

I. MARTIN & D. B. PAROW.

Improvement in Slide Valves.

No. 115,878.

Patented June 13, 1871.

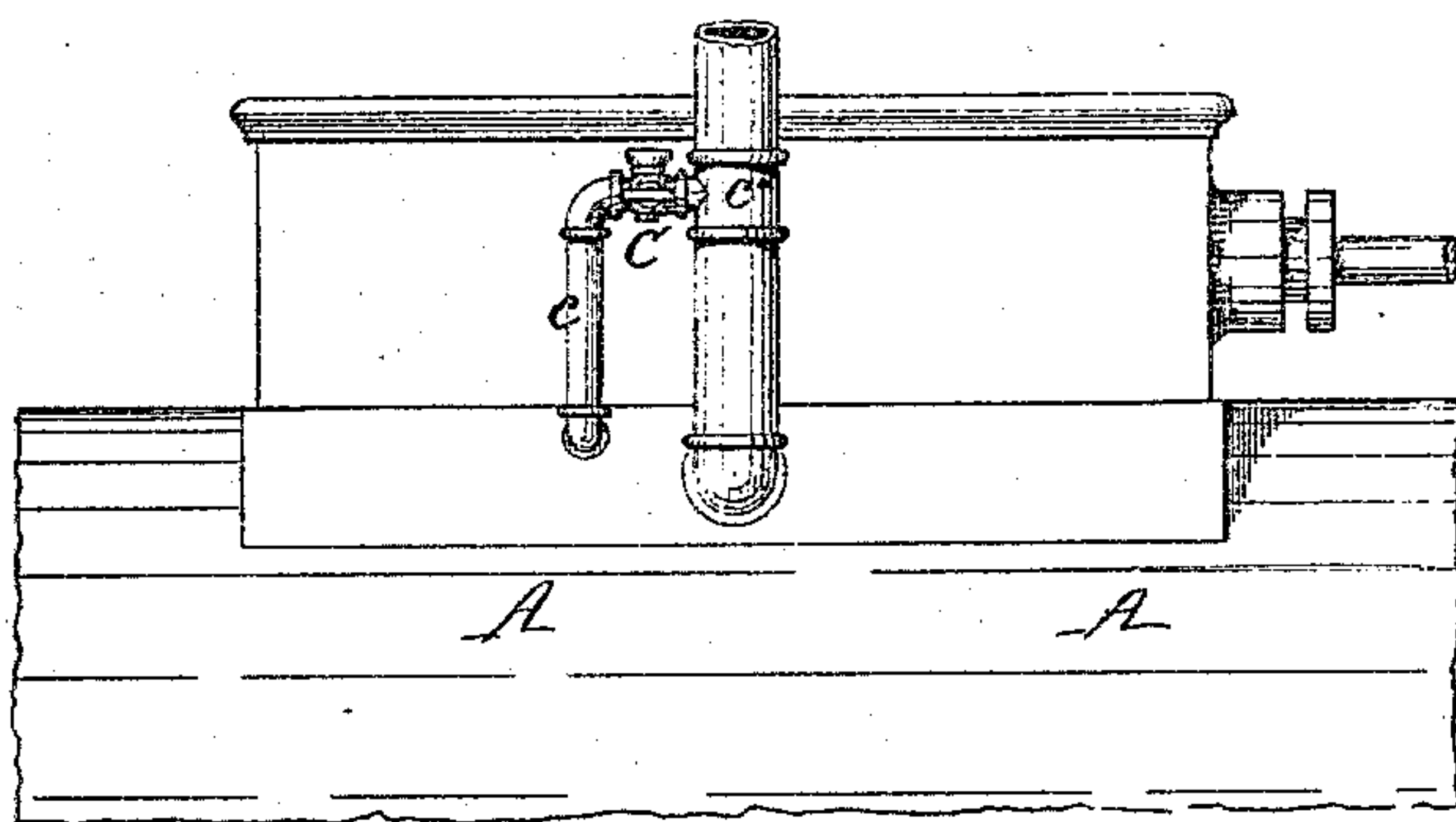


Figure 1.

