E. C. H. BARTLETT.

BLOWER.

APPLICATION FILED JUNE 12, 1919.

1,375,482.

Patented Apr. 19, 1921.

2 SHEETS—SHEET 1.

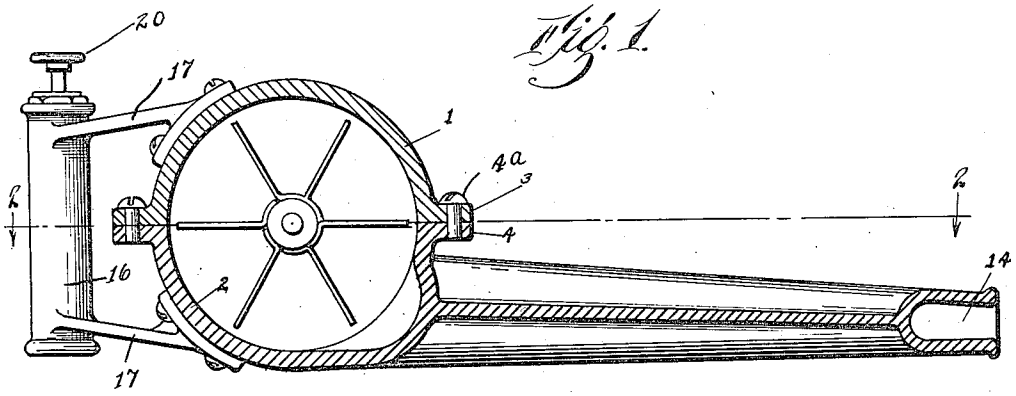

Fig. 1.

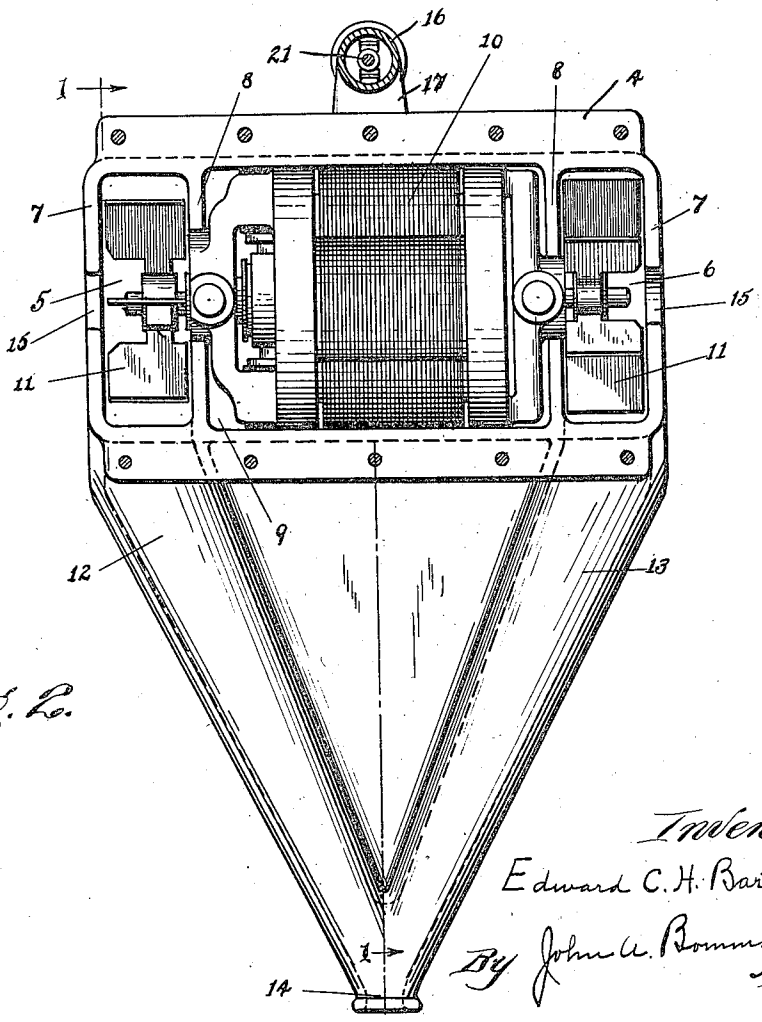

Fig. 2.

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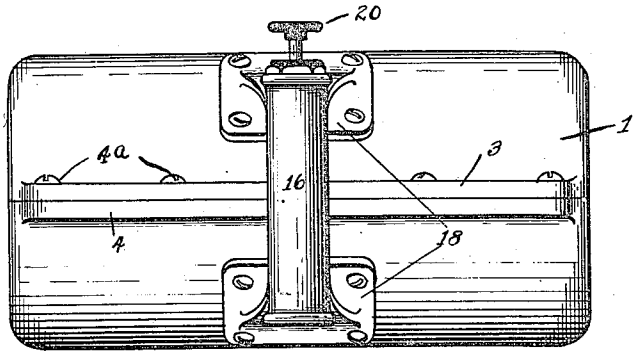

Fig. 3.

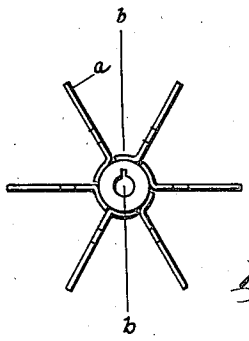

Fig. 4.

