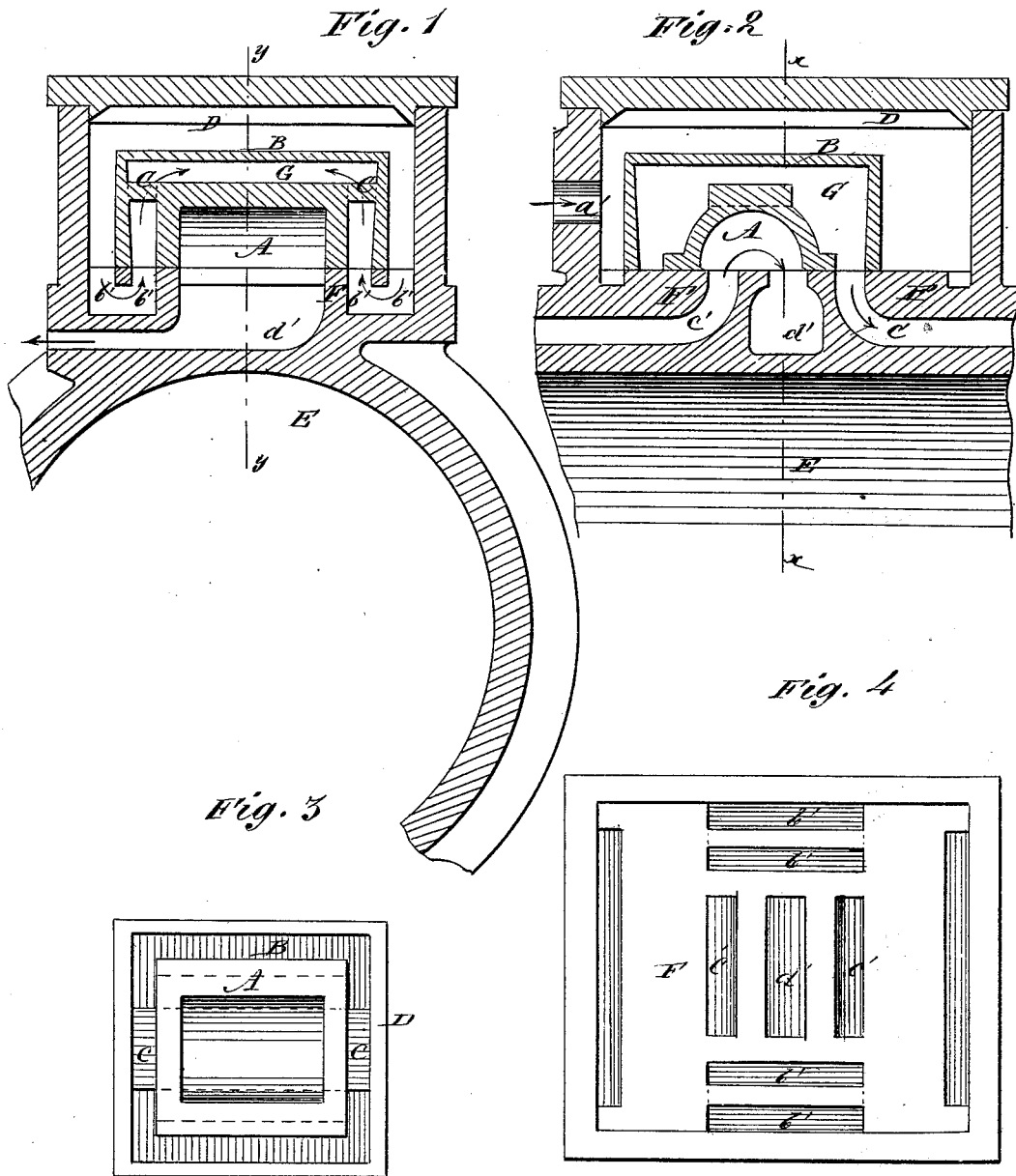


L. H. BAKER.  
Combined Sliding Box and Valve.

No. 218,697.

Patented Aug. 19, 1879.



WITNESSES:  
*C. N. Nye*  
*C. Sedgwick*

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

LEWIS H. BAKER, OF FAIRFIELD, ILLINOIS.

## IMPROVEMENT IN COMBINED SLIDING BOX AND VALVE.

Specification forming part of Letters Patent No. **218,697**, dated August 19, 1879; application filed April 21, 1879.

*To all whom it may concern:*

Be it known that I, LEWIS HENRY BAKER, of Fairfield, in the county of Wayne and State of Illinois, have invented a new and Improved Combined Sliding Box and Valve, of which the following is a specification.

Figure 1 is a sectional elevation on line *x x*, Fig. 2. Fig. 2 is a sectional elevation on line *y y*, Fig. 1. Fig. 3 is a plan of the reverse of the sliding box and valve. Fig. 4 is a plan of the valve-seat.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide an engine-valve so constructed and arranged that the pressure of the steam upon the valve from above will be nearly or quite counterbalanced by the pressure from below.

The invention consists of the semicircular valve A that is held within a box, B, by the abutments C C. These rest within the steam-chest D of the cylinder E upon the valve-seat F.

The steam entering at *a'*, or any other point in the steam-chest, is continuously admitted through the openings *b' b'* into the space G between A and B, in order to pass to the steam-ports *c' c'*; then as the valve moves in one direction the steam enters the cylinder from the space

G through one of the steam-ports, while the exhaust-steam escapes from the other port into the hollow of the valve, and thence into the exhaust-port *d'*, and the reverse action attends the reverse movement of the valve and box.

It will be seen that the external and internal superficial areas of the combined box and valve are so nearly alike that the steam-pressure upon their exterior must be very nearly counterbalanced by the pressure on their interior surfaces, so that in effect a balanced slide-valve is produced.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The valve A and box B, in combination with the valve-seat F provided with steam-ports *c' c'*, exhaust-port *d'*, and steam-openings or passages *b' b'*, substantially as and for the purpose described.

2. The combination of the steam-chest D, valve A, box B, and valve-seat F, constructed and arranged substantially as and for the purpose described.

LEWIS HENRY BAKER.

Witnesses:

ALEXIS B. RIDER,  
GILES M. TINKER.