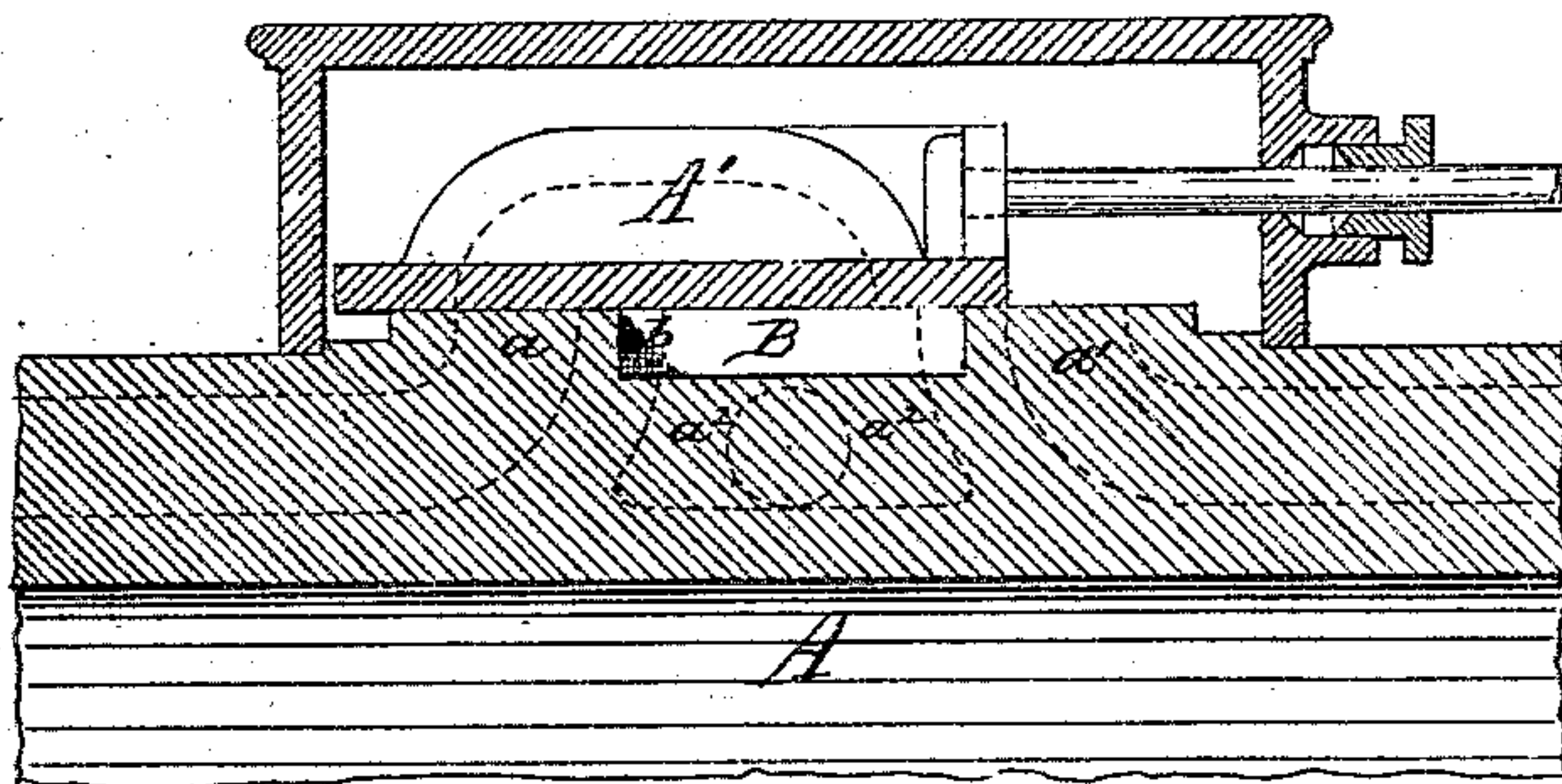


Figure 2.

