

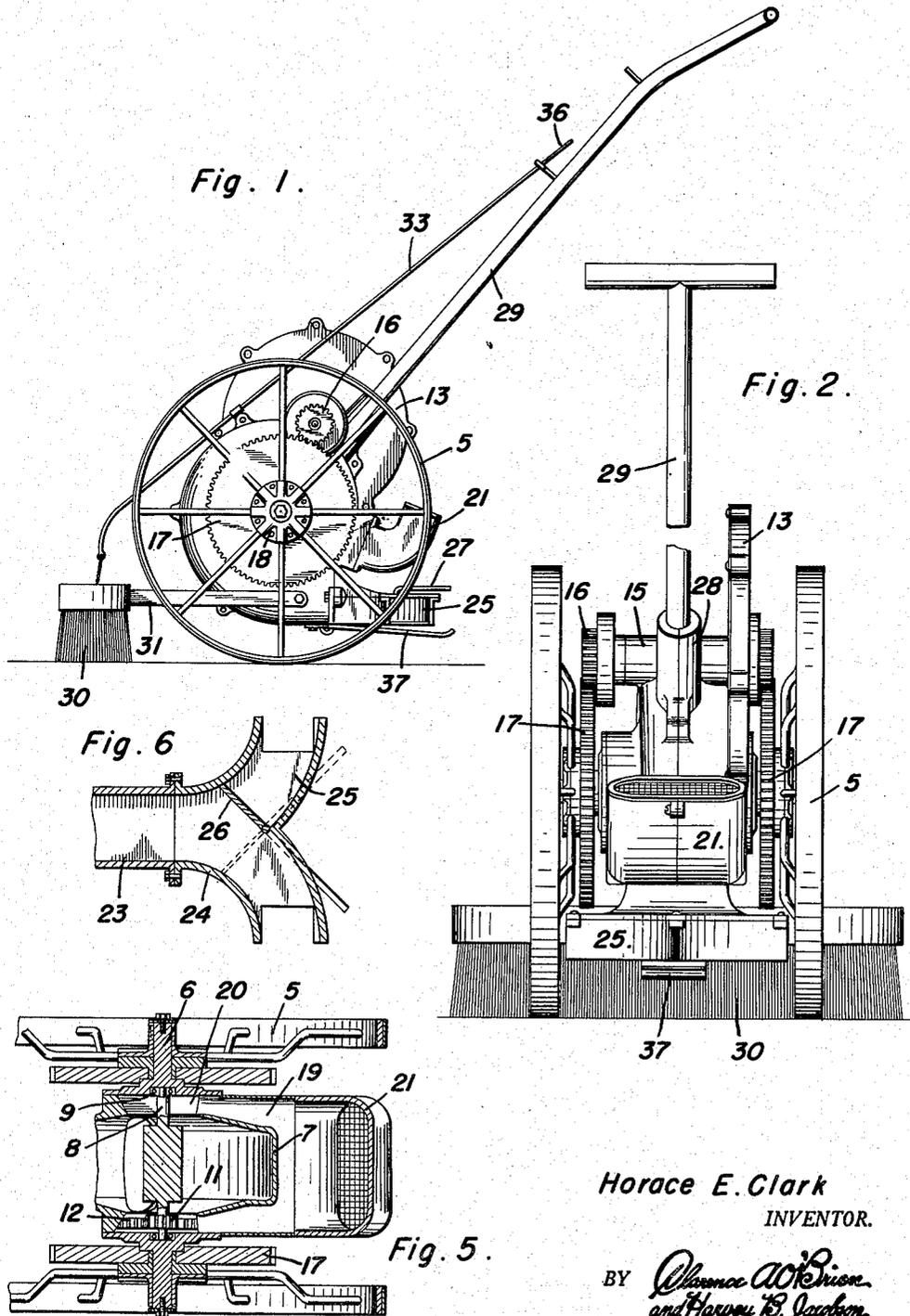
March 6, 1951

H. E. CLARK  
PORTABLE BLOWER

2,543,833

Filed Dec. 30, 1948

2 Sheets-Sheet 1



Horace E. Clark  
INVENTOR.

