

D. B. Martin,
Packing Slide Valves.

Nº 11,968.

Patented Nov. 21, 1854.

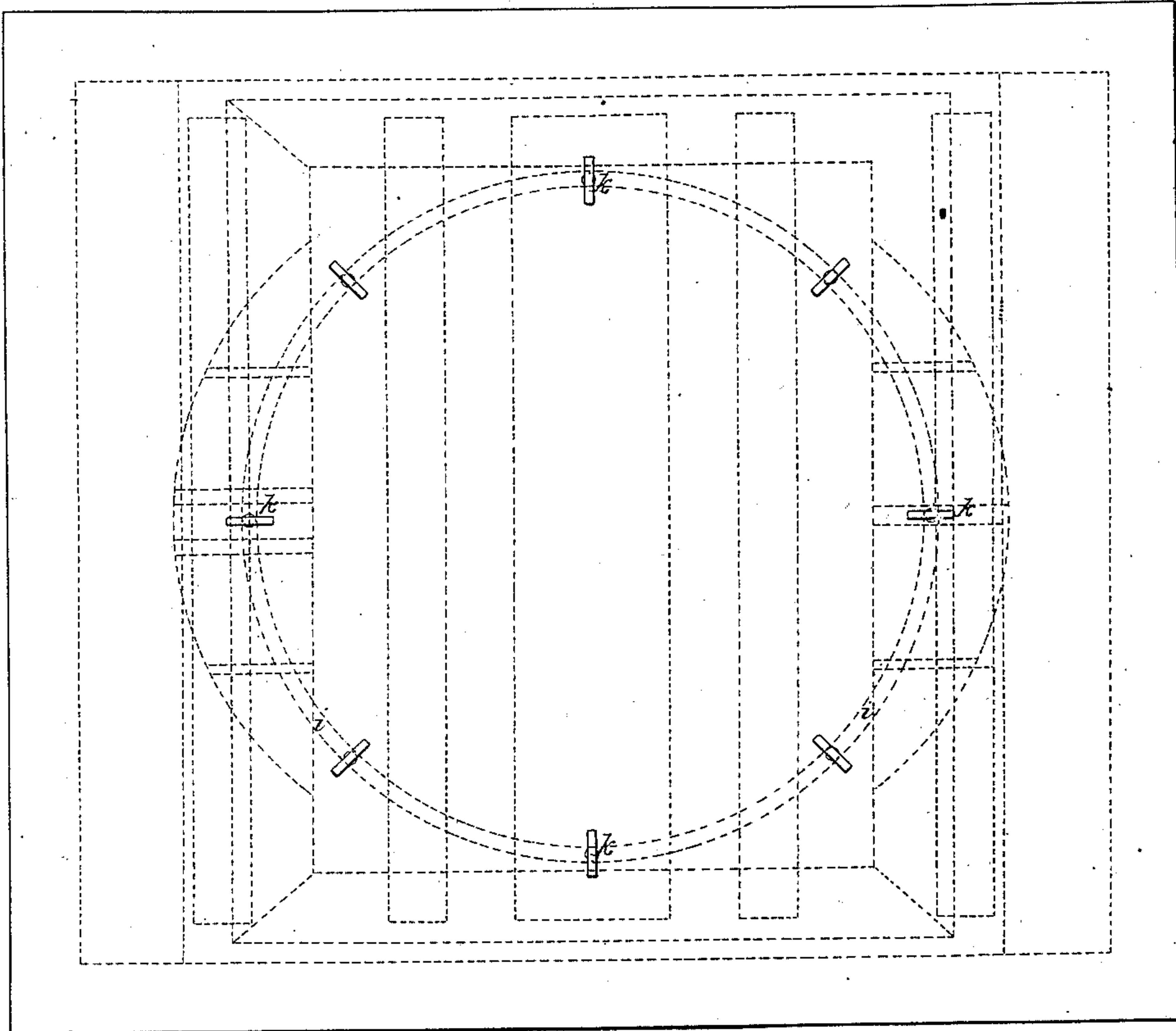


Fig. 1.

