

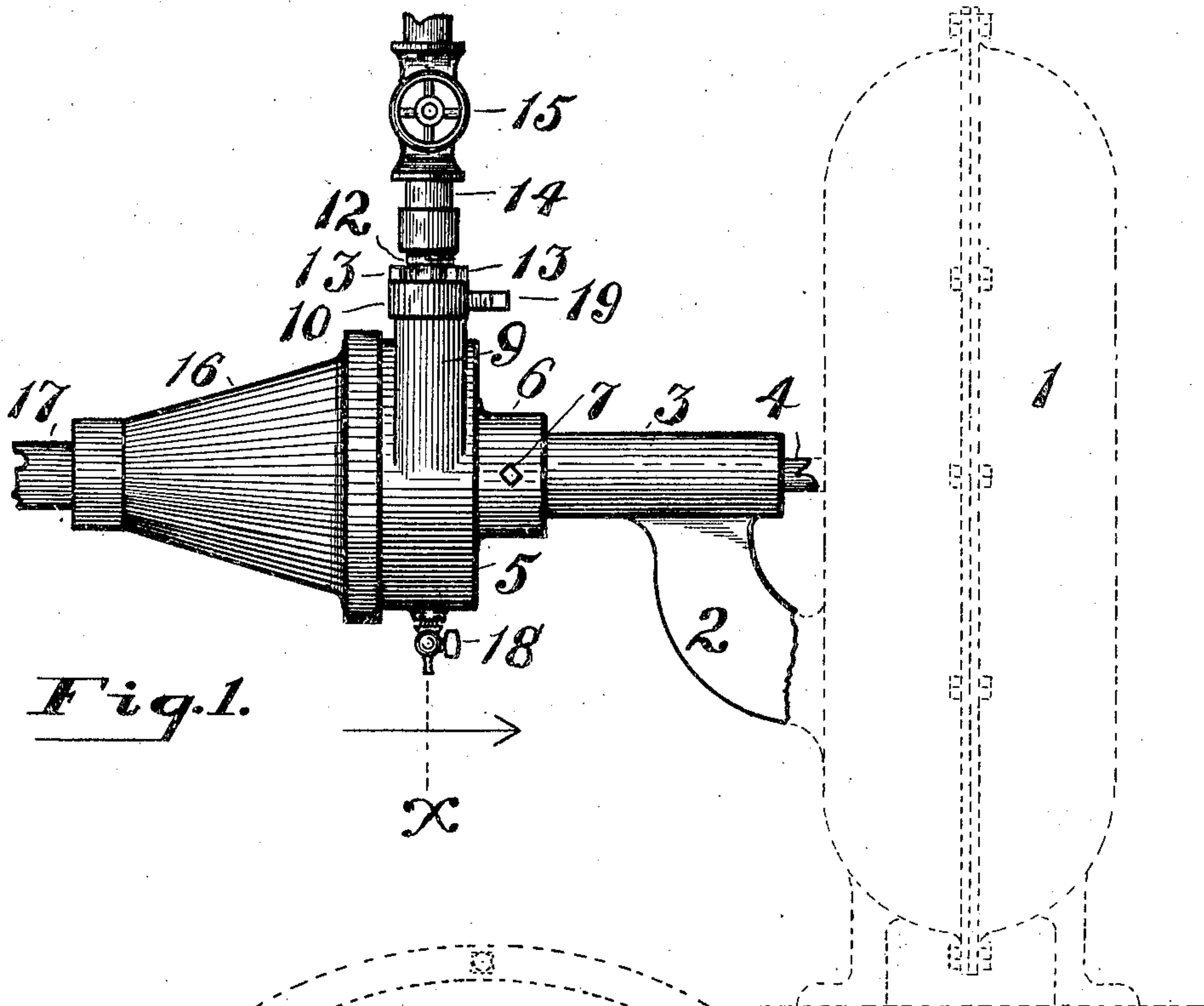
No. 770,086.

PATENTED SEPT. 13, 1904.

