Dec. 1, 1925 1,563,707

J. T. HOHL

HAND TOOL CONSTRUCTION

Filed Sept. 20, 1921

FIG. 1

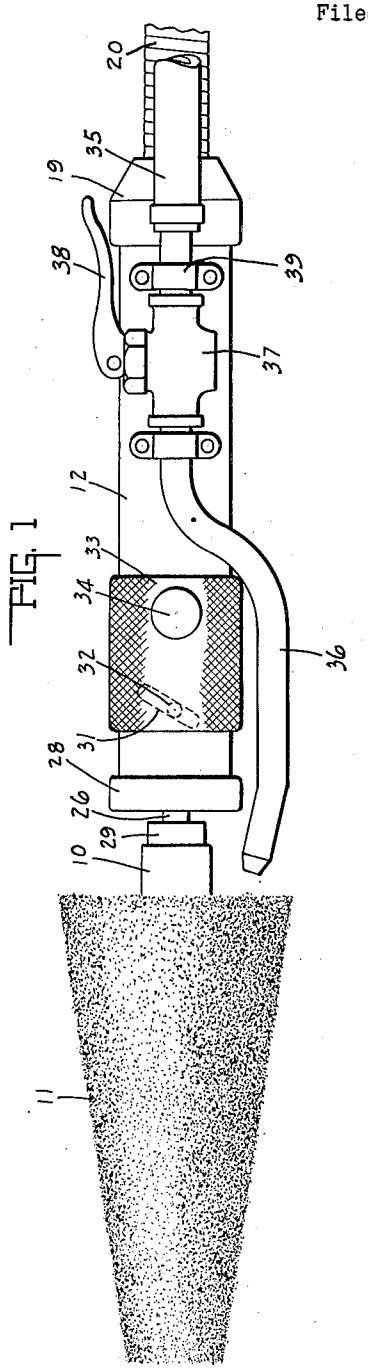
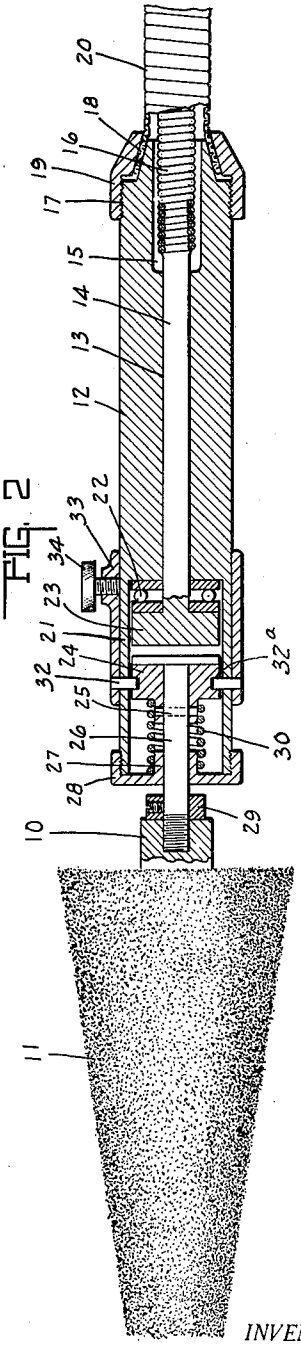



FIG. 2

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# UNITED STATES PATENT OFFICE.

JOHN T. HOHL, OF INDIANAPOLIS, INDIANA.

## HAND-TOOL CONSTRUCTION.

Application filed September 20, 1921. Serial No. 501,981.

*To all whom it may concern:*

Be it known that I, JOHN T. HOHL, a citizen of the United States, and a resident of Indianapolis, county of Marion and State of Indiana, have invented a certain new and useful Hand-Tool Construction; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

This invention relates to a hand tool construction such as a spray brush wherein the brush is supplied with fluid and is simultaneously rotated.

The chief object of the invention is to construct a tool of the character described such as a brush which will permit said brush to be rotated independently of the fluid supply, or which will permit said brush to be maintained stationary and still be supplied with fluid; or which will permit said brush to be rotated and supplied with fluid.

The chief feature of the invention consists in the particular means, whereby the aforesaid objects are accomplished.

The full nature of the invention will be understood from the acompanying drawings and the following description and claims.