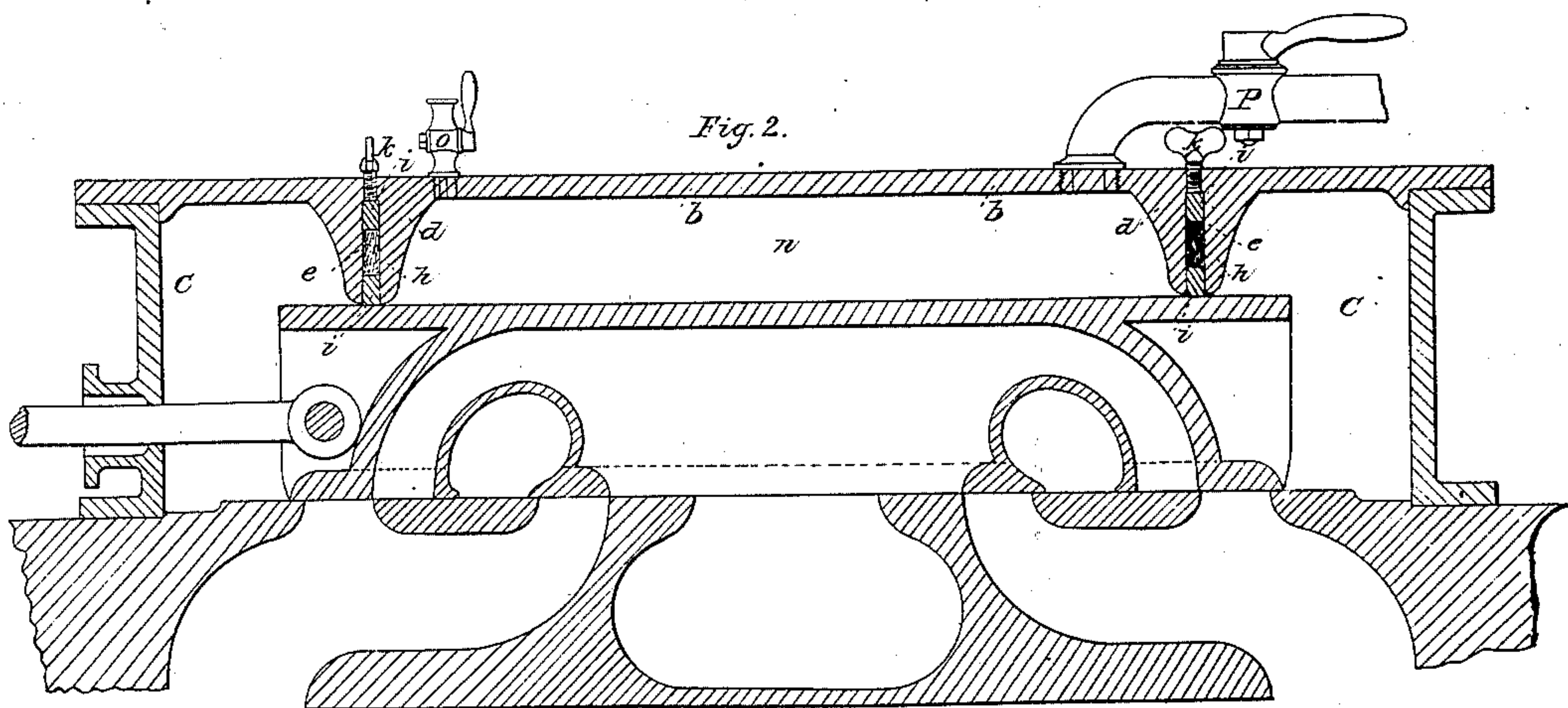


Fig. 2.

UNITED STATES PATENT OFFICE.

DANIEL B. MARTIN, OF WASHINGTON, NEW JERSEY.

PACKING SLIDE-VALVE IN STEAM-ENGINES.

Specification of Letters Patent No. 11,968, dated November 21, 1854.

To all whom it may concern:

Be it known that I, DANIEL B. MARTIN, of Washington, in the county of Middlesex and State of New Jersey, have invented an Improvement in Balanced Slide-Valves of Steam-Engines, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the usual manner of making, modifying, and using the same, reference being had to the annexed drawings, of which—

Figure 1 is a top view of the steam chest showing the valve packing in dotted lines. Fig. 2 is a longitudinal vertical section of the steam chest.

My invention consists in a mode of packing the slide valve in the steam chest so as to relieve the pressure on the valve, and in such manner that the packing can be adjusted while the engine is in motion.

In the usual mode of packing the valve for the purpose of relieving it from pressure on the back, the packing is on the valve and rubs against the bonnet of the steam chest, in consequence of this arrangement the packing cannot be adjusted without stopping the engine. It is moreover more difficult to adjust the packing when the parts are cold to suit all changes of temperature. These difficulties I obviate entirely by my packing which is on the bonnet of the steam chest and stationary, the valve rubbing against it.

To construct my packing I attach to or cast upon the bonnet *b* of the steam chest *c*

a projecting piece *d* with a groove *e* into which the packing *h* is to be fitted.

The packing may be of any suitable material but I prefer to use vulcanized rubber *h* between the two metallic projecting pieces or bands *i, i*. The pressure of the packing is to be regulated by the set screws *k, k*. Between the valve and valve bonnet there is a chamber *n* from which the steam is shut out by the packing. This chamber is open to the condenser through cock P and according to the area of this chamber will be the differences of pressure upon the valve. In case the packing should leak there is a steam trial cock *o* upon the chest which is opened, after first closing cock P.

It is obvious that the means of packing may be varied without changing the principle of my invention, provided they be attached to the bonnet of the steam chest so as to be adjusted from the outside and while the engine is in motion. It is not necessary to describe other parts of the apparatus.

What I claim as my invention is—

The mode herein set forth of packing balanced slide-valves, the same consisting in the attachment of the packing to the bonnet of the steam chest whereby I am enabled to adjust the packing while the engine is in motion, all substantially in the manner set forth.

DANL. B. MARTIN.

Witnesses:

WM. W. W. WOOD,
T. CARMELL.