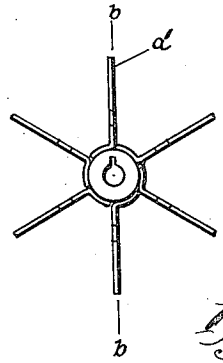

Fig. 5.

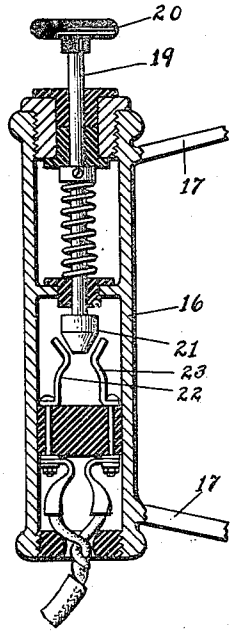

Fig. 6.

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UNITED STATES PATENT OFFICE.

EDWARD C. H. BARTLETT, OF CLEVELAND, OHIO.

BLOWER.

1,375,482. Specification of Letters Patent. Patented Apr. 19, 1921.

Application filed June 12, 1919. Serial No. 303,582.

To all whom it may concern:

Be it known that I, EDWARD C. H. BARTLETT, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Blowers, of which the following is a specification.

This invention relates to blowers and more particularly to that type of blower which is electrically operated and so constructed as to be held in the hand thereby allowing the blast of air to be directed upon a mold preliminary to pouring the molten metal therein, and for the purpose of freeing the mold from a surplus of parting sand.

The objects of the invention are to provide means whereby the operating parts of the device may be readily accessible, and the provision of a blower which will secure the maximum capacity for the space occupied by the same.

While I have shown an embodiment of the invention which may be portable it is obvious that the same device or various modifications thereof may be utilized for various purposes which will suggest themselves to those acquainted with the art and I do not wish to limit myself further than is required by the state of the art and that which is within the scope of the appended claims.

In the drawings forming part of the specification and in which like reference numerals designate similar parts throughout the various views, Figure 1 represents a sectional elevation of the device substantially on the line 1—1 of Fig. 2; Fig. 2 is a sectional plan on the line 2—2 of Fig. 1; Fig. 3 is a rear elevation of the device; Figs. 4 and 5 are diagrammatic views of the fans, the position of the blades indicated being the same as they are when placed upon the driving shaft of the motor and Fig. 6 is a sectional detail through the handle of the device showing the controlling switch for the motor.

The device comprises a housing made with an enlarged cylindrical portion composed of upper and lower members 1 and 2 respectively, each provided with radial flanges 3 and 4 by means of which the two halves are secured to each other with screws 4ª.

At each end of the housing fan chambers 5 and 6 are formed by the end walls 7 of the housing and transverse partitions 8 extending parallel and a short distance therefrom.

The space 9 formed between the partitions 8 contains the electric motor indicated at 10, the armature shaft of said motor extending into the chambers 5 and 6 and supporting thereon the blades of the fans.

Nozzles or pipes 12 and 13 have communication with the bottom of the fan chambers before mentioned and project tangentially therefrom and at a short distance from the housing the aforesaid nozzles are brought together to form a single outlet indicated at 14.

It will be noted upon referring particularly to Figs. 2, 4 and 5 that the blades of the fans, there being six blades to each fan, are placed in a staggered relation to each other, that is, while the blades A of the fan occupying the chamber 5 assume a position 30 degrees from the vertical as indicated at BB, the blade A′ of the fan occupying the chamber 6 will be directly upon the vertical BB, and it will thus be seen that there are provided twelve impulses upon one revolution of the armature shaft, the impulse formed by the blade A′ reaching its maximum before that formed by the blade A has reached its minimum. This occurs so rapidly that a steady current of air is forced from the outlet 14. By the provision of air intakes 15 formed in the walls 7 the air circulating within the chambers 5 and 6 is sufficient to cool the motor 10 and by the provision of the housing 1 and 2 the motor and other operating parts may be conveniently reached for the purpose of repair, although by the construction shown the wearing parts are such that very little wear is encountered. For convenience in supporting the device a handle 16 is provided and may be secured to the housing A by extensions 17 cast integral therewith and provided at their ends with pads 18 which may be secured to the housing by means of screws. Within the handle 16 is supported a contact switch by which the current of electricity may be conducted to the motor contained within the housing at the will of the operator. This switch comprises a spring pressed plunger 19 thoroughly insulated from the handle and provided at its upper end with an operating button 20. At its lower end this plunger is provided with an enlarged head 21 which when pressed downwardly by the thumb of the

operator bridges two contact points 22 and 23 and allows the current to pass therethrough, the contact 22 having communication with one source of current and the contact 23 connected with the motor as is customary.

I claim:

1. A blower casing comprising upper and lower sections with two closed transverse partitions across the same, forming a fan chamber at each end of the casing and an intermediate motor chamber, the partitions having bearings for the motor shaft, the lower section having an outlet from each fan chamber.

2. A blower comprising a casing divided lengthwise into two parts and having cross partitions forming a fan chamber at each end and a motor chamber at the middle, an electric motor in the middle chamber having a shaft extending through bearings in the partitions, and a fan mounted upon each end of the shaft in said fan chambers.

In testimony whereof, I do affix my signature in presence of two witnesses.

EDWARD C. H. BARTLETT.

Witnesses:
JOHN A. BOMMHARDT,
ROBERT L. BRUCK.