J. A. GALLAGHER.

PNEUMATIC TOOL.

APPLICATION FILED FEB. 11, 1909.

953,263.

Patented Mar. 29, 1910.

Fig. 1.

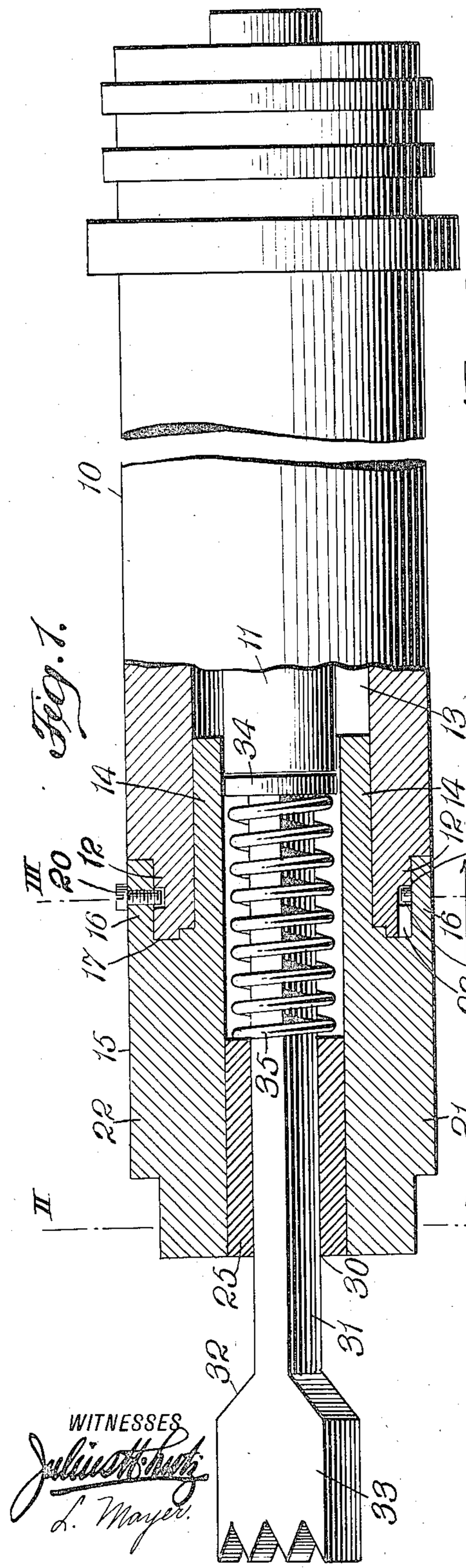


Fig. 4.

