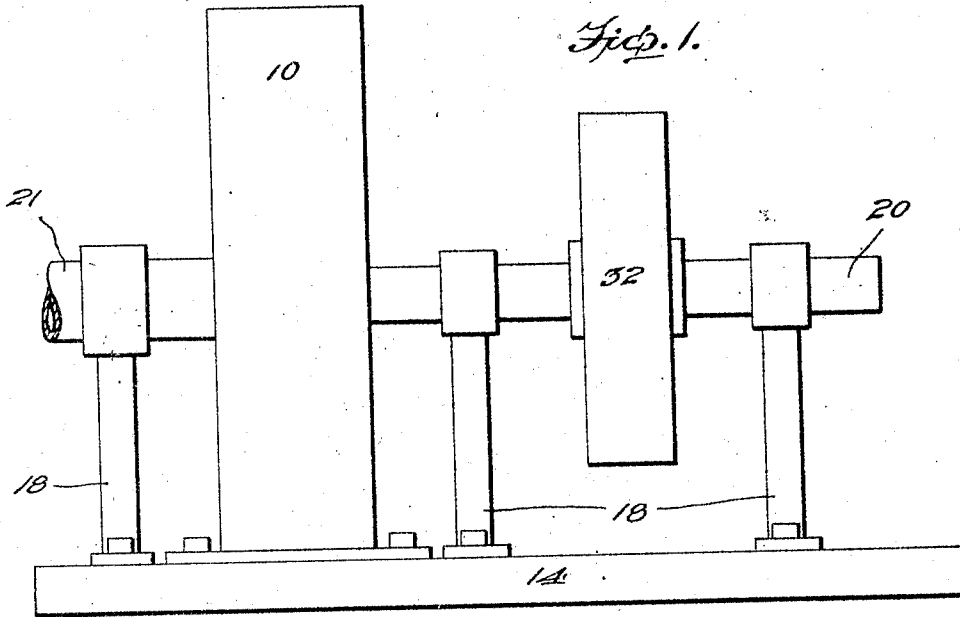
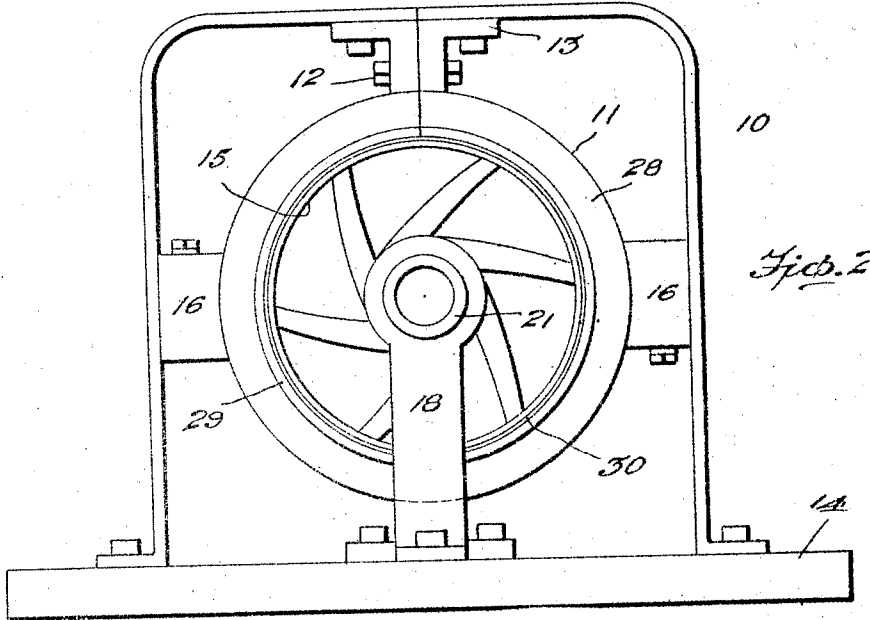


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AIR COMPRESSOR OR PUMP.
APPLICATION FILED MAR. 8, 1920.

Patented Mar. 22, 1921.

2 SHEETS—SHEET 1.

1,372,532.



