

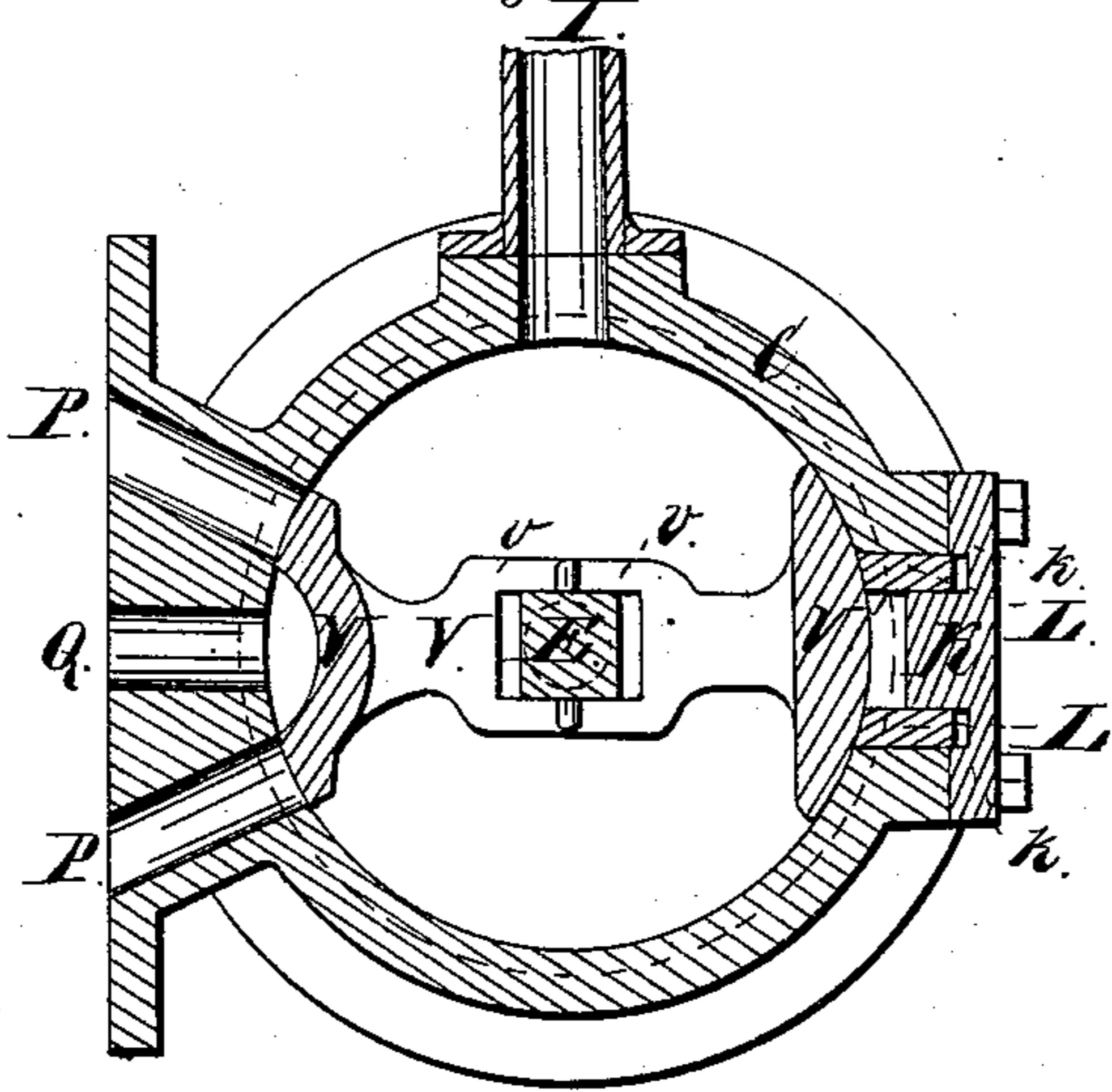
*F. S. Pease,*

*Rotary Steam Valve,*

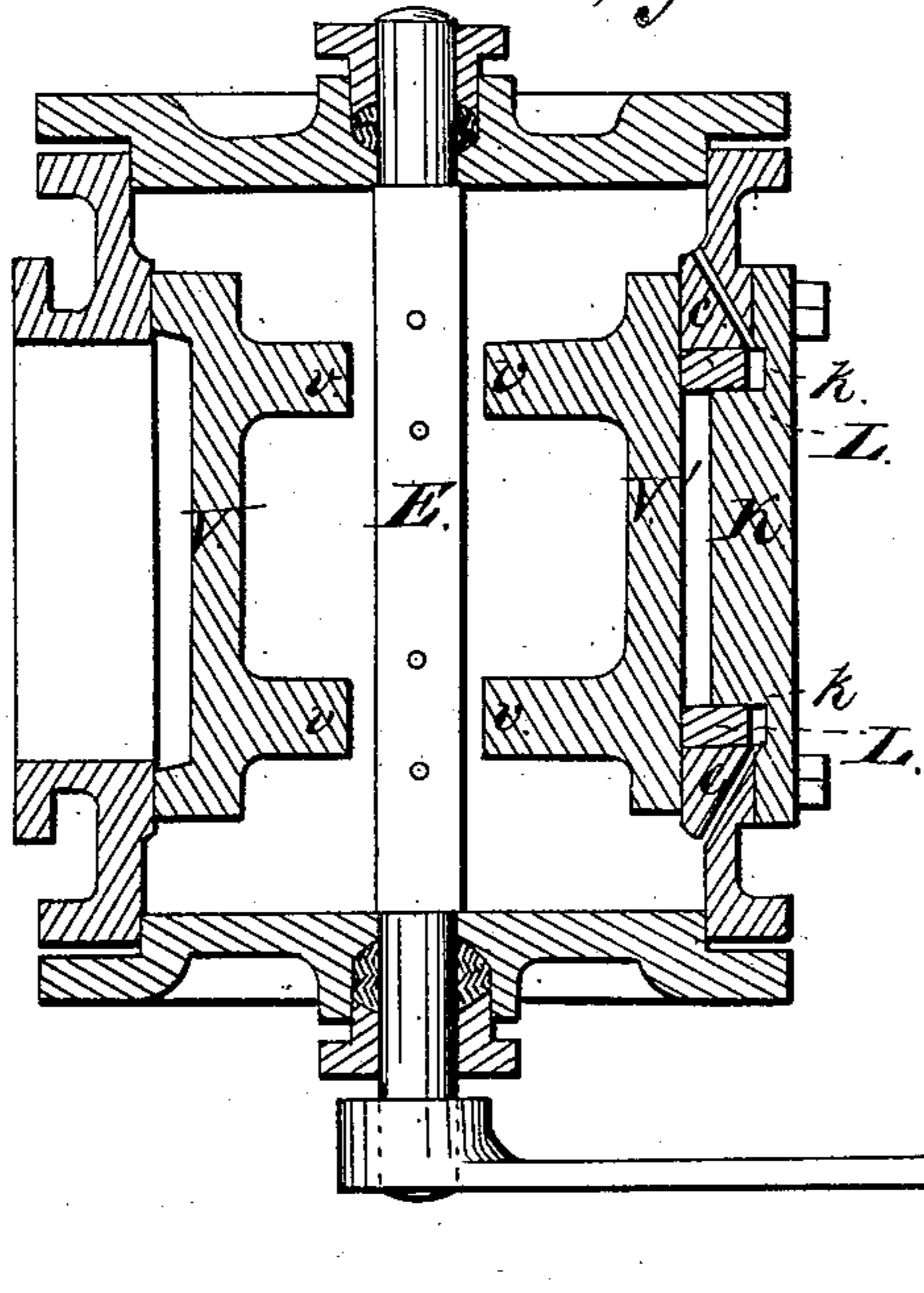
*No 84,211,*

*Patented Nov. 17, 1868.*

*Fig: 2.*



*Fig: 1.*



*Witnesses:*

*W. B. Deming*

*Wm. H. Brewster*

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*F. S. Pease*

*By ~~Knights~~ ~~Brose~~  
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# United States Patent Office.

FRANCIS S. PEASE, OF BUFFALO, NEW YORK.

Letters Patent No. 84,211, dated November 17, 1868.

## IMPROVEMENT IN STEAM-VALVES.

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, FRANCIS S. PEASE, of Buffalo, in the county of Erie, and State of New York, have invented a new and useful Improvement in Valves for Steam and other Engines; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which are made a part of this specification.

My invention consists in improved construction and combination of devices for packing and balancing the valve, and adapting it to work tightly upon its seat.

In the drawings—

Figure 1 represents a longitudinal section of a steam-valve, illustrating my invention, and

Figure 2, a transverse section of the same.

Similar letters of reference indicate corresponding parts in both figures.

C represents the steam-chest, I, the induction-port, P P, ports communicating with the respective ends of the cylinder, and Q, the exhaust-port. All the above-named parts may be of common construction.

My oscillating valve is constructed with a concave face, V, which works over the ports P P Q in customary manner, and with a balancing-plate, V', the convex back of which, being concentric with the axis of motion, works in contact with a packing-block or ring, L, which I prefer to make open or hollow, and of rectangular form.