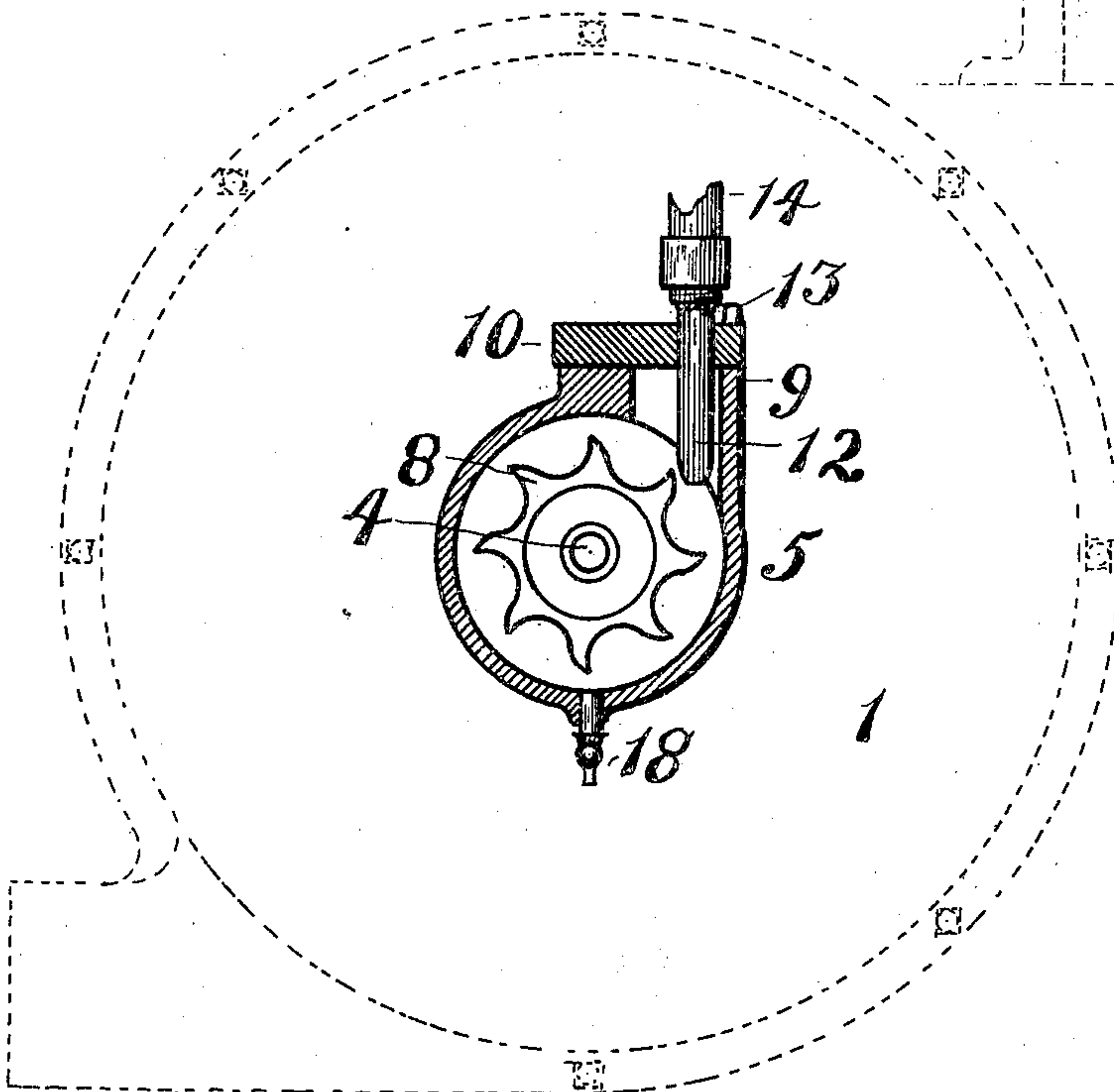
J. W. MILLER.  
ROTARY FAN MOTOR.

APPLICATION FILED JUNE 27, 1904.

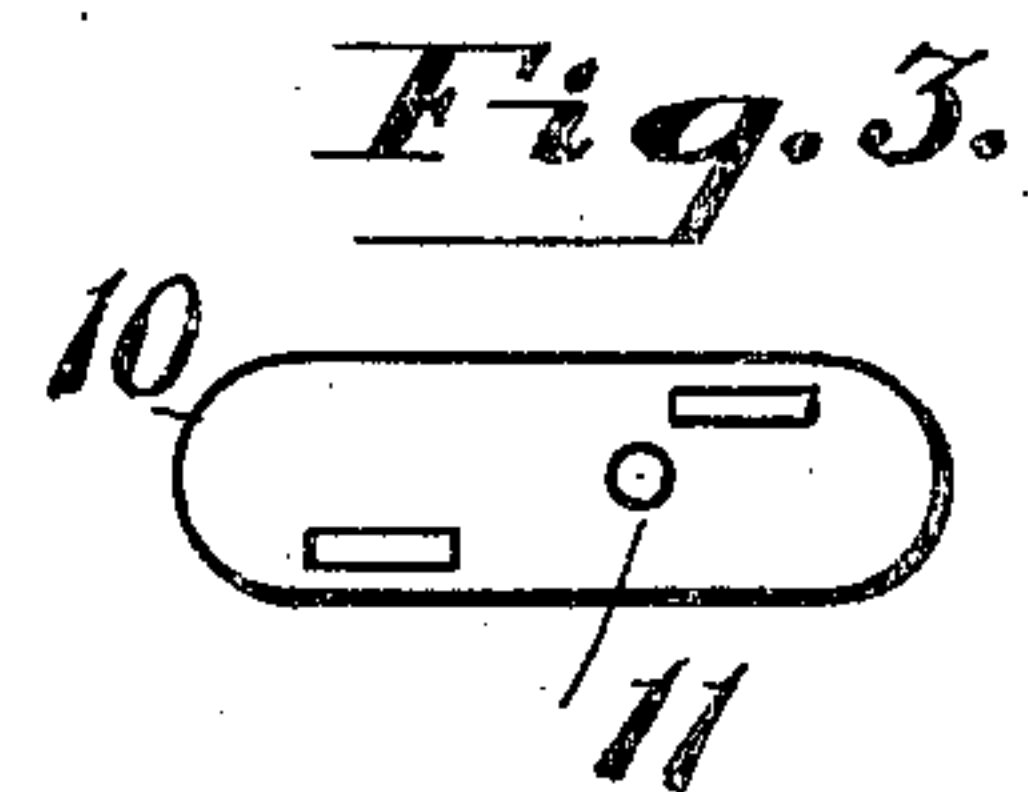
NO MODEL.