P. M. Hunt
J. Milner Jester
WITNESS:

S. C. Monberg
INVENTOR
Victor J. Evans
BY ATTORNEY

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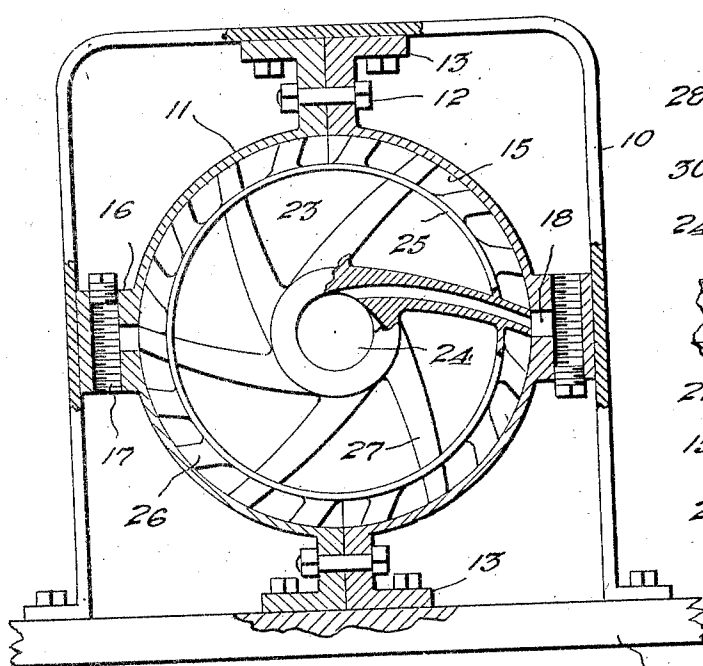


Fig. 3.

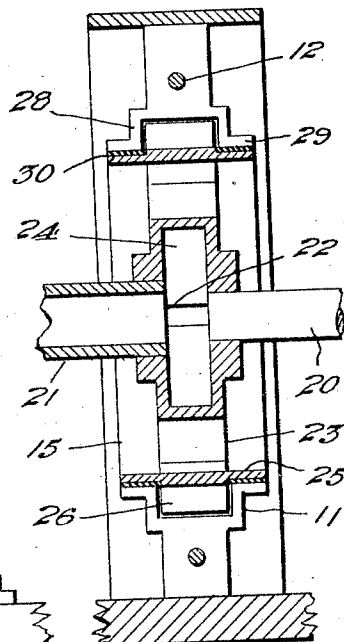
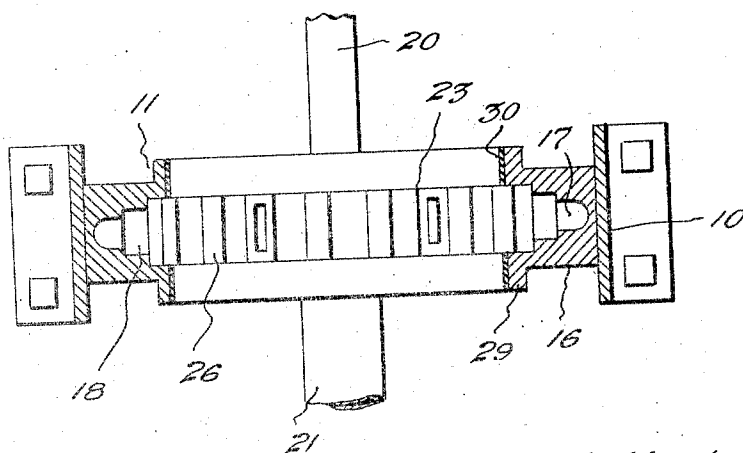


Fig. 4.

Fig. 5.



P. M. Hunt.
Witness:

S. C. Monberg
INVENTOR
BY *Victor J. Evans*
ATTORNEY

UNITED STATES PATENT OFFICE.

SOREN C. MONBERG, OF LEADVILLE, COLORADO.

AIR COMPRESSOR OR PUMP.

1,372,532.

Specification of Letters Patent.

Patented Mar. 22, 1921.

Application filed March 8, 1920. Serial No. 363,951.

To all whom it may concern:

Be it known that I, SOREN C. MONBERG, a citizen of the United States, residing at Leadville, in the county of Lake and State of Colorado, have invented new and useful Improvements in Air Compressors or Pumps, of which the following is a specification.

This invention relates to pumping devices, particularly to those of the centrifugal type, and has for its object the provision of a novel form of air compressor or pump adapted for many uses and in which use is made of a rotary wheel which sucks in the fluid at the center and which is provided with radial passages whereby the fluid will be forced outwardly under the influence of centrifugal force and be subsequently delivered to the place where its use is desired.