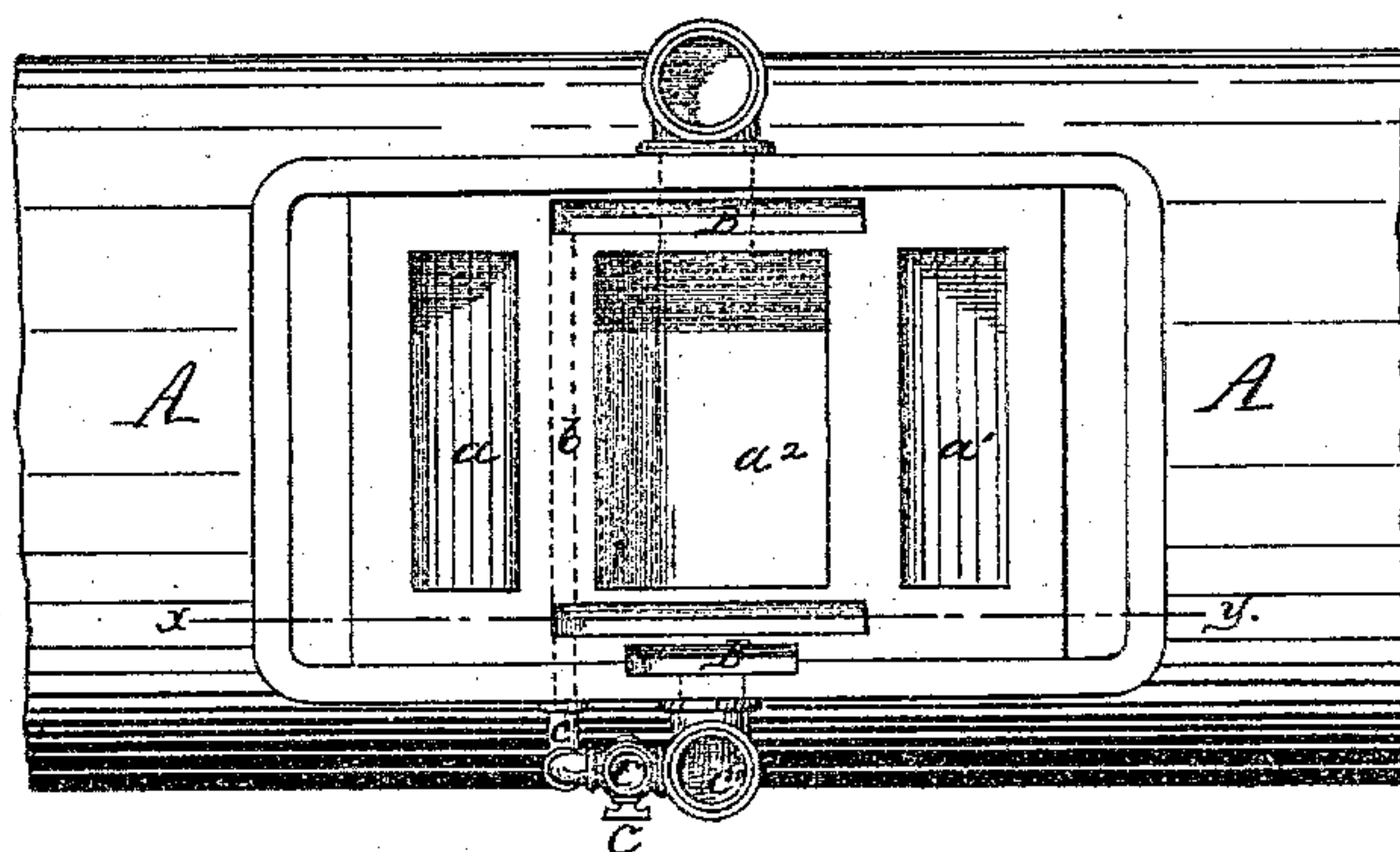


Figure 3.

Witnesses:

Robert F. Smith.

J. W. Herthel

Inventors:

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# UNITED STATES PATENT OFFICE.

ISAAC MARTIN AND DANIEL B. PERROW, OF LONE JACK, MISSOURI.

## IMPROVEMENT IN SLIDE-VALVES.

Specification forming part of Letters Patent No. 115,878, dated June 13, 1871.

*To all whom it may concern:*

Be it known that we, ISAAC MARTIN and DANIEL B. PERROW, of Lone Jack, in the county of Jackson and State of Missouri, have made certain new and useful Improvements in Slide-Valves; and we do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The object of this invention is to lubricate steam-engine valves in a simple, economical, and thorough manner. The nature of this invention relates to the introduction of oil or other lubricating fluid between the valve-face and valve-seat by means of suitable oil-recesses in the valve-seat; also to certain detail arrangement of parts by which the oil is introduced into said oil-recesses, as shall now be more fully described.

To enable those herein skilled to make and use our said improvements, we will now more fully describe the same, referring to the accompanying—

Figure 1 as a side elevation; to Fig. 2 as a sectional elevation at line  $x y$ ; and to Fig. 3 as a top plan of valve-seat, showing oil-recesses.

The steam-cylinder A has sliding valve A', operating over ports  $a a^1 a^2$ , in the ordinary manner. As stated to be in the nature of our invention, we have provided the valve-seat with oil-recesses or chambers B B, connecting or communicating with each other by a transverse passage,  $b$ , as clearly indicated in Figs.

2 and 3. The slide-valve A' has broader flanges than usual, so as to overlap the oil-chambers B B. The oil-cup C, for introducing oil, we connect with the oil-recesses B B by a pipe,  $c$ , said oil-cup being furthermore connected to the live-steam-supply pipe  $c'$ , from which it receives steam to force the oil into said recesses through the said pipe  $c$ .

By such a manner of construction the oil or lubrication is brought into immediate contact with the surface required, the recesses serving the purpose of a reservoir for supplying the lubricating agent.

It is evident that thus friction is greatly reduced, and the operation of the valve to work freely, and yet steam-tight against its face, is facilitated.

Having thus fully described our said invention, what we claim, and desire to secure by Letters Patent, is—

1. The arrangement, in the valve-seat, of recesses or chambers B B, communicating with each other by the ports or passage  $b$ , substantially as and for the purpose set forth.

2. The pipe C' with oil-cup C, when arranged in communication with oil-recesses B B, in combination with supply steam pipe  $c$ , substantially as set forth.

In testimony of our said invention we have hereunto set our hands.

ISAAC MARTIN.

DANIEL B. PERROW.

Witnesses:

A. M. JOHNSON,  
RILEY PARRENT.