In the drawings, Fig. 1 is a side elevational view of the spray brush embodying the invention. Fig. 2 is a central sectional view of the means associated with the brush bristles, showing the means for rotating the same.

In the drawings 10 indicates a core, to which is suitably secured a plurality of bristles 11, which herein are shown forming a frusto-conical brush. An elongated handle 12 is provided with a central opening 13 extending longitudinally thereof, and in said opening is positioned a shaft 14. The opening 13 is enlarged at 15 and the free end of the shaft in said enlargement is suitably secured to suitable flexible shafting 16. The end of the tubular handle 12 is threaded at 17 and is provided with a conical end 18 with which is associated a conical clamping sleeve 19 having a threaded engagement with the aforesaid end of the tubular handle 12. The clamping sleeve is thus adapted to clamp to the handle a flexible conduit 20, which is concentric with the flexible shaft 16 and protects the same from casual injury.

The opposite end of the tubular handle 12 is enlarged to provide a chamber 21. In said chamber is positioned a ball race 22 through which extends the shaft 14, and said shaft is herein shown terminating in a clutch member 23. Also mounted in the chamber 21 is a complementary clutch member 24, and to the same is secured, as by means of the pin 25, a stub-shaft 26. The shaft 26, extends through a bearing or boss 27 of a cap member 28 having the threaded engagement with the end of the tubular handle 12, and thereby closes the chamber 21. The free and outwardly extending end of the shaft 26 has a threaded engagement with the brush core 10 and a suitable collar 29 is suitably secured to the shaft and limits the movement of said shaft longitudinally of the tubular handle. The rear portion of the clutch member 24 and the boss 27 of the cap 28 cooperate to form a seat for the ends of a coiled spring 30 which is concentric with the stub-shaft 26. The coiled spring 30 normally projects the clutch member 24 into engagement with the clutch member 23 to rotate the brush by means of the shaft 14.

The means for controlling the operation of the clutch association consists of a pair of oppositely positioned and inclined cam slots 31 in the wall portion of the chamber 21. The clutch member 24 is provided with an annular groove $32^a$ into which project the pair of pins 32 seatable in the slots 31, and which are secured to a longitudinally slidable and rotatably mounted on sleeve 33 having a set screw 34 associated therewith, whereby said sleeve can be secured to the handle 12 in any desired position. From the foregoing it will be readily apparent that when the thumb screw 34 is turned to release the sleeve 33 from the handle 12, said sleeve may be rotated, and for the aforesaid purpose, said sleeve is provided with a knurled exterior surface. By means of the cam pins and cam slots rotation of the sleeve causes the clutch member 24 to engage the clutch member 23 to rotate the brush 11.

The means for supplying fluid to the brush comprises a fluid supplying conduit 35 which terminates in a nozzle 36, in turn discharging adjacent the brush bristles. Intermediate the connection of the nozzle 36 and the conduit 35 is positioned a valve 37 having a controlling handle 38 associated therewith, and herein suitable strap members 39 are adapted to secure said valve

and nozzle in position upon the handle, so that said nozzle will discharge in the desired position with relation to the brush.

The invention claimed is:

1. A hand tool construction including a tubular handle having an enlarged opening at one end, a rotating shaft in said tubular handle and terminating within the enlarged opening and having an enlargement thereon, a thrust bearing positioned in said enlarged opening and interposed between the handle and the shaft enlargement, a tool supporting shaft extending into the enlarged opening of said handle, clutch means within the handle for associating said shaft terminations, a sleeve slidably and rotatably supported by said handle adjacent the open end, said handle adjacent the open end having an inclined slot, and a pin carried by the sleeve and positioned in said slot and engaging the clutch means for shifting the same.

2. A hand tool construction including a tubular handle having an enlarged opening at one end, a rotating shaft in said tubular handle and terminating within the enlarged opening and having an enlargement thereon, a thrust bearing positioned in said enlarged opening and interposed between the handle and the shaft enlargement, a tool supporting shaft extending into the enlarged opening of said handle, clutch means within the handle for associating said shaft terminations, a sleeve slidably and rotatably supported by said handle adjacent the open end, said handle adjacent the open end having an inclined slot, a pin carried by the sleeve and positioned in said slot and engaging the clutch means for shifting the same, and means for securing said sleeve against rotation upon said handle for securing the clutch in the adjusted position.

In witness whereof, I have hereunto affixed my signature.

JOHN T. HOHL.