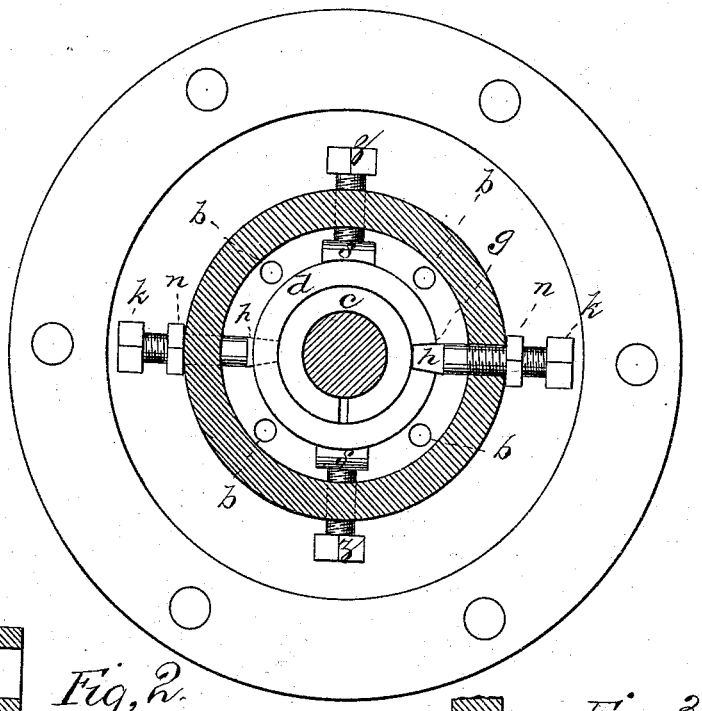
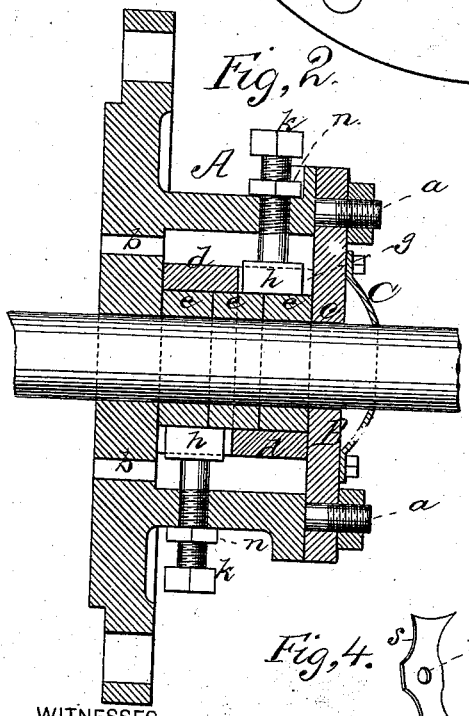
J. H. GUILEY.
Piston-Packing.

No. 215,349. Patented May 13, 1879.

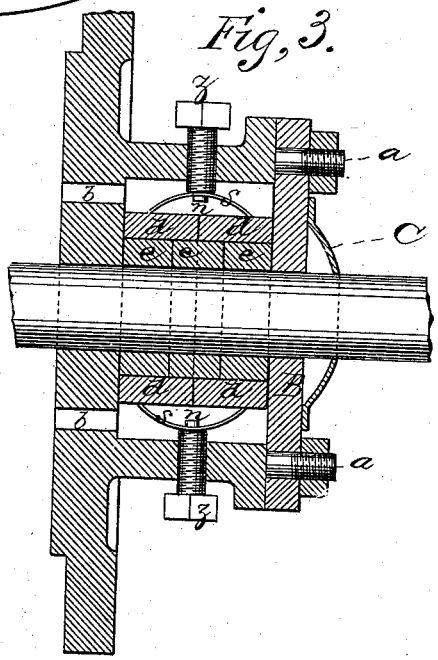
Fig, 1.



Fig, 2.



Fig, 3.



Fig, 4.

WITNESSES

Mary L. Utley

Frank J. Mlasi

INVENTOR

Jacob H. Guiley

By E. W. Anderson

his ATTORNEY

UNITED STATES PATENT OFFICE.

JACOB H. GUILEY, OF EAST SAGINAW, MICHIGAN, ASSIGNOR OF ONE-THIRD HIS RIGHT TO WILLIAM E. STICH, OF SAME PLACE.

IMPROVEMENT IN PISTON-PACKING.

Specification forming part of Letters Patent No. **215,349**, dated May 13, 1879; application filed April 7, 1879.

To all whom it may concern:

Be it known that I, JACOB H. GUILEY, of East Saginaw, in the county of Saginaw and State of Michigan, have invented a new and valuable Improvement in Piston-Packing; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse section of my improved packing, and Figs. 2 and 3 are longitudinal sections thereof.

This invention has relation to packings for piston, governor, and valve rods, and valves; and it consists in the construction and novel arrangement of the contracting rings, the spring-holders, and the adjusting-screws, and the regulating slide-wedges, all as hereinafter shown and described.

In the accompanying drawings, the letter A designates the packing-chamber, having the projecting bolts *a* to connect the heads B to it. In the floor of the chamber are perforations *b*, for the admission of water or steam, as the case may be. The opening *c* in the head B is of larger diameter than the piston-rod, and an exterior concave plate, C, having a smaller opening, is provided to be filled with felt or other soft material to prevent the admission of dust or grit into the chamber, and at the same time to allow play to the rod.

Centrally arranged within the packing-chamber are the packing-rings, consisting of an inner set of three rings, *c*, and an outer set of two rings, *d*, the latter set being equal in depth to the former set, and both being about equal in depth to the chamber. All of these rings are cleft and act by contraction. The middle inner ring is provided with studs, which engage with holes in the end rings and keep them with their cleft sides properly arranged to break joints. The outer rings are also cleft, as indicated at *g*, these clefts being turned in opposite directions and receiving the slide-wedges *h*, which are swiveled on the ends of regulating-screws *k*, which pass through threaded apertures in the chamber-wall, and are provided with exterior jam-nuts *n*, to fix their adjustment. By loosening or tightening these wedges in the ring-clefts their tension can be regulated according to requirement.

In order to take the weight of the rod off the packing-rings, slight concave end or furcated springs *s* are used, bearing against the outer packing-rings at their points. These springs are provided with central bearing-holes *t*, engaging the reduced ends *n* of the screws *z*, which serve to regulate their bearing. These springs are, to a certain extent, automatic in their action, allowing the packing-rings to accommodate themselves to the position of the engine when out of line. The steam or water passing into the chamber A through the perforations *b* serves to contract the springs in the rod, and the pressure is regulated by the adjusting-screws through the medium of the wedges and springs.

I am aware that it is common to form packings by means of cleft-rings, and I do not, therefore, claim such invention broadly.

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

The packing for piston-rods, &c., herein described, consisting of the chamber A, perforated at *b*, the inner set of cleft-rings *d*, breaking joints with each other, the slide-wedges *h*, engaging the clefts of the outer rings, the holding-springs *s*, and their adjusting-screws *k z*, arranged as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JACOB HARTMAN GUILEY.

Witnesses:
GEORGE B. BROOKS,
CHAS. H. CAMP.