H. P. TENANT.
Steam-Jet Pump.

No. 206,054. Patented July 16, 1878.

FIG. 1.

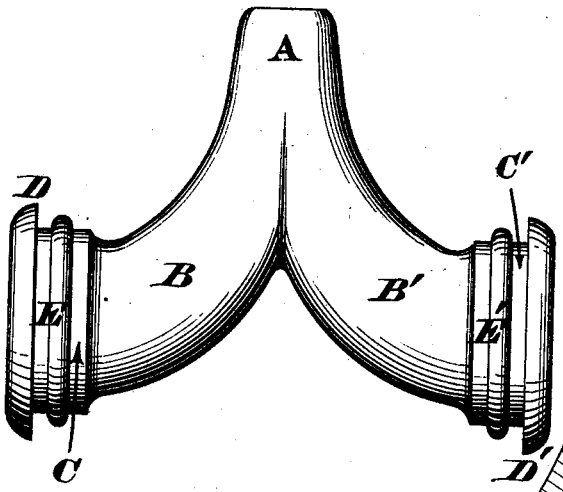

FIG. 2.

Attest.
C. G. Bovey.
S. A. Bondy.

Inventor.
Hanson P. Tenant
by James H. Layman
his Attorney.

UNITED STATES PATENT OFFICE.

HANSON P. TENANT, OF EAST GERMANTOWN, ASSIGNOR TO KERRICK & WINEGARDNER, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN STEAM-JET PUMPS.

Specification forming part of Letters Patent No. **206,054**, dated July 16, 1878; application filed June 21, 1878.

To all whom it may concern:

Be it known that I, HANSON P. TENANT, of East Germantown, Wayne county, Indiana, have invented certain new and useful Improvements in Steam-Jet Pumps, of which the following is a specification:

The object of this invention is to facilitate the construction and render more certain in action the steam-jet pumps for which Letters Patent No. 174,390 were issued to me March 7, 1876; and my present improvements comprise the following features, to wit:

First, a peculiar construction of nozzle or steam-ventage, which is made separate from the pump, and has the shell or globe cast around it. This nozzle is formed at the junction of two upwardly-curved branch pipes, which latter extend to the diametrically-opposite sides of the shell, so as to locate said nozzle exactly in the axis of the pump, the receiving ends of these branch pipes being tapped to permit the attachment of the steam-pipe and a removable cap, as hereinafter more fully described.

Second, the provision of suitable flanges and collars on the necks of said branch pipes, for the purpose of securing a steam-tight joint between these pipes and the shell when the latter is cast around them, as more fully explained hereinafter.

In the annexed drawing, Figure 1 is an elevation of the combined nozzle and branch pipes as they appear before the shell is cast around them, and Fig. 2 is an axial section of the complete pump ready for use.

The central member of the pump is the nozzle A, which is composed of any suitable cast metal, and is formed by the junction of two upwardly-projecting curved branch pipes, B B′, which pipes are provided, respectively, with short cylindrical necks C C′, that terminate with annular flanges D D′. Furthermore, these necks are furnished with external collars E E′ and internal or female threads F F′. These members A B B′ C C′ D D′ are placed in a suitable mold, and the shell or globe is cast around them, after which act the core is knocked out, and the pump is ready for use as soon as the steam and suction pipes are attached.

By referring to Fig. 2, it will be seen that this shell consists essentially of a globe, G, joined to a cone, H, the axis of said cone being in line with nozzle A.

Cone H is threaded at I, either internally or externally, to permit attachment of the discharge-pipe.

Globe G is of such size and shape as to afford ample clearance around the nozzle A and branches B B′, for the passage of the water as it flows through the pump. The water enters at inlet J, to which the suction-pipe K is connected.

L is the steam-pipe screwed into branch B, and M is a plug or cap screwed into the opposite branch B′.

One advantage peculiar to the present construction of my pump is, that the nozzle A is more quickly and accurately located in the axis of shell G H, and, being supported by the extended bearings afforded by the necks C C′, said nozzle cannot sag down and get out of line with the cone H.

Another advantage consists in providing the apparatus with two threads or couplings, F F′, thus permitting the steam-pipe L to be attached either at the right or left side of the pump, the cap M being, of course, screwed to the opposite pipe to which the one L is applied.

Another advantage results from the use of the flanges D D′ and collars E E′, as they serve to anchor the branches B B′ firmly within the shell, and thereby secure a steam-tight joint between these members B B′ and G.

It will also be noticed that no fittings are used in connecting the nozzle and branches, and consequently there are no leaky joints inside the pump.

An inferior modification of the device may have the pipes B B′ placed horizontally across the shell, with nozzle A projecting at right angles from them.

I claim as my invention—

1. An improved steam-jet pump whose nozzle A is formed by the junction of two branch

pipes, B B′, extending to opposite sides of the shell G H, which shell is cast around said nozzle and pipes, substantially as herein described.

2. An improved steam-jet pump consisting of the nozzle A, branch pipes B B′, necks C C′, flanges D D′, and collars E E′, the shell G H being cast around said necks C C′ and collars E E′, substantially as herein described and set forth.

In testimony of which invention I hereunto set my hand.

HANSON P. TENANT.

Witnesses:

J. D. CONDIT,

ROBT. EVANS.