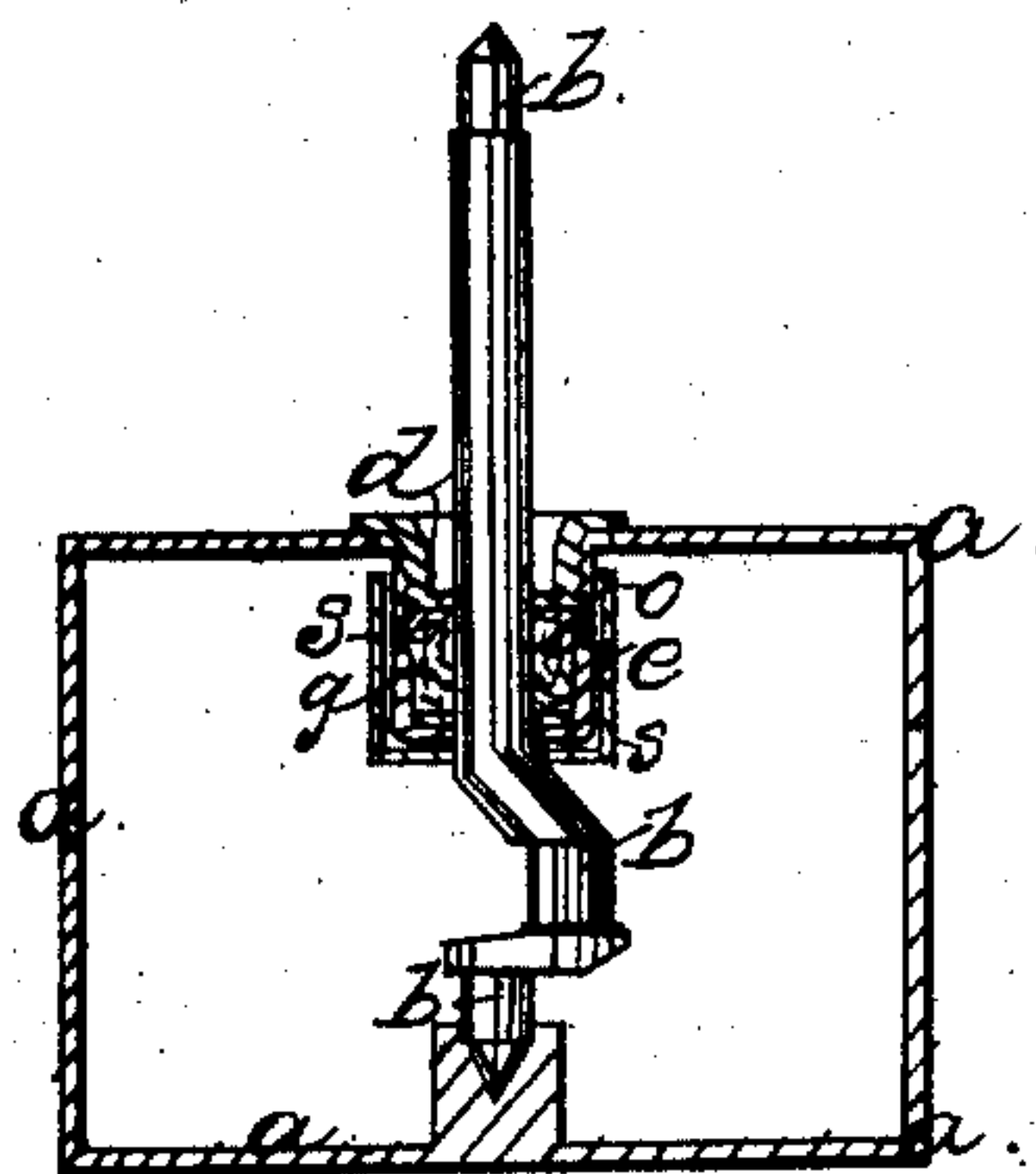


No. 49,935.

PATENTED SEPT. 12, 1865.

N. TUFTS, JR.  
PACKING THE SHAFTS OF DRY GAS METERS.



Witnesses:

W. D. Brushy.  
F. Gould.

Inventor:

Nathaniel Tufts, Jr.

*The drawing in this patent  
is not in print.*

# UNITED STATES PATENT OFFICE.

NATHANIEL TUFTS, JR., OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN PACKING THE SHAFTS OF DRY GAS-METERS.

Specification forming part of Letters Patent No. **49,935**, dated September 12, 1865.

*To all whom it may concern:*

Be it known that I, NATHANIEL TUFTS, JR., of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Packing-Shafts of Dry Gas-Meters; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

In dry gas-meters much trouble has been experienced in so packing the vertical shafts which pass through the meter to communicate with the registering clock-work, and for other purposes, that gas will not leak out around them without creating so much friction thereupon as to interfere with the proper operation of the meter. If the packing is left loose, so that the operation of the mechanism of the meter is not retarded by the friction of the packing, then the gas will escape, so as to be annoying and even dangerous.

The drawing embodying my invention represents by *a* a portion of the case of a dry gas-meter where the shaft is located which operates the indicating mechanism, said shaft being cranked and marked *b*. Connected with this case *a* is a packing-box, *c*, having a follower, *d*. The packing within the box is oiled or greased fibrous material, and is marked *e*, while above and below said packing are leather washers *o*.

The follower *d* is made of cup form, so as to hold oil, and thus in a measure prevent the gas from leaking, while at the same time the packing is kept lubricated; but as the oil passes down into the packing it soon runs out of that down the shaft into the meter, and thus leaves a passage for the leakage of gas.

To remedy the difficulty above set forth is the object of my invention, which consists in surrounding each packing-box *c* with a cup, *s*, made fast to the shaft so as to rotate with it. This cup catches all the oil or grease which works out of the packing, and thereby makes a fluid joint past which the gas does not escape, even though the packing in the packing-box is quite loose therein.

In setting up new meters I prefer to fill the space between the cups and the packing-boxes with oil and tallow mixed.

I claim—

In dry gas-meters, and in combination with the vertical shafts therein and with the packing-boxes of such shafts, the oil-cup *s*, when secured to such shafts and made to rotate therewith.

In witness whereof I have hereunto set my hand this 14th day of August, A. D. 1865.

NATHANIEL TUFTS, JR.

Witnesses:

J. B. CROSBY,  
F. GOULD.