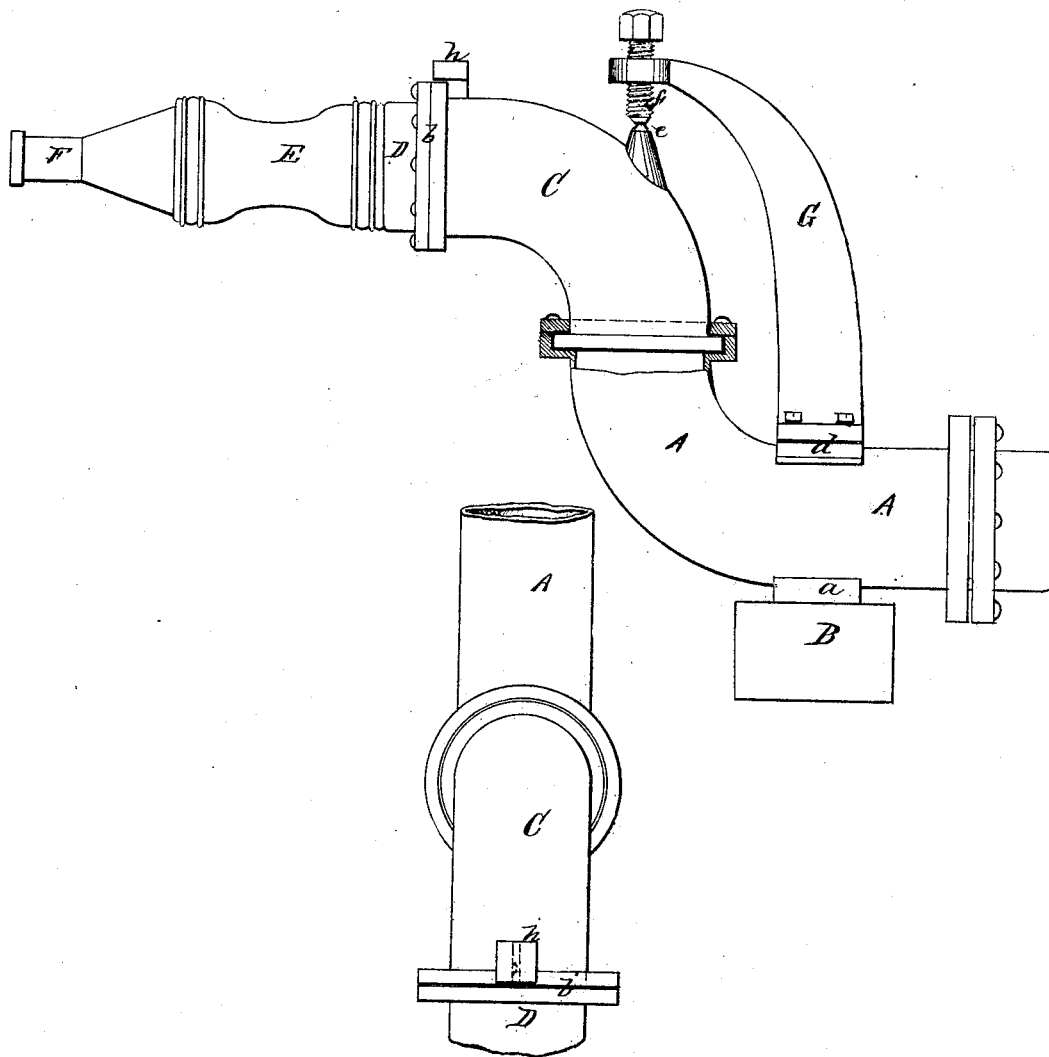


*S. Adams,*

Nozzle

No. 111600.

*Patented Feb. 7. 1871.*



Witnesses,  
Geo. A. Strong  
John, L. Boone

Inventor,  
Samuel Adams  
by His Attorneys  
Dewey & Co.

# United States Patent Office.

SAMUEL ADAMS, OF MICHIGAN BLUFF, CALIFORNIA.

Letters Patent No. 111,600, dated February 7, 1871.

## IMPROVEMENT IN HYDRAULIC TURNPIPES.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern:*

Be it known that I, SAMUEL ADAMS, of Michigan Bluff, county of Placer, State of California, have invented an Improved Hydraulic Turnpipe and Nozzle; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to an improved turnpipe or tube with nozzle attached, to be used for delivering a stream of water in hydraulic mining.

My improvements consist—

First, in constructing the pipe near the nozzle in such-formed sections that, when united together, it will be of a convenient shape, not only for handling, but also for delivering the water; and

Secondly, in the manner of relieving the strain upon the moving joints, in order that the nozzle may be easily turned about for changing the direction of the stream of water.

In order to better illustrate and explain my invention, reference is had to the accompanying drawing forming a part of this specification, in which—

A is the lower section of the turnpipe, and is connected with the main pipe which conveys the water to the mine. This section is curved as shown, and has the plate *a* cast with it, which is provided with screw-holes, in order to secure it in the proper position upon the timber B.

The section C is also curved, and is secured upon the upward projecting end of the section A by means of some suitable loosely-moving water-tight joint, the two sections when united forming an S-shaped pipe, the upper section of which is capable of being turned so as to present the end in any desired direction.

To the end of the section C is secured a short section of pipe, D, by means of flanges *b* or other suitable device, and to this is secured a short hose, E.

The nozzle F is secured to the opposite end of the hose, and in delivering a stream, when it is desired

only to vary the direction slightly, the flexibility of the hose will be sufficient to allow the nozzle to be directed without changing the position of the turnpipe.

Cast upon the upper horizontal surface of the section A is a plate, *d*, to which is strongly secured, by suitable means, a curved bar or arm, G. The upper end of this bar is provided with a screw-hole, through which a screw, *f*, passes, the lower end of which is hollowed so as to bear upon the conical projection *e*. This conical projection is cast upon the section C, directly in a line with the center of the circular moving water-tight joint which connects the two pipes, A C. This screw serves to relieve the pressure upon the joint when the pipe is carrying a stream, in order to allow the section C to be readily turned as desired. This is necessary, as the immense pressure of the water, which is frequently two hundred and fifty pounds to the square inch, would otherwise seal the joint so strongly that it would be almost impossible to move it, but by turning the screw down this pressure is counteracted, and the pipe moves between the water and pivot.

Upon the flange *b* is cast a lug or projection, *h*, through which there is a hole sufficiently large to admit the end of an iron bar to aid in turning the pipe into position.

What I claim, and desire to secure by Letters Patent, is—

1. The combination of the bent pipes A. and C, connected by a loose joint with the flexible pipe E and nozzle F, when arranged to operate substantially as described.

2. In combination with a bent revolving pipe, C, the standard G, screw *f*, and projection *e*, substantially as and for the purpose specified.

In witness whereof I have hereunto set my hand and seal.

SAMUEL ADAMS. [L. S.]

Witnesses:

JAMES A. VAN EMAN,  
JOHN H. PERRY.