An additional object is the provision of a device of this character which will be simple in construction, easy to operate, efficient and durable in service, and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings in which—

Figure 1 is a front elevation of the device,

Fig. 2 is a side elevation,

Fig. 3 is a transverse sectional view,

Fig. 4 is a vertical cross sectional view,

and

Fig. 5 is a horizontal cross sectional view.

Referring more particularly to the drawings, I have shown my device as comprising a suitable casing 10 within which is secured a frame 11 which may be formed in halves if desired with the halves secured together by suitable bolts 12. At its upper and lower portions the frame carries attaching feet 13 which are suitably secured to the casing. It is of course apparent that the casing of the device should be suitably mounted upon a base 14.

Formed at opposite sides of the frame 11, which is circular as shown and which is provided with a circular opening 15, are extensions 16 which are formed hollow or rather which are provided with vertically extending bores 17 each threaded at both ends. At each side of the frame is formed an opening or passage 18 leading from the central opening in the frame into the bore 17.

Rising from the base 14 at opposite sides of the casing 10, are bearings 18 and journaled through these bearings are shafts 20 and 21 which pass through the frame 11 and one of these shafts is formed hollow and the other solid, the solid shaft extending into the hollow shaft and forming a closure for one end thereof. The hollow shaft is provided adjacent the end of the solid shaft with ports 22 which establish communication between the hollow shaft and the interior of the frame.

Secured upon the hollow shaft and located within the frame 11, is a wheel indicated by the numeral 23 and this wheel includes a hollow hub portion 24 which provides an annular chamber communicating with the ports 22. This wheel further includes a rim portion 25 having teeth-like projections thereon serving as vanes and also includes spokes 27 which are formed with passages extending therethrough and through the registering one of the teeth 26. These passages are tangential with respect to the periphery of the chamber in the hollow hub and communicate at their inner ends with this chamber.

The frame 11 is formed at each side with an inwardly extending flange 28 which terminates in an outwardly extending flange 29. Secured to the flanges 29 and bearing against the sides of the wheel are leather or rubber packing rings 30.

In the operation of the device, when the wheel is rotated by means of a suitable drive pulley or the like 32 secured on either the shaft 20 or 21, air or any other fluid will be sucked in through the open end of the hollow shaft and will pass through the ports 22 into the annular chamber within the hollow hub. As the wheel is rotated centrifugal force will cause the air to be forced outwardly through the passages 27 against the inner periphery of the frame 11. The air will of course pass rapidly along the inner wall of the frame and upon reaching the passages 18, will pass into the bores 17 of the extensions 16. It will be observed that any outlet pipes or hose may be screwed into the threaded ends of the bores 17 for conducting the air or other fluid to the place where its use is desired. The teeth 26 serve as baffles to prevent back flow of the air or other fluid.

From the foregoing description and a study of the drawings it will be apparent

that I have thus provided a simply constructed and consequently inexpensive centrifugal pump device whereby air, any gas, or liquids may be pumped in a thoroughly efficient manner.

While I have shown and described the preferred embodiment of my invention, it is of course to be understood that I reserve the right to make such changes in the form, construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

- 15 1. A pumping device comprising a supporting frame having an opening therein and provided at its sides with extensions formed with bores adapted for connection with outlet pipes, said extensions being provided with passages communicating with the bores therein and with the interior of the frame, a hollow shaft extending through said frame and provided therein with ports, and a wheel secured upon said shaft and
- 20 having a hollow hub communicating with said ports and including spokes formed with passages leading from the hollow hub to the outer periphery of the wheel.

2. A device of the character described

comprising a supporting base, a casing rising therefrom, a frame secured within said casing and having a circular opening therein, extensions at opposite sides of the frame provided with bores, said frame being provided at each side with a passage communicating with the opening therein and with the bore of the adjacent extension, bearings rising from said base at opposite sides of the frame, a hollow shaft journaled through one bearing, a solid shaft journaled through the other bearing and extending into the hollow shaft whereby to form a closure for one end thereof, a wheel secured upon the hollow shaft and disposed within said frame, the wheel having a hollow hub providing an annular chamber, and the hollow shaft being provided with ports communicating with said annular chamber, said wheel further including a rim portion having inclined tooth-like projections thereon, and the wheel further including spokes each formed with a passage communicating with the annular chamber and extending to the outer periphery of the wheel, the bores in said extensions providing means for attachment of discharge pipes.

In testimony whereof I affix my signature.
SOREN C. MONBERG.