

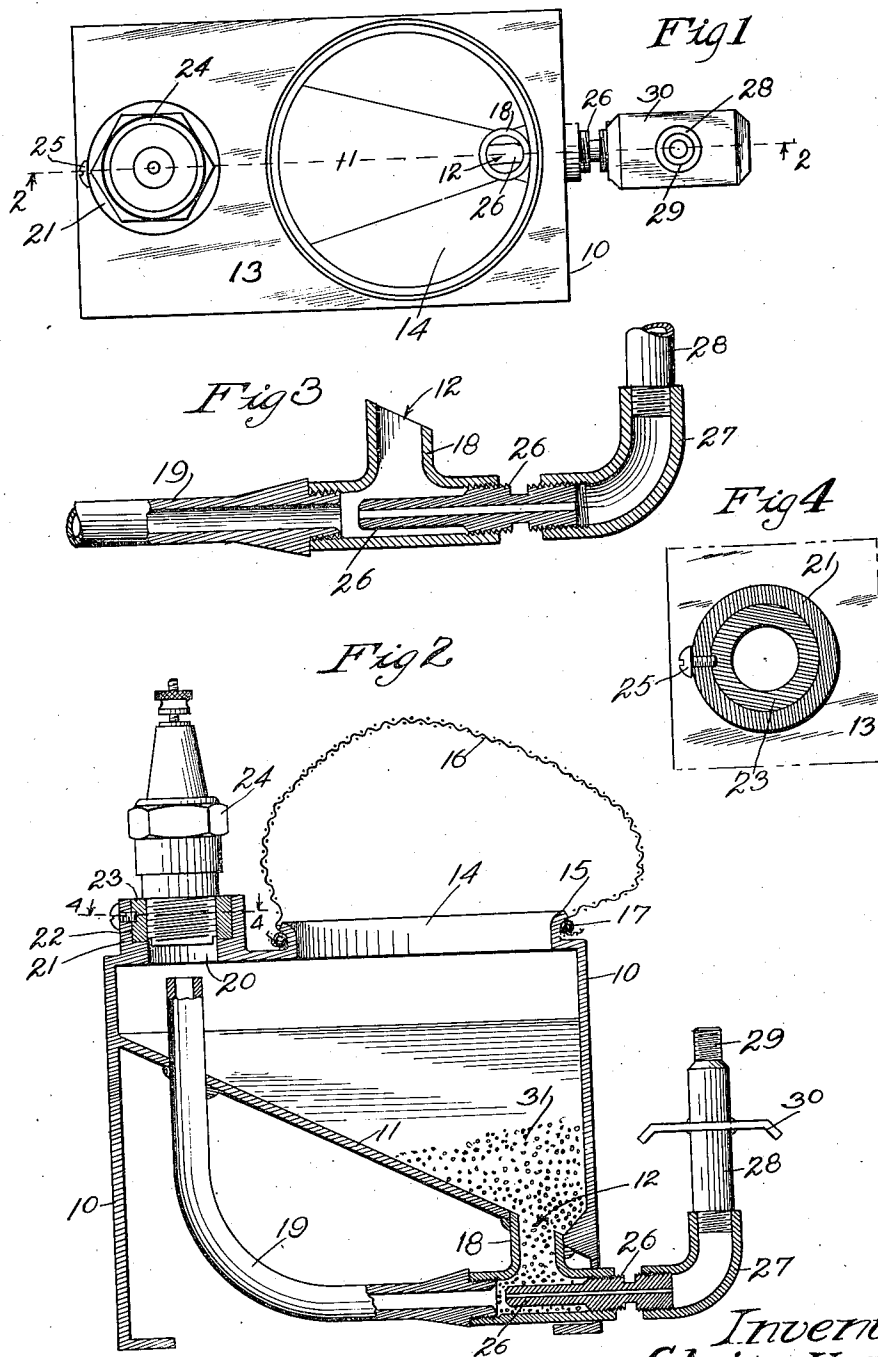
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C. HANSON

SAND BLAST SPARK PLUG CLEANER

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UNITED STATES PATENT OFFICE.

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SAND-BLAST SPARK-PLUG CLEANER.

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To all whom it may concern:

Be it known that I, CHRIS HANSON, a citizen of the United States, and a resident of Fort Dodge, in the county of Webster and State of Iowa, have invented a certain new and useful Sand-Blast Spark-Plug Cleaner, of which the following is a specification.

