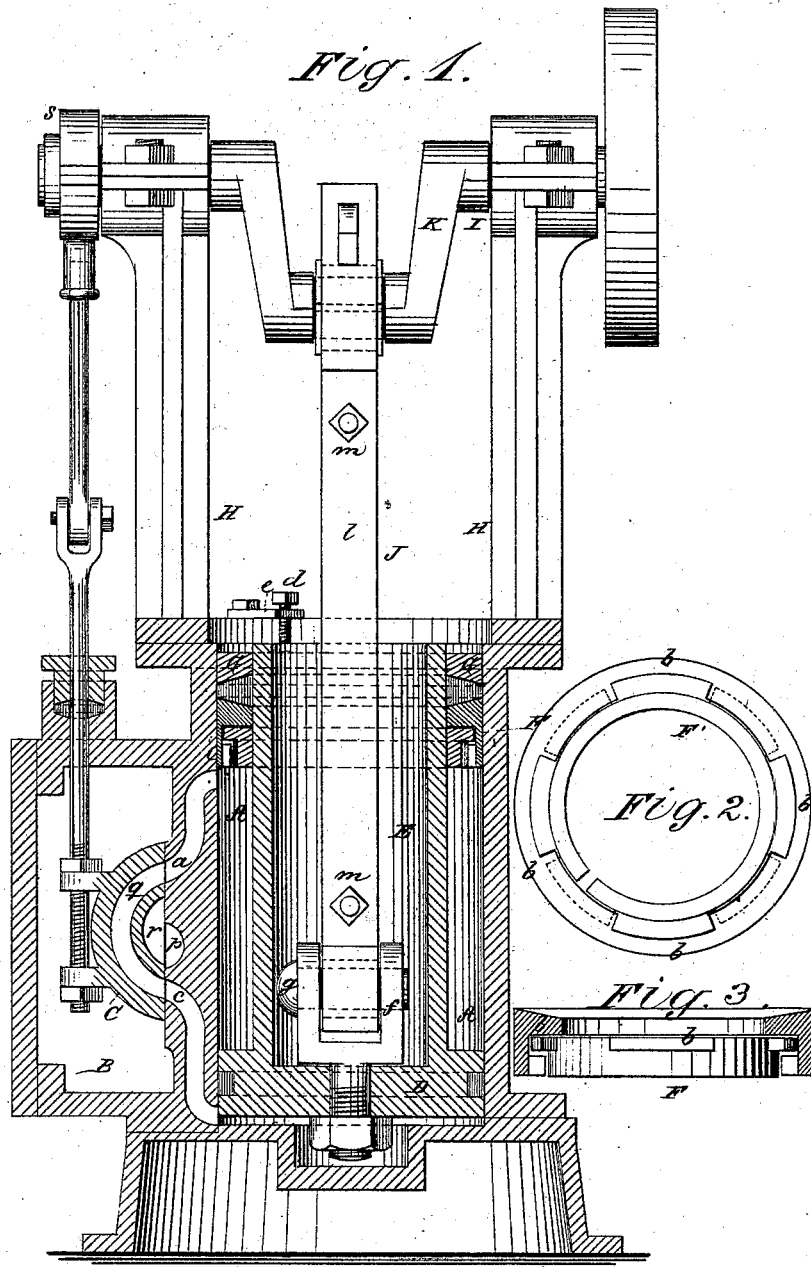


W. CRAM.
Packing for Piston and other Rods.

No. 203,596.

Patented May 14, 1878.



WITNESSES:

E. H. Rydquist
J. H. Scarborough

INVENTOR:

W. Cram
BY *Munn*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM CRAM, OF RALEIGH, NORTH CAROLINA.

IMPROVEMENT IN PACKING FOR PISTON AND OTHER RODS.

Specification forming part of Letters Patent No. **203,596**, dated May 14, 1878; application filed September 10, 1877.

To all whom it may concern:

Be it known that I, WILLIAM CRAM, of Raleigh, Wake county, North Carolina, have invented an Improvement in Steam-Engines, of which the following is a specification:

Figure 1 of drawing is a vertical section; Figs. 2 and 3, detail views of the packing-rings.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

A represents the cylinder; B, its steam-chest; C, its valve, and D the piston. The latter is a trunk that extends through a cut ring, F', provided with lugs *b*, which fit into corresponding recesses of a ring, F, the two being caused by the pressure of the steam to form a perfectly steam-tight joint with the trunk E and cylinder A.

G is a third and superposed ring, that forms, with ring F, an intermediate chamber for the reception of a cotton or other fabric filling, which is saturated with some fluid lubricant. The rings F G are correspondingly beveled, so as to converge with their opposite faces in an

outward direction, and allow the ring G, which is pressed by set-screws *d*, to produce a tendency of the lubricant toward the trunk.

By the relative construction and arrangement of the rings F F', I secure an admirable steam-packing, and by the co-operation of the ring F with the pressure-ring G, I cause the trunk to move smoothly and with a very trifling friction.

What I claim as new and of my invention is—

1. A trunk, E, steam-packed in the cylinder A by means of the cut ring F', provided with lugs *b*, and the recessed ring F, constructed and arranged as shown and described.

2. The pressure-ring G and ring F, constructed and arranged to form a chamber to receive a lubricant filling, which may bear against the trunk, in combination with the ring F', substantially as shown and described.

WILLIAM CRAM.

Witnesses:

J. McCALLUM,
R. N. MITCHELL.