*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

Witnesses:  
A. E. King  
Mabel L. Surgeon

Inventor:  
John W. Miller  
by C. E. Humphreys  
Atty.

# UNITED STATES PATENT OFFICE.

JOHN W. MILLER, OF AKRON, OHIO.

## ROTARY-FAN MOTOR.

SPECIFICATION forming part of Letters Patent No. 770,086, dated September 13, 1904.

Application filed June 27, 1904. Serial No. 214,353. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. MILLER, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a certain new and useful Improvement in Rotary-Fan Motors, of which the following is a complete specification.

My invention has relation to rapidly-revolving fans, blowers, &c.

The object of my invention is to produce a suitable means for running a fan or blower commonly used on portable mechanism and especially designed to operate on forges used in sharpening and repairing well-drilling tools, and it will be thus seen from the nature of the use to which the device is put it is necessarily transported from place to place, and experience has shown that revolving the fan by means of a pulley and belt is not satisfactory, and hence the main object sought in this invention is to furnish a simple compact motor capable of being attached to the fan-shaft and arranged to be driven by steam from a suitable supply.

To the accomplishment of the aforesaid object my invention consists in the peculiar and novel construction, arrangement, and combination of parts hereinafter described, reference being had to the accompanying drawings, forming a part hereof.

In the accompanying drawings, in which similar reference-numerals indicate like parts on the different figures, Figure 1 is an end elevation of my device when in position upon a fan. Fig. 2 is a section of Fig. 1 at the line X; Fig. 3, a detail of the nozzle-holding block and adjusting device.

In the drawings, 1 is a dotted outline of an ordinary form of centrifugal fan or blower suitably mounted and provided on one side with a bracket 2, having a sleeve 3 mounted integrally thereon, and within this sleeve 3 is the main shaft 4, which bears the fan.

In placing my device I customarily attach it to the sleeve 3, and it consists of a cylindrical casing 5, provided on one side with a hollow hub 6, which incloses the sleeve 3 and is retained in place by a set-screw 7. The shaft 4 of the fan projects into the casing 5, and there is mounted on this shaft centrally within the casing 5 a rotary piston 8, provided

with suitable buckets on its outer periphery. On the upper part of the casing 5 is a hollow boss 9, placed to one side of the center and the opening of which communicates with the interior of the casing 5. On top of the boss 9 is a cap 10, (see Fig. 3,) having an opening 11 therein through which is passed a nozzle 12, from which steam is driven against the buckets of the piston 8. This cap 10 is held to the top of the boss 9 by cap-screws 13, which pass through slots in the cap, (see Fig. 3,) thus enabling the nozzle held by the cap to be adjusted with reference to the piston 8 in order to cause the jet of steam from the nozzle to encounter the piston 8 at different or preferred distances from the center thereof. The nozzle 12 is capable of vertical adjustment in the opening 11, and when in a desired position it is held in place by a set-screw 19. (See Fig. 1.) A supply-pipe 14 conveys steam to the nozzle 12, and this pipe is customarily provided with a cock 15 to regulate the amount of steam to be admitted. In order to carry away the exhaust-steam after use in this device, I fasten by threads or otherwise to the front face of the casing 5 a hood or cap 16, from which projects pipe 7 to conduct the used steam to any suitable spot. In the lower part of the casing 5 is a drip-cock 18 to permit drainage.

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

The combination with a fan or blower provided with an extended bracket having a sleeve furnishing a bearing for the fan-shaft, a casing arranged on said sleeve, a rotary piston within said casing mounted on the fan-shaft, an adjustable nozzle capable of directing a jet of operating-fluid against said piston and a hood arranged to be fastened to said casing to direct the flow of used fluid substantially as shown and described and for the purpose specified.

In testimony that I claim the above I hereunto set my hand in the presence of two subscribing witnesses.

JOHN W. MILLER.

In presence of—

C. E. HUMPHREY,  
MABELLE F. SURGEON.