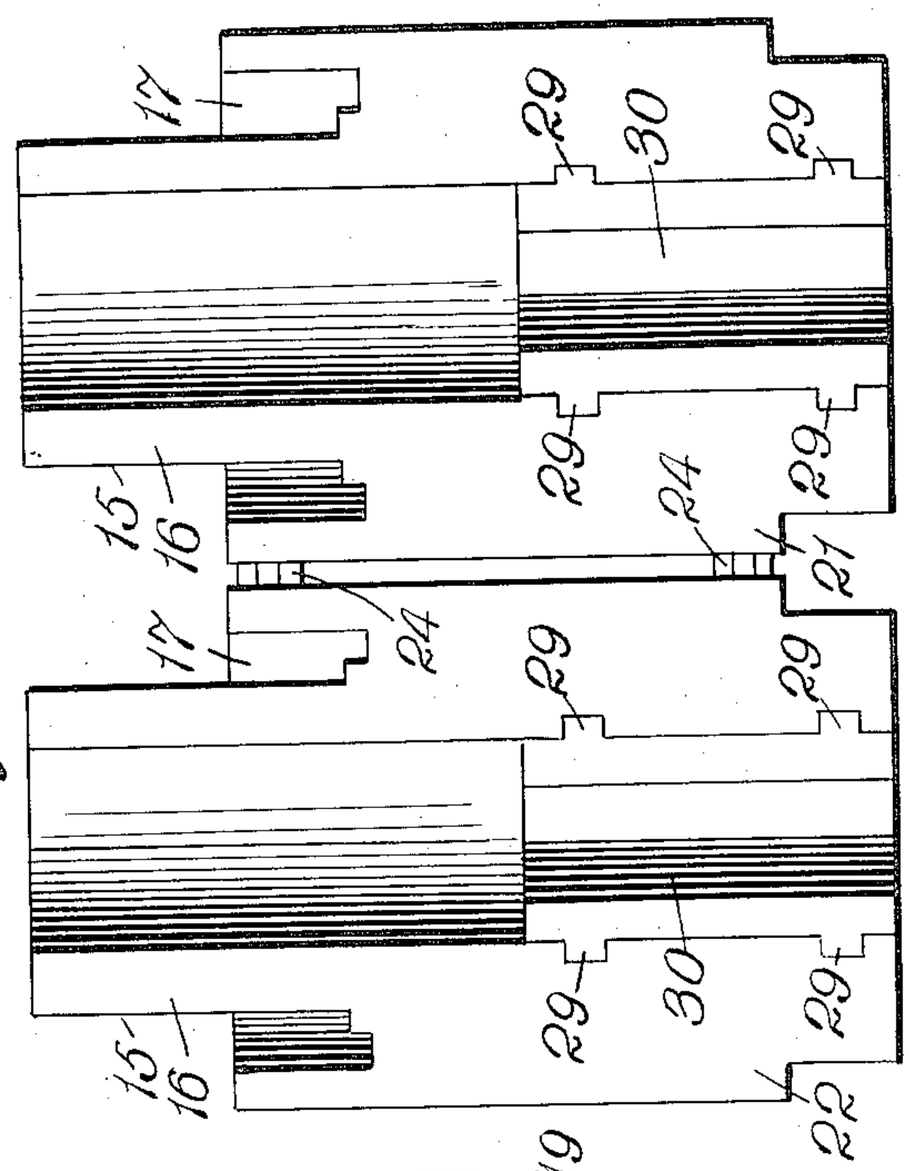


Fig. 3

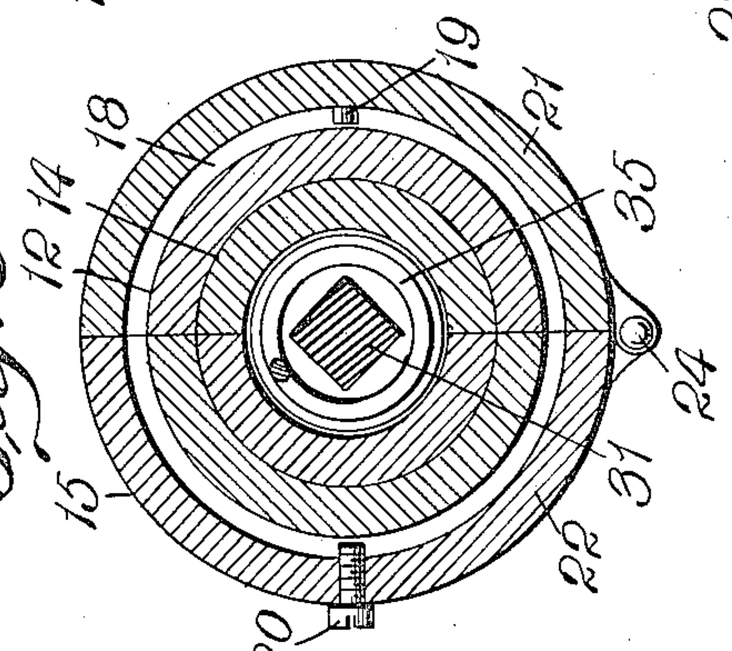
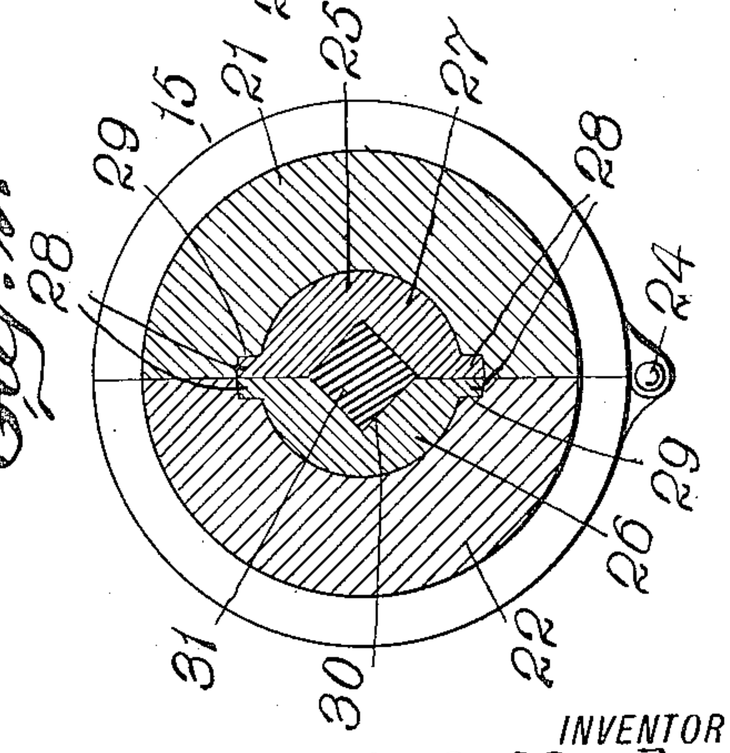


Fig. 2.



WITNESSES

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PNEUMATIC TOOL.

953,263. Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed February 11, 1909. Serial No. 477,355.

To all whom it may concern:

Be it known that I, JAMES A. GALLAGHER, a citizen of the United States, and resident of Midford Station, Long Island, county of Suffolk, and State of New York, have invented certain new and useful Improvements in Pneumatic Tools, of which the following is a full, clear, and exact description.

This invention relates more particularly to the holding part of pneumatic tools adapted for cutting moldings and the surface of granite and other stone.

The primary object of the invention is to provide simple, strong, and efficient means for removably holding a tool in such a way that the tool may be placed at any desired angle without dropping from the holding means, thus overcoming the objections incident to the use of devices of this character as ordinarily constructed.