Motion is imparted to the valve by a rectangular rock-shaft, E, which passes through oblong apertures or slots, leaving spaces *v v*, so as to permit the valve to find its seat, and be kept constantly tight thereon, under pressure of steam.

The oblong metallic packing, L, is pressed against the back of the valve by steam admitted through a hole or holes, *c c*, and acting within one or more cavities, *k k*, between the packing and the cover K of the steam-chest.

The surfaces of the valve V being about equally exposed to the pressure of steam, the valve is balanced and is kept to its seat by the steam pressing on the stationary packing-block L. An aperture being cut in the back of the steam-chest, the stationary packing is readily inserted against the back of the valve, and fits steam-tight within said aperture. It is very easy to get at, without removing the heads, by taking off the cover or cap K, and it admits of very easy adjustment.

The area of the oblong metallic packing is only required to be about two-thirds of the area of the face of the valve, or two-thirds of the size of the steam-ports, or sufficiently large to hold the valve to the seat, or, if preferred, a simple plate or block may be used instead of the open packing, L.

Having described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The oscillating steam-valve, consisting of two segments, V and V', constructed and operating as and for the purposes described.

2. The combination and arrangement of the packing L, and the slots *v v*, in the valve V V', substantially as and for the purposes explained.

FRANCIS S. PEASE.

Witnesses:

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