

## Nozzle Control Valve

Figure 1 shows the hand valve which controls the flow of steam to the supplementary nozzles. It is a simple valve of the single-seated variety known as the "Plug Type".

The valve seat "1" is pressed into the steam chest casting. The remainder of the valve assembly is carried in the cover "6" which is bolted to the steam chest and centered on a spigotted fit in the chest, machined in the same operation with the valve seat bore.

Movement of the valve is controlled by the handwheel "10" and guided by the stem bushing "4". Leakage of steam is kept to a minimum by the packing composed of items "7", "8", and "9" which is commercial Q.P. packing.

The following points should be noted in connection with reseating this valve. The seating surfaces of the valve "2" and the seat "1" are machined spherically and then lapped a very small amount which gives a narrow, continuous surface of contact. If the valve and seat are in good condition but leaking slightly, they can be made tight by additional lapping provided the width of these contacting surfaces does not exceed 1/16 inch. If the width of these contacting surfaces exceeds 1/16 inch, both the valve and seat must be remachined, using the same radii as on the original pieces. When machining the seat "1", after finding the correct radius, the center should be moved toward the left (as viewed in the illustration) in a line parallel with the axis of the seat so as to take the cut off the end and not increase the diameter of the opening through the seat. After this machining, the parts should be lapped just enough to make them tight. It should also be noted that there is no gasket between the seat "1" and the valve body. These surfaces must be ground to a steam tight joint.

The following list has been compiled to facilitate ordering spare or renewal parts by name and number together with the serial number of the turbine:

<u>Item No.</u>	<u>Name</u>
1	Valve Seat
2	Valve
3	Valve Stem Coupling Nut
4	Valve Stem Bushing
5	Gasket
6	Valve Bonnet
7	Valve Steam Packing Ring (Inner)
8	Valve Stem Packing
9	Valve Stem Packing Ring (Outer)
10	Handwheel
11	Handwheel Washer
12	Handwheel Nut
13	Valve Stem
14	Valve Stem Nut