The object of my invention is to provide a sand blast spark plug cleaner of simple, durable and comparatively inexpensive construction.

More particularly, my invention relates to a sand blast cleaner for spark plugs, wherein the sand may be utilized over and over again.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Figure 1 is a top plan view of my invention.

Figure 2 is a central, sectional view taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged detail, sectional view of the air nozzle construction; and

Figure 4 is a detail, sectional view taken on the line 4—4 of Figure 2.

In the accompanying drawings, I have used the reference numeral 10 to indicate generally, a casing or hopper which is provided with inclined sides and a bottom 11.

The hopper structure inclines down to a common discharge opening 12. The hopper structure 10 is so arranged that it is substantially rectangular in outline.

The top side 13 of the hopper structure is provided with an enlarged opening 14, having an annular flange 16 extending upwardly there around.

A cloth bag or the like 16 extends over the opening 14 and is held in position by means of a coil spring 17 extending around the flange 15, as clearly shown in Figure 2 of the drawings.

The purpose of the cloth bag 16 will be hereafter more fully explained. Connected to the discharge opening 12 is a T fitting 18. The T fitting 18 has one of its ends extended through the hopper structure 10.

Connected to one end of the T fitting 18 is a pipe 19, having one of its ends extended through an opening formed in the

bottom 11, and terminating shortly below the top side 13 of the hopper structure.

The top side 13, directly above the pipe 19, is provided with an opening 20 having an upwardly extending flange 21 extending therethrough. The flange 20 is provided with an internal rabbet 22 which receives a spark plug holder or ring 23.

The ring 23 may be either formed with screw threads on its inner surface or S. A. E., threads or standard threads. The ring 23 is designed to have a spark plug 24 received thereon. The ring 23 is held in position by means of a screw 25, extending through the flange 21. By changing the ring 23, the spark plugs with the various types of screw threads may be properly held in position.

From the construction of the parts just described, it will be seen that the lower end of the spark plug is arranged so that it is directly above the upper end of the pipe 19.

Extending into the fitting 18 is a nozzle 26. The nozzle 26 has its discharge end project beyond the opening 12, as clearly shown in Figures 2 and 3 of the drawings.

An elbow 27 is secured to the outer end of the nozzle and has fixed to it a short tube 28 with the screw threaded portion 29 thereon. The screw threaded portion 29 is so arranged as to receive the ordinary air hose.

A holder or finger engaging element 30 is arranged on the pipe 28 so that when the air hose is held over the screw threads 29, the operator may grip the member 30 for more readily holding the air hose on the screw threads 29.

In the practical operation of my device, a spark plug is placed in the holder or ring 23. An air hose is fastened to the tube 28 and air under pressure is then shot into the pipe 19 through the nozzle 26. The inrushing air will carry with it sand 31, which is in the fitting 18. The air and sand carried with it will be shot up against the lower end of the spark plug 24 and will cause it to be cleared of any carbon or other undesired materials collecting on spark plugs.

The air passing in through the pipe 20 will pass out through the fabric bag 16, while the sand will again be returned towards the opening 12 and into the fitting 18 for use over again.

The arrangement wherein the nozzle 26 projects past the opening 12 insures me that the fitting 18 will never become stopped up,

and the intrushing air will draw a sufficient amount of sand with it from the fitting 18 to properly and effectively clean the plug 24.

I have shown the hopper structure 10 as made up of a single unit or casting, however, it may be made of sheet metal if desired.

Some changes may be made in the construction and arrangement of the various parts of my invention, without departing from the real spirit and purpose of my invention and it is my intention to cover by my claim, any modified forms of structure or use of mechanical equivalents, which may be reasonably included within its scope.

I claim as my invention:

A sand blast spark plug cleaner including a hopper for containing sand or the like having a discharge opening therein, a spark plug holder mounted on said hopper for receiving a spark plug, the top of said hopper

being open, a cloth sack over said opening, a T fitting connected to said discharge opening into which the sand will fall by gravity, a nozzle, the discharge end of which projects beyond the passage way through which the sand enters, mounted in said T-fitting, said nozzle being in communication with a source of air under pressure, a pipe connecting the T fitting to the hopper at a point directly below the spark plug holder, the parts being so arranged that the nozzle will create a suction in the T fitting and thus draw the sand into the pipe by suction, and force the sand through the pipe into the interior of the spark plug, the sand dropping back into the hopper and the air escaping through the cloth sack.

Des Moines, Iowa, March 24, 1922.

CHRIS HANSON.