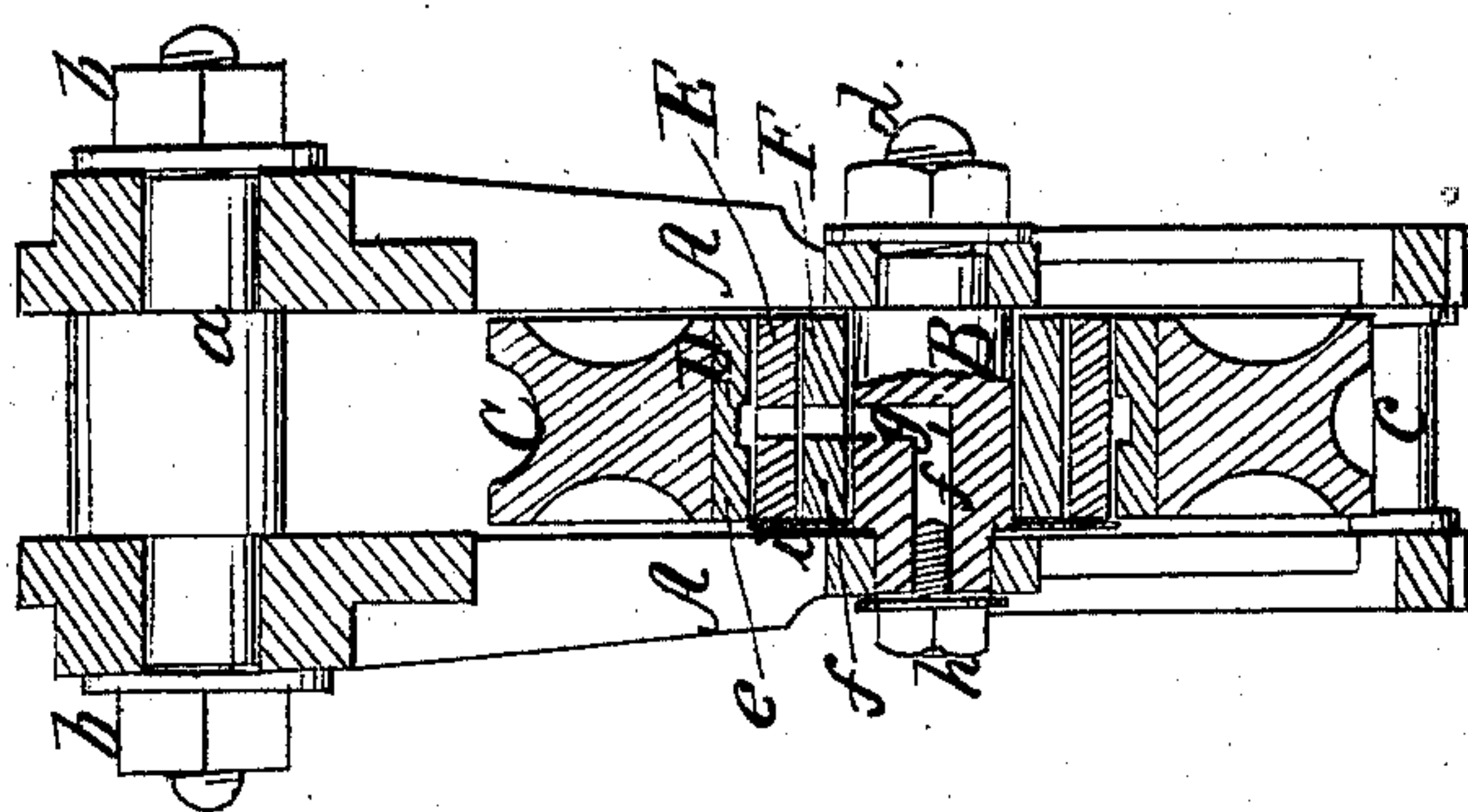
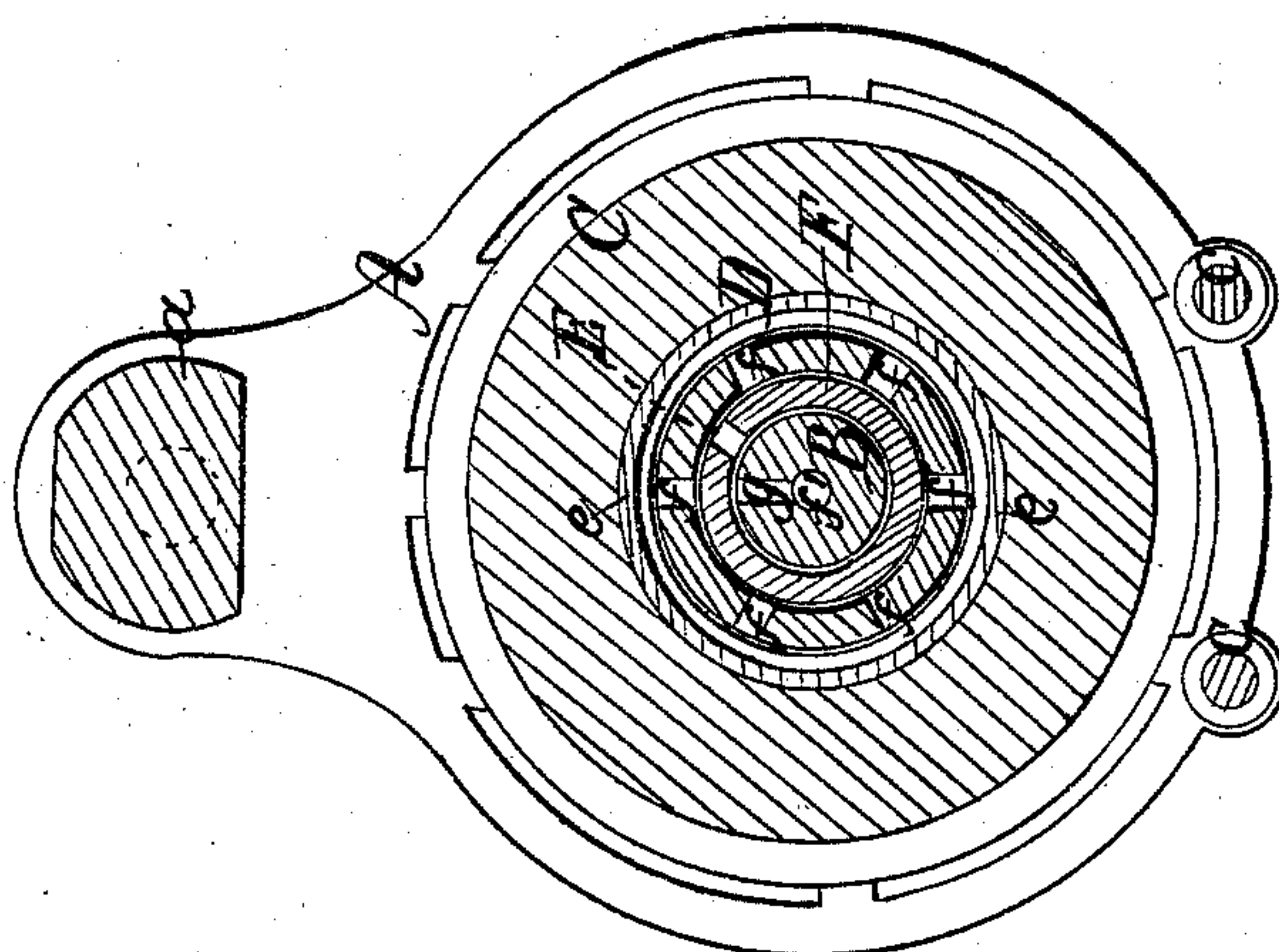


