It is also important that the steam-jets, by means of which an induced draft is created, should be so located as to permit a maximum of air-inlet and interfere as little as possible with the stream of inflowing air. It is also important that the injectors should be so constructed that they may be set at any desired aperture and when so set should remain constantly at the set aperture without variation or change.

Referring to the drawings, Figure 1 is a vertical section of the blower-casing and of two of the steam-nozzles, showing three others in full elevation. Fig. 2 is a front elevation of the blower with the funnel removed. Fig. 3 is a vertical section of the funnel detached. Fig. 4 is a vertical section of the face-plate detached. Fig. 5 is a front view of a fragment of the face-plate. Fig. 6 is a longitudinal section of the steam-jet.

Referring to the drawings, Fig. 1, 1 is a casing cylindrical in form and having a right-angle flange 2. The cylinder 1 is inserted through a circular hole in the wall of an ash-pit below a furnace and is of a length demanded by the location and force of the blowers. The flange 2 projects at right angles to the cylinder 1 at its outer edge.

3 is a face-plate. (Shown in detail in Figs. 4 and 5.) It is provided in the rear side with a circular recess 4, into which fits the flange 2 of the cylinder 1. The flange is secured to

the cylinder by suitable bolts, as shown. The face-plate (shown in section in Fig. 4 and in plan in Fig. 5) is provided with eight inwardly-projecting fingers 7 7, &c., on the end of each of which is a vertical support 8, having recesses in their outer ends. These recesses are all in the same vertical plane. On one side of the face-plate is a lug 9, projecting at right angles from the plate and having a notch 10 in its outer end.

11 is the bell of the blower, cylindrical in shape, having the same interior diameter as the aperture in the face-plate and the cylinder 1 and flared at its outer end. The narrow end of the bell is provided with a circular recess 12, having exterior and interior walls. The exterior wall is provided with a notch 13 and the interior wall with a series of notches 14 14, &c. The notch 13 is of the same width as the width of the lug 9 and the notches 14 14 are of the same width as the lugs 8 8. On the exterior of the bell 11 are a series of lugs 15 15, projecting at right angles to the wall of the bell and perforated and by which the bell may be bolted to the face-plate, as shown in Fig. 1, by means of the bolts 16 16, &c.

17 is a steam-pipe supplying steam to the blower.

18 is a closed circular pipe tapped into the steam-pipe 17 and having eight branches 19 19, &c., which project radially inward from the circular pipe 18 toward the center of the circle of the pipe 18. The circular pipe 18 is of a size to fit into the recess 12 of the bell 11, and each of the branches 19 19 will be held in position by the lugs 8 8 of the face-plate, by which they will be supported. When the bell 11 is placed on the face-plate, the circular pipe 18 will lie in the recess 12 and the notch 13 of the bell will fit over the steam-pipe 17, while the notches 14 14 will each fit over one of the branches 19 19 and hold the circular pipe 18 and the series of branches firmly in position within the center of the blower, leaving the center of the aperture open and unobstructed.

The detail of the steam-nozzles is shown in Fig. 6.

20 is the steam-nozzle integral with the pipe 19.

21 is an air-nozzle tapped into the rear end of the steam-nozzle 20 and beveled at its forward end, so as to be screwed forward or backward into or out of the steam-nozzle, so as to increase or decrease the steam-aperture between the exterior of the air-nozzle 21 and the interior of the steam-nozzle 20.

22 is a gasket surrounding the air-nozzle 21 and resting upon a shoulder in the wall of the steam-nozzle 20.

23 is a cylinder surrounding the air-nozzle and sliding freely thereon, provided with a thread upon its exterior and tapped into the rear end of the steam-nozzle. The cylinder 23 is provided upon its exterior end with a nut made integral with the cylinder, by which it may be screwed down upon the gasket 22, so as to pack the air-nozzle 21 and not only prevent the escape of steam to the rear of the blower, but also to lock the air-nozzle when set within the steam-nozzle.

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

1. In a steam-blower, the combination with a bell having a central aperture, of a circular steam-pipe outside of the bell and surrounding the same and having radial inwardly-projecting branches extending into

the bell, each branch being provided with a steam-nozzle.

2. In a steam-blower, the combination with a face-plate having a central aperture, of a bell having a central aperture secured to the face-plate, a circular steam-pipe surrounding the bell and having radial inwardly-projecting branches extending into the bell, each branch being provided with a steam-nozzle.

3. In a steam-blower, the combination of a face-plate having a central aperture, and provided with a series of lugs surrounding the aperture and projecting at right angles therefrom, with a removable bell, having a central aperture and a series of notches of a size equal to and adapted to fit over the projecting lugs upon the face-plate, and a circular steam-pipe surrounding the bell and having radial inwardly-projecting branches so located as to rest upon the lugs of the face-plate and within the notches of the bell, substantially as described.

Signed by me at Sault Ste. Marie, Michigan, this 12th day of August, 1903.

HENRY EDWIN PARSON.

Witnesses:

CHAS. T. CLARK,
WM. A. MILLAGER.