J. SCHELLER.

VALVE GRINDING TOOL.

APPLICATION FILED JUNE 29, 1911.

1,023,967. Patented Apr. 23, 1912.

Fig. 1.

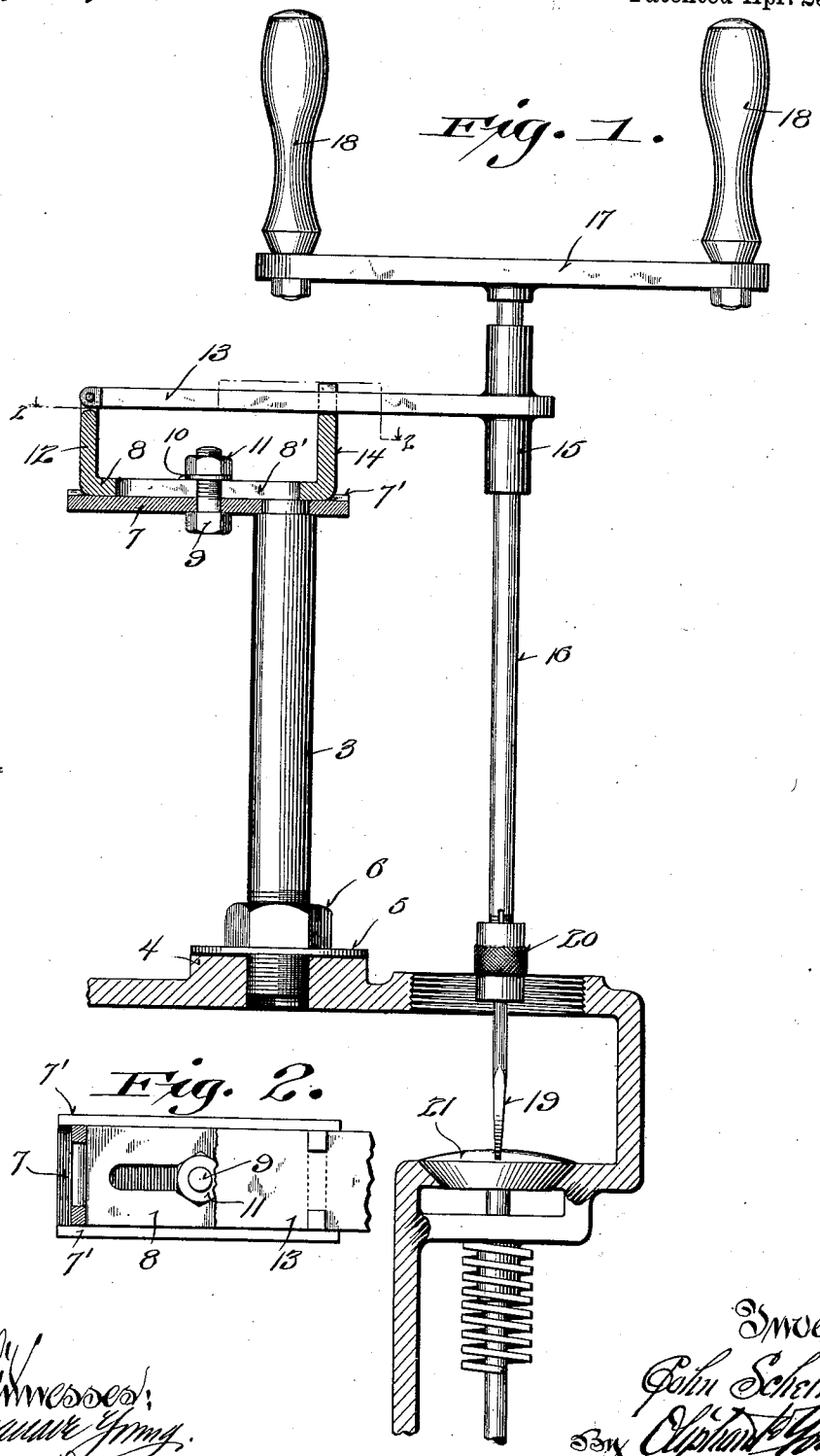

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN SCHELLER, OF MILWAUKEE, WISCONSIN.

