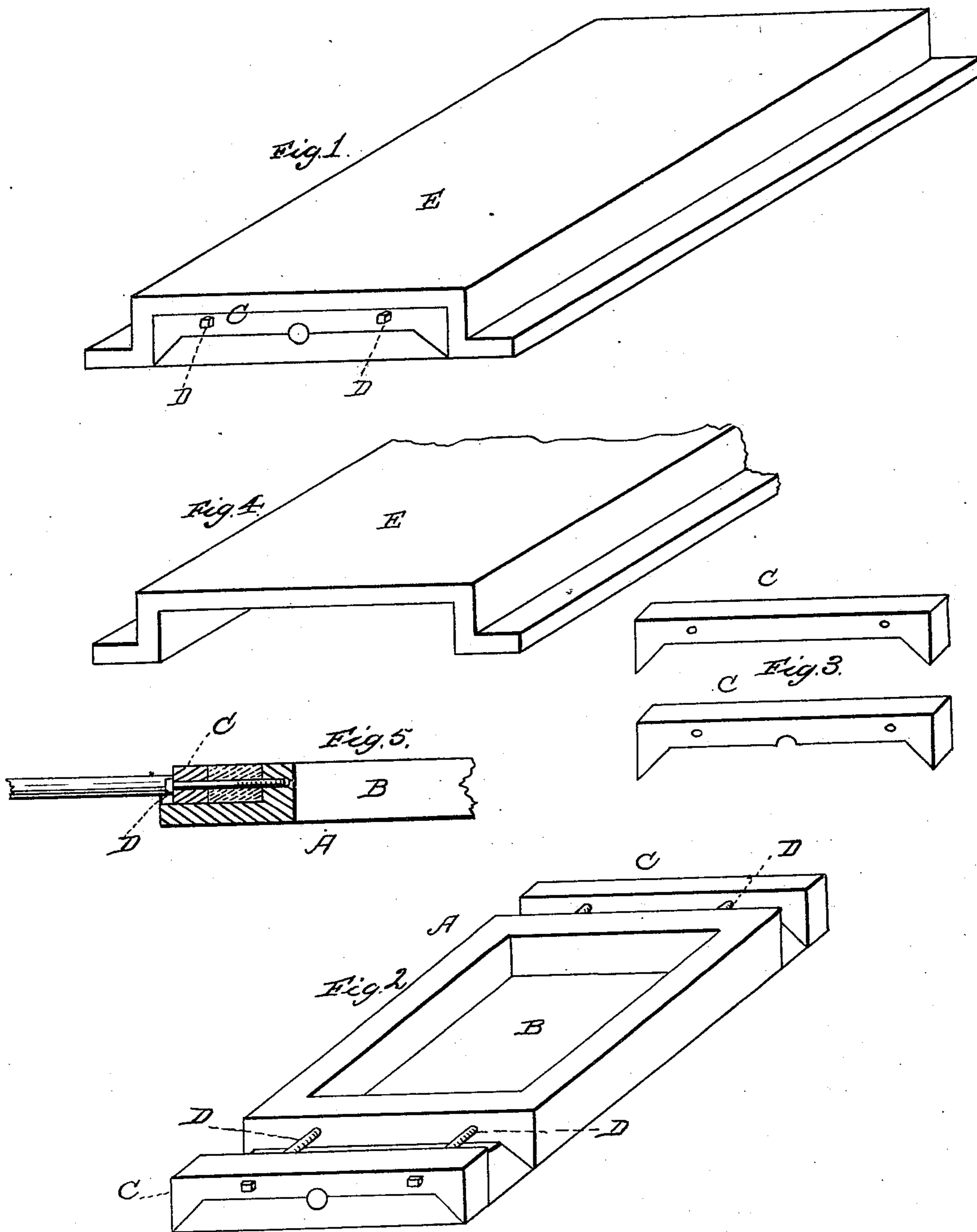


(No Model.)

J. C. KNECHT.
BALANCED SLIDE VALVE.

No. 282,906.

Patented Aug. 7, 1883.



WITNESSES
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UNITED STATES PATENT OFFICE.

JOHN CHARLES KNECHT, OF SIGEL, ILLINOIS.

BALANCED SLIDE-VALVE.

SPECIFICATION forming part of Letters Patent No. 282,906, dated August 7, 1883.

Application filed March 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHARLES KNECHT, a citizen of the United States, residing at Sigel, in the county of Shelby and State of Illinois, have invented a new and useful Balanced Slide-Valve, of which the following is a specification.

This invention has relation to certain improvements in balanced slide-valves for steam-engines; and it has for its objects to prevent the pressure of steam on the top of the valve and permit it to work with the utmost freedom, as more fully hereinafter specified. These objects I attain by the means shown in the accompanying drawings, in which—

Figure 1 represents a perspective view of my valve and a hood covering the same. Fig. 2 is a representation of the valve detached; Fig. 3, a detached view of the two glands to hold packing at the ends of the valve, as more fully hereinafter specified; and Fig. 4 is a perspective view of the hood without the valve. Fig. 5 is a sectional detail view of the valve, packing, and one of the glands, with the valve-rod applied.

The letter A indicates the valve, which is rectangular in shape, and which is formed with a rectangular opening, B, so as to permit the steam to exhaust freely. The said valve at its ends is provided with glands C, which are secured by means of screws D, the said glands being for the purpose of securing packing to the ends of the valve, which is clamped between them and said ends.

The letter E indicates a cover, which is open at the ends, and which is adapted to be secured to the valve-seat in the valve-chest over the

valve, covering both the induction and exhaust ports. The said cover on its under side is truly planed, so that the valve may slide accurately in it, the packing between the glands and valve preventing the passage of steam. The hood is somewhat shorter than the steam-chest, so that the steam may enter freely at opposite ends as the valve moves back and forth in order to alternately reach the induction-ports of the engine. The valve is operated by a valve-rod, as usual, and, being shorter than the cover, as it reciprocates alternately uncovers the induction-ports and makes connection with the exhaust, so as to give motion to the engine.

I am aware that packing has been used in steam-valves, and therefore do not claim such, broadly; but,

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

The combination, in a balanced slide-valve, of the reciprocating valve A, having the rectangular recess B through its center, and the packing-glands C, constructed as described, one of which is provided on its central under side with a circular groove to receive the valve-rod, with the packing between the glands and valve, and the rectangular cover adapted to be secured to the valve-seat in the valve-chest over said valve, substantially as specified.

JOHN CHARLES KNECHT.

Witnesses:

EUSTACH KUNKLER,
CHARLES KNECHT.