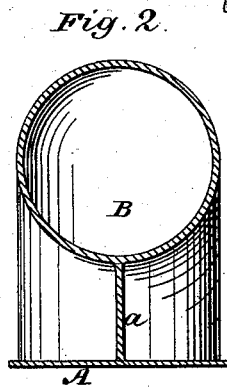
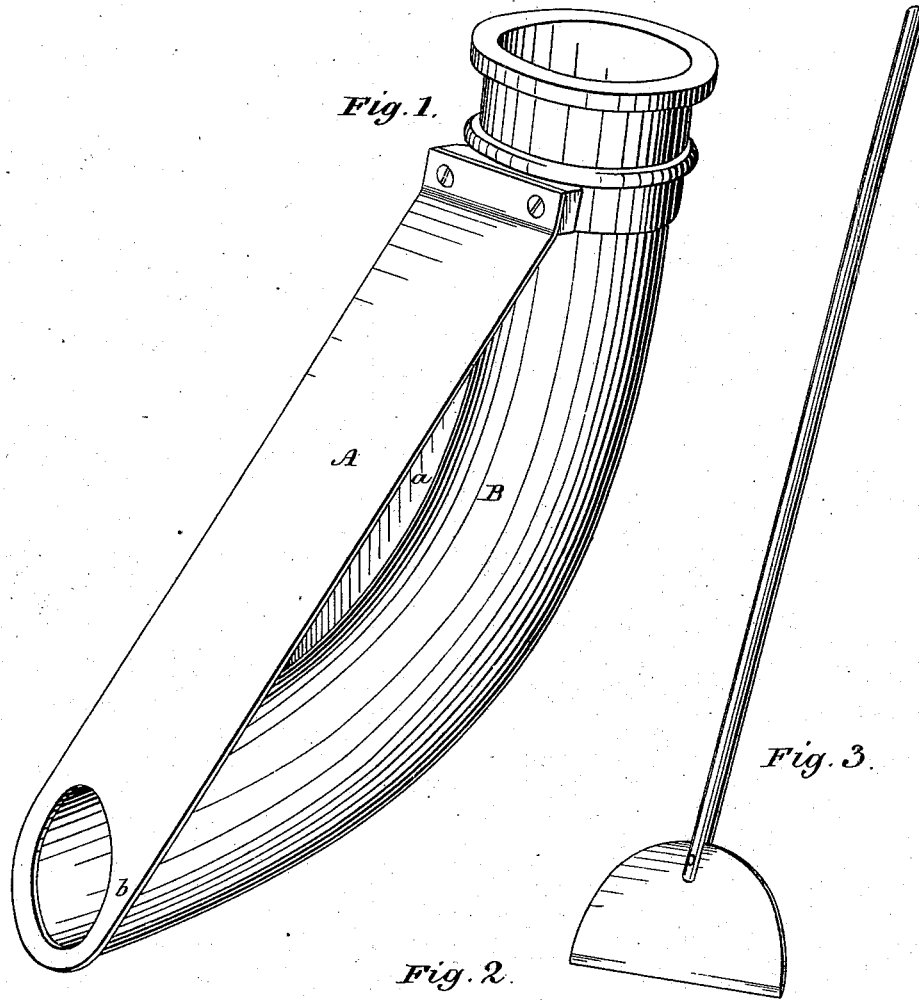


W. PAINTER.  
Foot-Pipe for Suction-Hose.

No. 160 704.

Patented March 9, 1875.



Witnesses  
Philip Garner  
A. B. Caldwell

Inventor.  
William Painter  
By *M. G. Wood*  
Attorney

# UNITED STATES PATENT OFFICE.

WILLIAM PAINTER, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN FOOT-PIPES FOR SUCTION-HOSE.

Specification forming part of Letters Patent No. **160,704**, dated March 9, 1875; application filed December 22, 1874.

*To all whom it may concern:*

Be it known that I, WILLIAM PAINTER, of the city and county of Baltimore, in the State of Maryland, have invented a certain new and useful Improvement in Foot-Pipes for Suction-Hose; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear, true, and accurate description thereof.

My improved foot-pipes are particularly intended for suction-hose employed in connection with pumping apparatus for removing the contents of privy-vaults, cess-pools, &c.

In order that the suction-hose may rest with its end on the bottom of the vault, and at the same time present an unobstructed opening, the foot-pipes have heretofore been curved; and prior to my invention considerable labor has frequently been requisite for clearing the entrance to the pipe from extraneous matter, and also in the removal from the curved portion such fibrous and other matter as is liable to rest thereon when the fluid mass has been removed from the vault.

It is the object of my invention to render these clearing operations capable of being rapidly executed by means of a spade or clearer; and my said invention consists in providing a curved foot-pipe with a longitudinal plane surface, which extends from the exterior of the foot-pipe on the concave side to the induction-aperture, and surrounds the same.

Referring to the drawings, Figure 1 represents, in perspective, one of my improved foot-pipes. Fig. 2 represents the same in lateral section.

The upper side of the plate A, in this instance, affords the essential plane surface. This plate is supported upon and joined to the concave exterior surface of the foot-pipe by means of a close web, *a*, which serves to strengthen the pipe, and prevents matter from lying across the pipe beneath the plate. The plate has a width equal to, or greater than, the diameter of the foot-pipe B. At the aperture of the foot-pipe the plate extends so as to present a surrounding plane surface, as at

*b*. The plate thus extended in a straight line from the butt of the foot-pipe across the aperture, as shown, permits a clearer placed thereon to be carried fully across the induction-aperture, and also allows all extraneous matter to more or less readily fall therefrom when the foot-pipe is raised vertically by the lifting of the suction-hose to which it is attached.

A longitudinal curvature of the plate, corresponding somewhat with the concave curve of the pipe, will not prove objectionable, although I prefer the straight-line arrangement shown. A flat sharp-edged shovel or clearer, as shown in Fig. 3, is employed in connection with the plate for occasionally clearing the aperture while in use, and also for clearing the flat surface after use.

In night-soil operations the time of the operatives, teams, &c., employed constitutes a large proportion of the attendant expense, and every improvement whereby these operations may be more rapidly effected is of practical importance.

By means of this simple improvement in foot-pipes a marked economy in time is effected in each operation, and this saving of time in the aggregate has proved to be of substantial value. The foot-pipe entrance frequently gets clogged by the partial entrance of shavings, rags, &c.; and instead of lifting the pipe for its clearance, a spade or clearer may be placed flatwise upon the plane surface, and, by moving it downward across the aperture, effect a complete clearance, while with a sharp-edged spade it is practicable to cut a tangled mass which is partially within the opening, so as to allow that portion already entered to be freely drawn through the pump.

Having thus described my invention, I claim—

A curved foot-pipe provided with a clearing-surface, substantially as described, whereby a clearer may be readily forced across the induction-aperture, and the foot-pipe readily cleared of extraneous matter, as set forth.

WILLIAM PAINTER.

Witnesses:

JAMES L. MURRILL,  
JOHN F. GROUND.