

July 21, 1942.

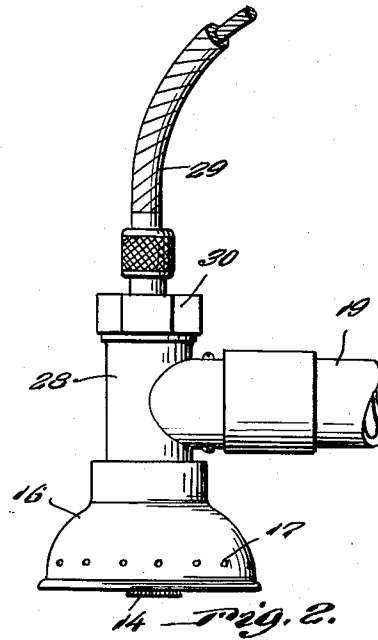
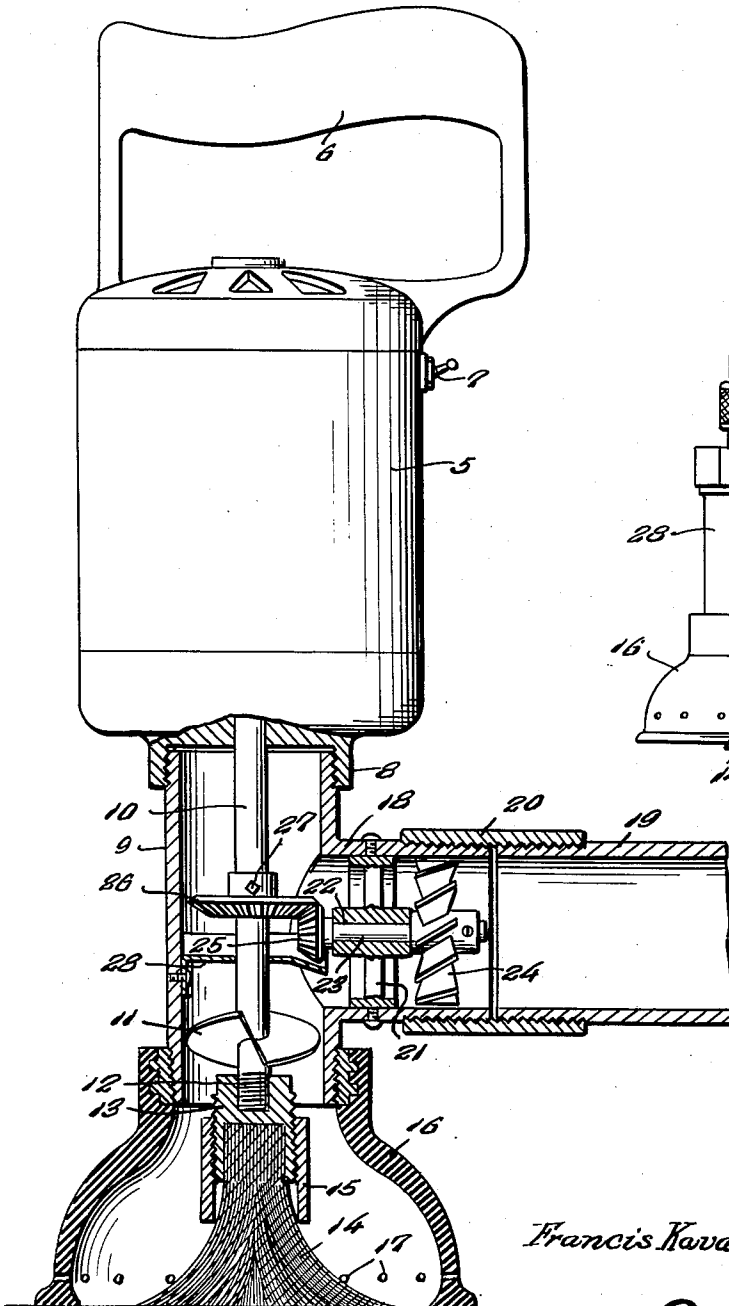
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2,290,533

CARBON CLEANING BRUSH

Filed March 24, 1942

Fig. 1.



