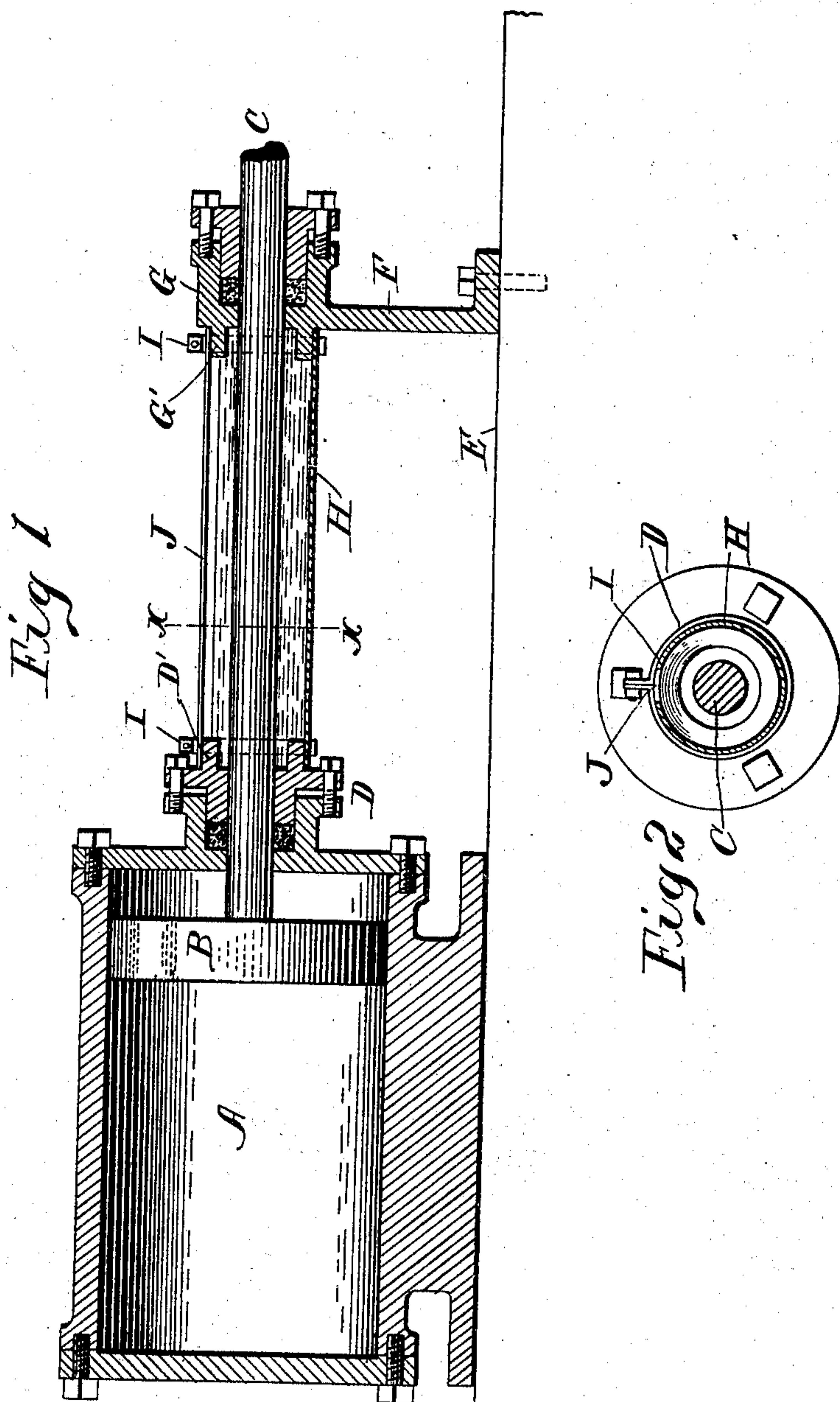


(No Model.)

S. KAYE.  
PISTON ROD PROTECTOR.

No. 502,402.

Patented Aug. 1, 1893.



WITNESSES:

C. C. Burdine  
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# UNITED STATES PATENT OFFICE.

SAMUEL KAYE, OF YAZOO CITY, MISSISSIPPI.

## PISTON-ROD PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 502,402, dated August 1, 1893.

Application filed March 9, 1892. Serial No. 424,306. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL KAYE, a citizen of the United States, residing at Yazoo City, in the county of Yazoo and State of Mississippi, have invented certain new and useful Improvements in Piston-Rod Protectors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improved means for protecting the piston rod of gas compressing cylinders from the oxidizing influences of the atmosphere as it moves in and out of the cylinder; and it has for its object to provide means which will be efficient and inexpensive, and at the same time will not interfere with the effective operation of the compressor to which it may be applied.

To these ends my invention consists in the novel combinations and constructions of parts more fully described hereinafter and finally embodied in the claim.

Referring to the accompanying drawings which illustrate my invention as applied to an ordinary gas compressor: Figure 1 represents a longitudinal section thereof; Fig. 2 a cross-section.

The reference letter A indicates the cylinder of the compressor to which my invention is applied, having the usual piston B and rod C. The rod C passes through the annular packing gland D and has its outer end connected with suitable mechanism for operating the compressor.

Rigidly secured to the bed E of the apparatus and arising vertically therefrom, is a standard F having its upper end arranged on the same horizontal plane as the gland D of the cylinder A, and such upper end is formed into a second packing gland G, circular in cross-section and of the same size as the gland D. In this gland the free end of the rod C is arranged to operate.

Arranged between the packing glands D

and G and having its ends embracing the annular flanges D' and G' thereof, is a piece of sheet metal H, preferably copper and having the binding rings I securely bolted over each end by which it is held in place. The sheet metal plate H is of such a width that when in place on the glands D and G, its sides will not meet but will occur a distance from each other equal to the space or opening J. Thus it will be seen that a water-tight chamber is formed around that portion of the piston rod which enters the cylinder, the gland G being arranged from the gland D a distance equal to the length of the piston's stroke, and that by way of the opening J access may be had to such chamber.

In operation the chamber is filled by way of the opening J, with oil or any other suitable substance which will keep out the air, and as the rod C reciprocates that portion which enters the cylinder and comes in contact with the ammonia within, will move out into the oil at each stroke. This operation effectively keeps the rod from exposure to the air, thereby preventing corrosion and other highly injurious effects.

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

An apparatus for protecting piston rods, comprising the combination of a piston-rod, two packing glands in which the rod operates, the outer gland being so arranged that that portion of the rod that enters the cylinder will not pass beyond it, a sheet metal covering reaching from one gland to the other and partially embracing the same, and binding straps secured over the glands and covering, whereby an open chamber is formed in which the piston-rod operates and which is adapted to receive oil for the protection of the rod, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL KAYE.

Witnesses:

J. B. OWENS,

L. P. WHITAKER.