Another object of the invention is to provide a separable two-part holding member for the body of the cutting tool, and in which a separable guide or device for the tool may be held in said member.

A further object of the invention is to provide simple and strong means forming a part of the device which is not likely to be broken by the blow of the hammer member used in said devices.

With these and other objects in view, the invention will be hereinafter more particularly described with reference to the accompanying drawings, which form a part of this specification, and will then be pointed out in the claims at the end of the description.

In the drawings, Figure 1 is a side elevation, partly in section, of one form of tool embodying my invention. Fig. 2 is a transverse section taken on the line II—II of Fig. 1. Fig. 3 is a transverse section taken on the line III—III of Fig. 1; and Fig. 4 is a detail plan of the separable tool holder detached from the body of the tool.

The tool or device may have a cylindrical body portion 10 which the hammer member 11 is adapted to reciprocate, and said hammer member is operated by suitable pneumatic or other mechanism forming a part of the tool and which may be of any suitable nature, as the same does not form a part of the present invention. The body portion 10 is reduced in diameter, as at 12, and is provided with a central bore or opening 13 in which the sleeve portion 14 of a tool-holding member 15 is adapted to fit. The body portion of the tool-holding member 15 is substantially the same diameter as the body portion 10, and has an extended part, as 16, which forms a chamber 17 between said extension and the sleeve part 14 in which is adapted to fit the reduced part 12 of the body portion 10. The extension 12, of the body 10, is provided with an annular groove 18, and engaging said groove is a pin or lug 19, and a bolt 20 carried, respectively, by the parts or members 21 and 22 of the tool-holding member 15, the said extension 12 being grooved, as at 23, for part of its length to permit the pin or lug 19 to be slipped into the annular groove, and by means of the bolt 20 and said lug the two-part member 15 may be removably held to the body portion 10. These parts 21 and 22 may be hinged together, as at 24, so that the said members may be opened and closed to adapt the same to be attached to or removed from the extension 12 of the tool body.

A device or guide 25 adapted to be held in the member 15, and this device may also be made of two parts or members 26 and 27. The device 25 is substantially cylindrical in form and each part is provided with lugs 28 which are adapted to fit recesses 29 in each of the members or parts of the holder 15, and each of the parts 26 and 27 is provided with a V-shaped groove 30, which when opposed forms a substantially square opening therethrough in which is adapted to fit a similarly formed shank 31 of a cutting tool 32, the end 33 of which may be of any desired shape according to whether it is used as a cutting or other tool. The tool shank 31, is provided with an enlarged portion 34, of any desired form, as a knob or a flange, either separate from or formed integral therewith, and between the knob or enlarged part and the device 25 may be arranged a spring 35 to take up in part the shock of the blow of the hammer 11 and to force the cutting tool inwardly of the tool holder after each blow. The sleeve portion 14 snugly fits the opening or bore 13, and the device 25 neatly fits the end of the tool-holding member 15, and by constructing the members in the manner shown, the striking part of the hammer 11 may be guided in the opening of the sleeve portion 14, and the parts are less likely to be broken or injured by the hammer.

From the foregoing it will be seen that

simple and efficient means are provided whereby a tool may be held to the holder in such a way that it will not drop therefrom in case the holder should be placed at different angles as would be the case if the shank of the cutting tool was of the same size throughout its entire length; that by forming the tool holder in the manner shown and described, the latter is less likely to become broken or injured in use; that the device may be constructed to hold various forms and sizes of tools; that simple means are provided whereby the tool-holding member may be detachably held to the body of the tool proper; and that said tool-holding member may be made to comprise a plurality of parts and so constructed that the tool may be properly held thereby.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A device of the character described, comprising a body portion, a hammer member adapted to reciprocate in said body portion, a tool-holding member having a sleeve portion adapted to fit within the body portion, said tool-holding member comprising two parts hinged together, and a device held within the tool-holding member and adapted to guide the tool.

2. A device of the character described, comprising a cylindrical body portion having a reduced end, a reciprocatory hammer member movable in said body portion, a tool-holding member provided with a sleeve portion and an extended part between which the reduced part of the body portion is adapted to fit, said tool-holding member comprising two substantially semi-cylindrical parts hinged together, means for detachably connecting the tool-holding member to the body portion, and means for holding and guiding the tool within the tool-holding member.

3. A device of the character described, comprising a body portion having a reduced end, a reciprocatory hammer member movable in said body portion, a tool-holding member provided with a sleeve portion and an extended part between which the reduced part of the body portion is adapted to fit, means for detachably connecting the tool-holding member to the body portion, and means for holding and guiding a tool within the tool-holding member.

4. A device of the character described, comprising a body portion, a detachable tool-holding member provided with recesses, a reciprocatory hammer member, a two-part device having a square opening therethrough fitting one end of said tool-holding member and provided with retaining lugs fitting in the recesses in said tool-holding member, and a tool having a shank passing through, and guided in the opening in said device.

This specification signed and witnessed this 6th day of February A. D. 1909.

JAMES A. GALLAGHER.

Witnesses:
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