BY *Clarence A. O'Brien*  
*and Harvey B. Jacobson*  
Attorneys

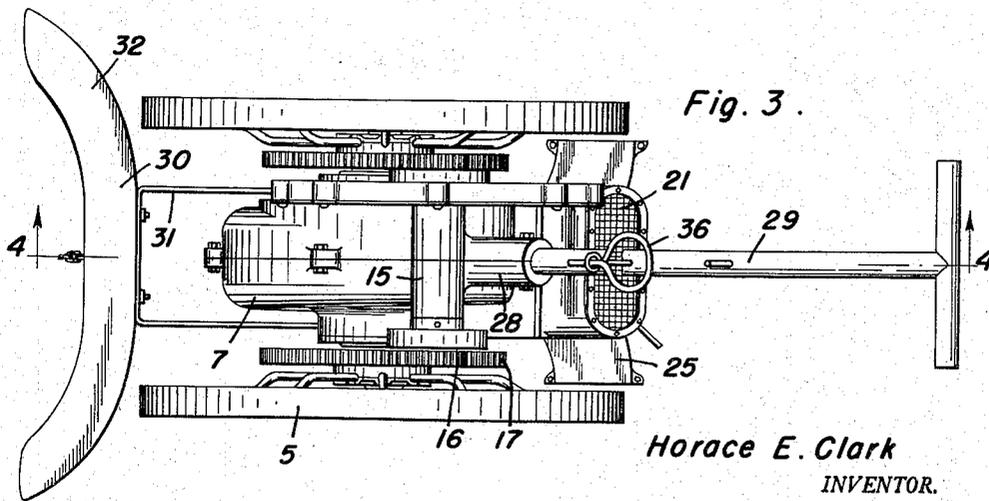
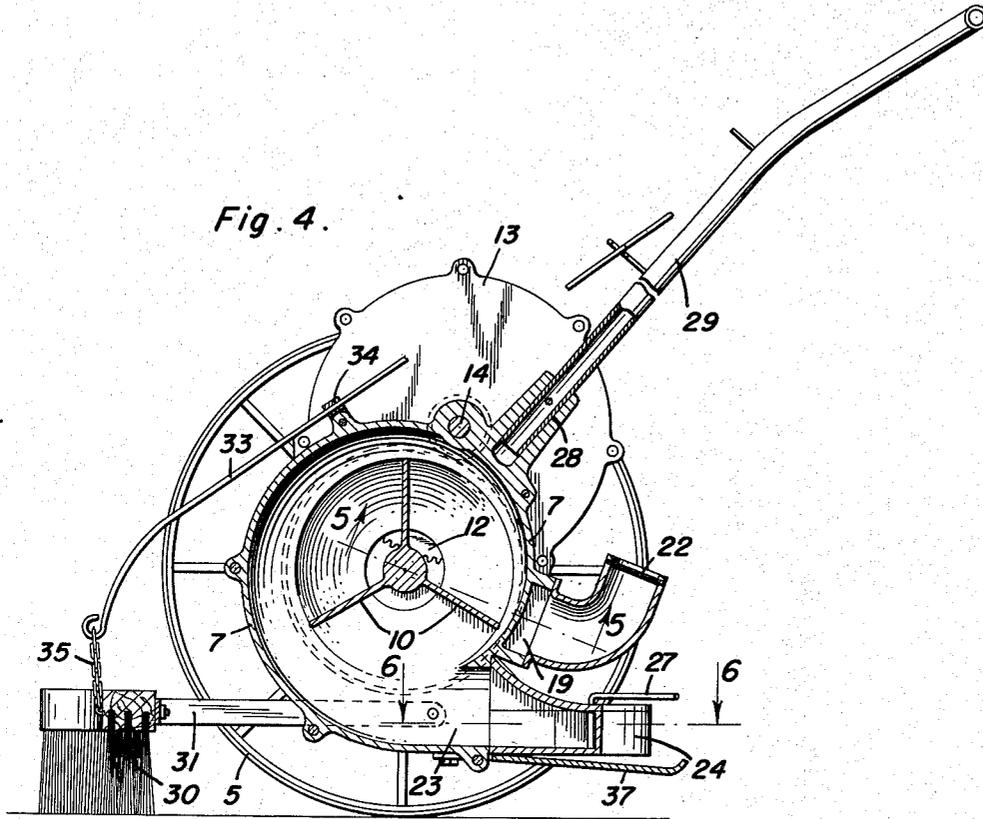
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Horace E. Clark  
INVENTOR.

BY *Almonce W. O'Brien*  
*and Harvey B. Jackson*  
Attorneys

# UNITED STATES PATENT OFFICE

2,543,833

## PORTABLE BLOWER

Horace E. Clark, Atlanta, Ga.

Application December 30, 1948, Serial No. 68,257

2 Claims. (Cl. 230—33)

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The present invention relates to new and useful improvements in portable blowers of a type covered by my prior Patent No. 1,234,446 dated July 24, 1917.

