Dec. 27, 1927. 1,653,907

F. M. HILGERINK

NOZZLE HANDLE

Filed Sept. 23, 1925

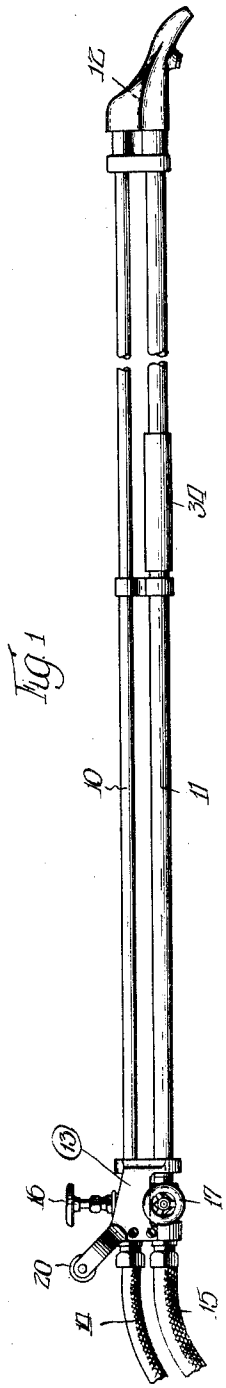


Fig. 1

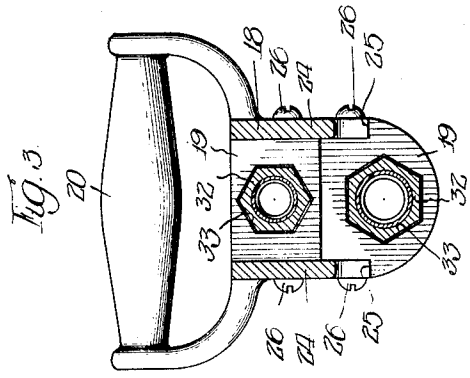


Fig. 3

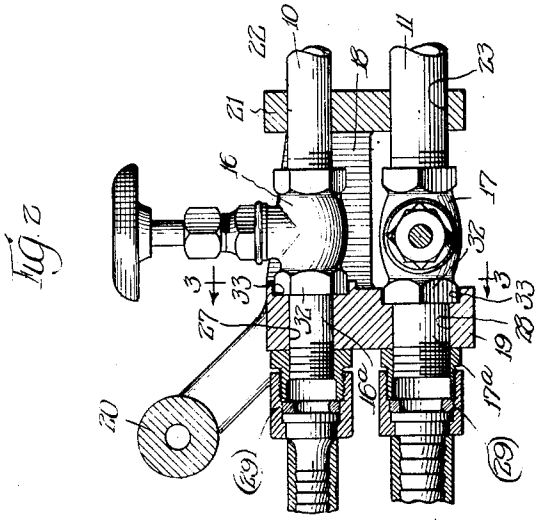


Fig. 2

Witness:
P. Burkhardt

Inventor:
Frank M Hilgerink,
By Wilkinson, Huxley, Byron & Knight attys.

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UNITED STATES PATENT OFFICE.

FRANK M. HILGERINK, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHARLES F. FITTS AND HARRY S. HART, BOTH OF CHICAGO, ILLINOIS.

NOZZLE HANDLE.

Application filed September 23, 1926. Serial No. 137,209.

The present invention relates to nozzle handles.

More particularly the present invention relates to handles suitable for use in elongated cleaning guns of the type shown and described in Patent No. 1,461,824, granted July 17th, 1923, to the present applicant.

An object of the present invention is to provide an improvement over the construction disclosed in the patent above referred to in which the valves will be held against displacement from their proper positions.

A further object is to provide a construction involving no more cost in manufacture and assembly than is involved in the construction disclosed in the patent above referred to, which construction will effectually hold the parts in predetermined position.

Further objects will appear as the description proceeds.

Referring to the drawings—

Figure 1 is a view in side elevation of a cleaning gun having as one of its constituent parts a handle embodying the principles of the present invention;

Figure 2 is a longitudinal sectional view of a portion of the construction shown in Figure 1; and

Figure 3 is a transverse sectional view taken along the plane indicated by the arrows 3—3 of Figure 1.