VALVE-GRINDING TOOL.

1,023,967. Specification of Letters Patent. Patented Apr. 23, 1912.

Application filed June 29, 1911. Serial No. 636,102.

To all whom it may concern:

Be it known that I, JOHN SCHELLER, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Valve-Grinding Tools; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its object being to provide simple, economical, labor-saving and efficient tools by which to facilitate the removal of carbon accumulations between valves and their seats in internal-combustion engines.

Figure 1 of the drawings represents a partly sectional elevation of a valve-grinding tool in accordance with my invention, and illustrates an application of said tool. Fig. 2 of said drawings represents a plan view of a fragment of the tool partly in section on line 2—2 in Fig. 1.

Referring by numerals to the drawings 3 indicates a post having a screw-threaded lower end for engagement with a spark-plug socket 4 of an internal combustion engine, the post being provided with a washer 5 and a set-nut 6 by which to secure it rigid in said socket. Made fast on the upper end of the post is a rest 7 having upwardly projecting parallel flanges 7′ longitudinally thereof to form a guide for an adjustable angular yoke 8, the rest-opposing horizontal portion of the yoke being provided with a longitudinal slot. A bolt 9 extends through the rest 7 and the slot 8′ of the yoke 8, and a washer 10 and nut 11 on the bolt serves to rigidly secure said yoke in adjusted position on said rest. Hinged at one end to an upwardly extending vertical projection 12 of the yoke is swing plate 13 that normally engages an angular recess in another upwardly extending vertical projection 14 of said yoke, said plate being notched to engage the sides of said recess. The plate 13 constitutes a shank for a sleeve 15 that projects at right-angles thereto in opposite directions and serves as a bearing for a loose stock 16 having the upper end thereof fast in a turning-bar 17 central of the same. Attached to the bar 17 is a pair of handles 18, to therewith constitute a double-crank. The shank of a screw-driver bit 19 is made fast in a lower end slot of the stock by a clamp-sleeve 20, and said bit engages the kerf provided in the valve 21 to be ground, the plug of the cylinder-opening over said valve being removed and the aforesaid yoke suitably adjusted.

The tool being applied as herein shown, its stock and the bit therewith are oscillated to grind the valve, the work being readily performed with but little expenditure of labor and no liability of slip on the part of said bit. The yoke of the tool being adjustable, the bit may be readily positioned with respect to varying distances of valve-centers from spark-plug sockets with which the tool-post is engaged, and the swing-plate of said tool permits of the stock and bit being thrown up out of the way whenever desirable.

While I have shown a double-crank for the bit-stock, a single crank may be substituted where insufficient clearance makes such substitution necessary.

I claim:

1. A valve-grinding tool comprising a post and means therewith for rigidly securing the same in a spark-plug socket of an internal-combustion engine, a horizontal rest rigid on the post, a support adjustable on the rest longitudinally of the same, means for holding the support in adjusted position, a vertical bearing having a horizontal shank in connection with the support, and a valve-grinding bit having a crank-controlled stock loose in the bearing.

2. A valve-grinding tool comprising a post and means therewith for rigidly securing the same in a spark-plug socket of an internal-combustion engine, a rest rigid on the post, an angular yoke adjustable on the rest, means for holding the yoke in adjusted position, a plate in hinge connection with one vertically extending end of the yoke and en-

gageable with a recess in another similarly extending end of said yoke, a bearing for which the plate constitutes a shank, and a valve-turning bit having a crank-controlled stock loose in the bearing.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of witnesses.

JOHN SCHELLER.

Witnesses:
N. E. OLIPHANT,
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EMMIT SMITH.