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UNITED STATES PATENT OFFICE

2,290,533

CARBON CLEANING BRUSH

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Application March 24, 1942, Serial No. 436,059

2 Claims. (Cl. 15—7)

The present invention relates to new and useful devices for cleaning and removing carbon from engine cylinders and has for its primary object to provide a power-operated rotary brush adapted for removing carbon deposits from the pistons and engine head of an internal combustion engine and also to provide suction means for removing the loose particles of carbon and conveying the same away from the engine.

A further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in performance, relatively inexpensive to manufacture, and otherwise well adapted for the purposes 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 drawing forming part hereof, wherein like numerals refer to like parts throughout and in which:

Figure 1 is a side elevational view with parts broken away and shown in section embodying one form of the invention wherein an electric motor is attached directly to the cleaning brush, and

Figure 2 is a side elevational view embodying a modification wherein a flexible cable from a suitable source of power is operatively connected with the brush.

Referring now to the drawing in detail, and with particular reference to Figure 1, the numeral 5 designates an electric motor having a handle 6 at one end adjacent to which is the switch 7. An internally threaded socket 8 projects from the other end of the motor to which one end of a T-shaped fitting 9 is connected, the fitting forming a housing for the shaft 10 of the motor.

A spiral fan blade 11 is secured to the shaft adjacent its outer end and the outer end of the shaft is threaded, as shown at 12, for threaded engagement therewith of a brush head 13 in which a wire brush 14 is mounted. A sleeve 15 is threaded on the head for longitudinal adjustment, the outer end of the sleeve being engaged by the bristles of the brush to adjust spreading of the free ends of the brush, as will be apparent from an inspection of Figure 1 of the drawing.

The brush is enclosed by a rubber suction cup 16 threaded on the lower end of the fitting 9 and the lower portion of the suction cup is provided with air intake openings 17.

The fitting 9 includes a lateral extension 18 to which an air pipe 19 is attached by means of a union 20.

A spider 21 is secured in the lateral extension 18, the spider being provided with a bearing 22 in which a shaft 23 is journaled, one end of the shaft having a fan blade 24 secured thereto and the other end of the shaft having a bevel gear 25 secured thereto by engagement with a bevel gear

26 adjustably secured on the shaft 10 by means of a set screw 27.

A baffle 28 is secured in the fitting 9 and underlies the gears 25 and 26, one edge of the baffle projecting into the lateral extension 18 to deflect particles of loose carbon drawn into the fitting by the fan blade 11 into the lateral extension 18 where the same is blown therefrom into the pipe 19 by the fan blade 24.

In the form of the invention illustrated in Figure 2 of the drawing, the T-shaped fitting is designated at 28 and a flexible shaft 29 is attached to the upper end of the brush shaft by means of an adapter 30, so that the brush and fan blades may be driven from a remote source of power.

Also, if desired, the upper end of the brush shaft in this form of the invention, may be attached directly to the conventional chuck of an electric drill as an interchangeable source of power.

From the foregoing it will be apparent that by placing the suction cup 16 on an engine piston or engine head and operating the brush 14, the carbon will be removed therefrom and the loose particles drawn upwardly into the fitting 9 and discharged through the pipe 19.

It is believed the details of construction, manner of operation and advantages of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention what I claim is:

1. A cleaning device comprising a housing, a shaft in the housing having a brush attached thereto for rotating the brush, a rubber cup attached to the housing and enclosing the brush, a suction fan on the shaft, a discharge conduit leading from the housing, a shaft journaled therein, gears operatively connecting the shafts, a fan connected to the second-named shaft, and a baffle in the housing between the first-named fan and the gearing to shield the latter from loose particles drawn into the housing by the fans and adapted for deflecting loose particles from the region of the brush into the conduit.

2. A suction attachment for power-driven rotary brushes of a type including a shaft for the brush, a T-shaped tubular housing for the shaft including a lateral tubular extension, a fan on the shaft, a second shaft journaled in the extension of the housing, a second fan secured thereto, gears operatively connecting the shafts, and a baffle secured in the housing adjacent the extension and positioned between the first-named fan and the gearing to shield the latter from loose particles drawn into the housing by the fans and arranged to deflect said particles into the extension for discharge from the housing.

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