The numerals 10 and 11 indicate two pipes disposed in parallel relationship with one another, which pipes are connected at their outer ends to the nozzle 12. The pipes 10 and 11 are adapted to deliver cleaning media to said nozzle 12, which media are mixed in said nozzle and discharged therefrom against an object to be cleaned. The inner ends of said pipes 10 and 11 are mounted in a handle, indicated as a whole by the numeral 13, which handle forms the subject matter of the present invention. Flexible tubes 14 and 15 are provided for delivering cleaning media to said pipes, valves 16 and 17 being provided for governing the rate of flow from said flexible tubes 14 and 15 to said pipes 10 and 11. Short connection pipes 16^a and 17^a connect the flexible tubes 14 and 15 to the valves 16 and 17, respectively.

The handle 13 is made up of two major portions 18 and 19 adapted to be fitted together and to provide supports for the valves 16 and 17, the pipes 10 and 11 and the connection pipes 16^a and 17^a. The portion 18 of the handle 13 is provided with the hand hold 20, which is disposed upwardly of the handle 13. The forward part of the handle portion 18, which forward portion is indicated by the numeral 21, is provided with apertures 22 and 23 adapted to receive more or less closely the pipes 10 and 11. Extending rearwardly from the forward portion 21 of the handle 13 are the side walls 24—24, which side walls receive between them the portion 19 of the handle 13. Said portion 19 is provided with the laterally extending shoulders 25—25 for receiving the lower rear extremities of the side walls 24—24. Screws 26—26 are provided for holding the portions 18 and 19 and the handle 13 rigidly together.

The portion 19 is provided with the apertures 27 and 28 for receiving the pipes 16^a and 17^a, respectively, which pipes have screw-threaded engagement with the valves 16 and 17, respectively. The flexible tubes 14 and 15 are joined to the pipes 16^a and 17^a, respectively, through unions 29—29, which unions in and of themselves present no novelty and therefore need not be described in detail. It will be sufficient to state that said unions 29—29 provide abutments against the rear face of the portion 19 of the handle 13, whereby the valves 16 and 17 may be drawn into clamping engagement with the forward face of the portion 19 of the handle 13.

The valves 16 and 17 may be of the regular commercial type, having non-round bosses at their extremities. Such bosses are indicated on the drawing by the numerals 32—32, the usual hexagonal bosses being illustrated. According to the present invention, the forward face of the portion 19 of the handle 13 is provided with recesses 33—33 conforming to the outline of the bosses 32—32 of the valves 16 and 17.

The numeral 34 indicates a sliding hand grip mounted upon the pipes 10 and 11. The operator will control the gun by gripping the members 20 and 34.

As is apparent from the drawings and from the above description, the valves 16 and 17 are rigidly connected to the portion 19 of the handle 13 by reason of the clamping action of the unions 29—29 in cooperation with the bosses 32—32 of said valves 16—17. By reason of the fact that said bosses 32—32

are non-round in conformation, and inasmuch as said bosses are set into recesses 33—33 which conform to the outline of said bosses, said valves will be held against turning movement relative to the portion 19 of the handle 13. The portion 18 of the handle 13 may be readily assembled relative to the portion 19 in a manner which will be clear from the drawings and from the description above, thereby providing a rigid handle construction which effectually prevents the turning of the valves 16 and 17 under service conditions.

Though a preferred embodiment of the present invention has been described in detail, it will be clear that many modifications will occur to those skilled in the art. It is intended to cover all such modifications that fall within the scope of the appended claims.

What is claimed is—

1. In handle construction, in combination, a portion provided with a pair of apertures, said portion having non-round recesses on one side thereof at the extremities of said apertures and valves communicating with said apertures and having non-round end portions conforming to said non-round recesses, said handle construction having another portion provided with apertures aligned with said first mentioned apertures whereby to support pipes connected to said valves, said first mentioned portion being provided with means including unions disposed on the opposite side of said portion from said valves for clamping said valves in predetermined position relative to said first mentioned portion and to connect said valves to sources of fluid supply.

2. In combination, a handle, a pair of valves mounted therein and adapted to be connected to a pair of pipes, each of said valves being provided with a non-round end portion fitting within a corresponding recess in said handle and means including unions cooperating with said valves to clamp said valves in said handle to prevent displacement of said valves under service conditions and to connect said valves to sources of fluid supply.

3. A handle comprising, in combination, two separable portions having aligned apertures, valves mounted in said handle in line with said apertures, said valves having non-round ends adapted to fit within corresponding recesses in one of said portions, said one portion being provided with unions disposed on the opposite side of said one portion for clamping said valves in predetermined position relative to said one portion and to connect said valves to sources of fluid supply.

Signed at Chicago, Illinois, this 15th day of September, 1926.

FRANK M. HILGERINK.