An important object of the present invention is to improve the construction of the fan case, the air intake and air discharge nozzle and to otherwise improve the ease of operation and efficiency of the machine.

A further object of the invention is to provide a machine of this character of simple and practical construction, which is strong and durable, relatively inexpensive to manufacture and otherwise well adapted for the purpose for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view;

Figure 2 is a rear elevational view;

Figure 3 is a top plan view;

Figure 4 is a longitudinal sectional view taken on the line 4—4 of Figure 3;

Figure 5 is a fragmentary sectional view of the fan housing and inlet throat leading thereto and taken substantially on the line 5—5 of Figure 4; and

Figure 6 is a fragmentary sectional view of the oppositely diverging outlet nozzle taken on the line 6—6 of Figure 4.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates the supporting wheels which constitute the prime driving members of the blower. The wheels are supported on trunnions or stub axles 6 projecting outwardly from the opposite sides of a fan housing or casing 7.

A fan shaft 8 has its ends journaled in bearing assemblies 9 recessed at the inner sides of the fan case 7 and fan blades 10 project radially from the shaft 8. To one end of said shaft 8 is suitably secured a small pinion 11 driven by a large gear 12 enclosed in a gear housing 13 at one side of fan case 7.

The gear 12 is secured to a shaft 14 journaled in a housing 15 on top of case 7 and extending transversely thereof, each end of shaft 14 having a pinion gear 16 suitably secured thereto and driven by large gear wheels 17 suitably secured to the hub portions 18 of the wheels 5.

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An air inlet throat 19 is provided at the rear of fan case 7 and leads to openings 20 at the opposite sides of the fan case, the outer end of the throat terminating in an upwardly extending opening 21 provided with a screen 22. The outlet for the blower is shown at 23 and is positioned in the lower portion of fan case 7 and extends in a rearward direction under throat 19. A forked nozzle 24 is secured to the outlet opening 23 to provide oppositely diverging discharge openings 25 immediately rearwardly of wheels 5. A control valve 26 is swingably mounted at the fork of the nozzle 24 and is provided with an operating handle 27 to position the valve for cutting off either of the discharge openings 25 or for discharging air from either side of the nozzle.

A rearwardly inclined handle socket 28 extends upwardly from the upper portion of the fan case 7 and in which a handle 29 is suitably secured.

A brush 30 is supported in a transverse position in front of wheels 5 by arms 31 which are pivoted at their rear ends to the outer sides of fan case 7, the ends of the brush 30 being curved forwardly as shown at 32. The brush is raised and lowered by means of a rod 33 slidable in guide 34 on top of the fan case and connected at its front end to the brush by a chain 35 or other flexible member.

A handle 36 is provided at the rear end of rod 33 and positioned on top of handle 29 within convenient reach of the operator.

A rearwardly inclined prop 37 is secured to fan casing 7 under nozzle 24 and on which the casing rests when the fan is idle.

In the operation of the device, the machine is pushed forwardly by handle 29 along the aisle of a cotton mill, the brush 30 sweeping waste ahead of the machine and wheels 5 drive fan shaft 8 and the force of air discharged from nozzle outlets 25 and directed toward opposite sides of the machine blows waste from under the spinning frames at each end of the aisle into adjacent aisles for subsequent sweeping by the brush.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein

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described and the scope of the appended claims.  
Having described the invention, what is claimed as new is:

1. A portable blower comprising a pair of supporting wheels, a fan housing having trunnions projecting from its opposite sides and on which the wheels are journaled, a fan including a shaft journaled internally of the housing coaxially with the trunnions, said housing having an air inlet and an air outlet, a gear housing supported by the fan housing, a shaft journaled in the gear housing, a pinion gear secured to at least one end of the last-named shaft, a drive gear secured to one of the wheels and driving said pinion gear, a gear enclosed in the gear housing and secured to said second-named shaft, and a pinion gear secured to the fan shaft and enclosed in the fan housing and driven by said last named gear.

2. A portable blower comprising a pair of supporting wheels, a fan housing having trunnions

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projecting from its opposite sides and on which the wheels are journaled, a fan including a fan shaft having its ends journaled at the inside of the fan housing in alignment with the trunnions, a throat leading into the fan housing at opposite sides of the fan, and having an upwardly projecting inlet end, gearing connecting the wheels to the fan shaft, an outlet for the fan housing, and a forked nozzle at the outlet.

HORACE E. CLARK.

REFERENCES CITED

The following references are of record in the file of this patent:

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