Nozzle Control Valve

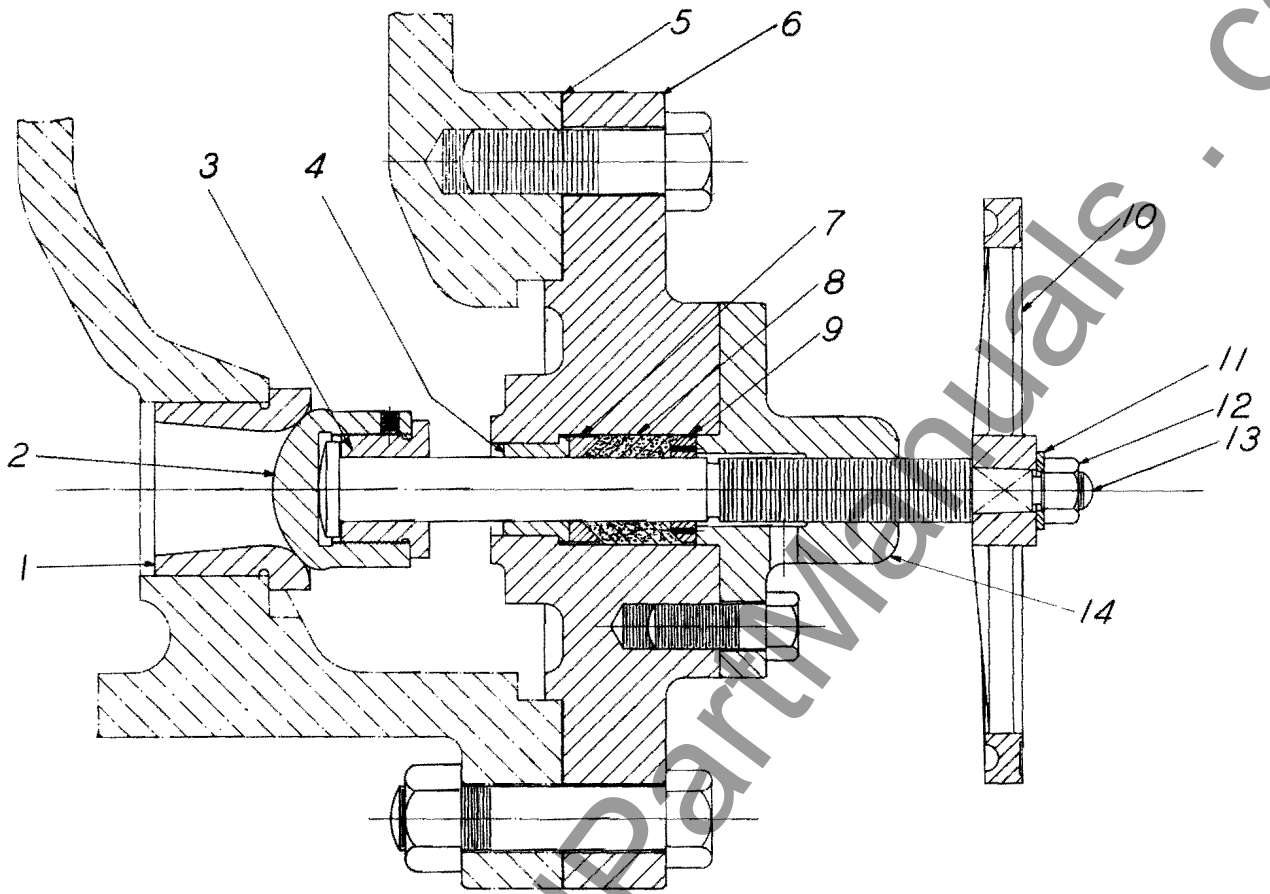


Fig. 1 -- Hand-Valve Assembly

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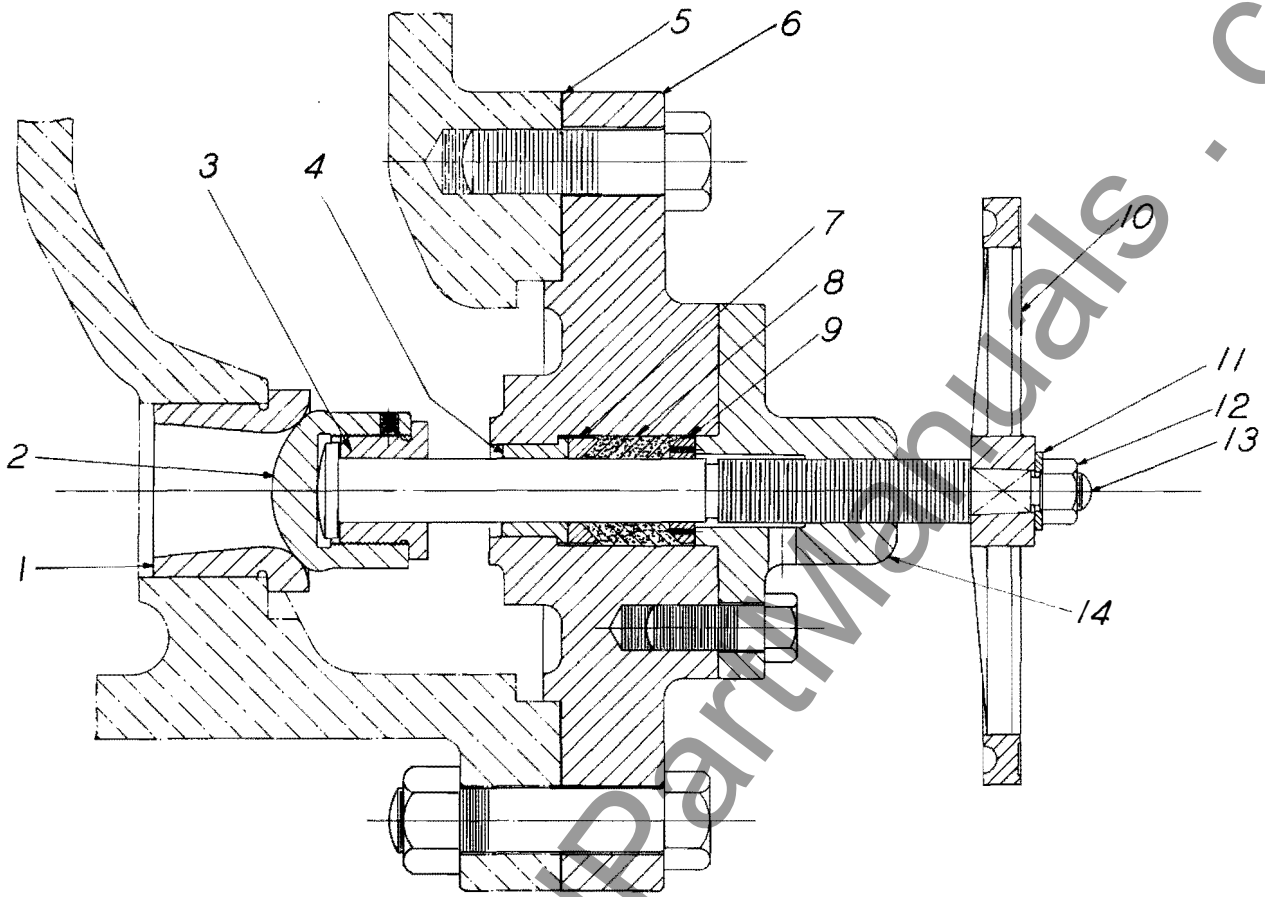


Fig. 1 - Hand-Valve Assembly