*J. M. Riley,*  
*Tackle Block,*  
*Nº 15,817, Patented Sep. 30, 1856.*

*Fig. 2.*



*Fig. 1.*





# UNITED STATES PATENT OFFICE.

JOHN M. RILEY, OF NEWARK, NEW JERSEY.

## MEANS FOR LUBRICATING THE SHEAVE-PIN OF SHIPS' BLOCKS.

Specification of Letters Patent No. 15,817, dated September 30, 1856.

*To all whom it may concern:*

Be it known that I, JOHN M. RILEY, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Pulley - Blocks for Ships' Tackles, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figures 1 and 2 are vertical sections of my improvement, the planes of section crossing each other at right angles.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, A, represent two cheeks of the block. These cheeks may be constructed of either metal or wood. The cheeks represented in the drawings are supposed to be of metal. The cheeks are connected at a proper distance apart at their upper ends by a rod *a*, having a nut *b* at each end, and they are connected at their lower ends by rods *c*, the cheek pieces bearing against shoulders on the rods.

B, represents the axis of the pulley C. This axis, at one end, is screwed into one of the cheeks, and the opposite end has a screw thread cut upon it, and a nut *d*, is fitted thereon, both cheeks bearing against shoulders on the axis B.

The pulley C, has a circular opening made through its center in which a metal band D, is permanently fitted. This band has a groove *e*, made circumferentially in its inner surface at about its center, as shown clearly in Fig. 2.

E, is a metal band which is fitted within the band D, and F, is a similar band which is fitted within the band E. The band F, is fitted on the axis B, and is allowed to turn freely thereon, and the band E, is al-

lowed to turn freely between the bands D, F. The two bands E, F, are perforated as shown at *f*, and the axis B has a longitudinal aperture *f*<sup>1</sup> made in it, said aperture extending to about the center of the axis B, and communicating with a passage *g*, which extends to the periphery of the axis B, see Fig. 2. The axis and also the several bands D, E, F, are lubricated by injecting oil into the aperture *f*<sup>1</sup>, said oil passing through the passage *g*, through the perforations *f*, in the bands and lodging in the recess *e*, which serves as a sort of chamber or reservoir. The end of the aperture *f*<sup>1</sup>, has a screw *h*, fitted in it, as shown in Fig. 2.

By the above improvement the pulley C, is allowed to turn freely and with but a small amount of friction, as the bands E, F, work independently of each other between the eye or band D, and the axis B. The eye of the pulley is also preserved, as it is not subjected to that wear and tear attending the pulleys of ordinary blocks. Any number of bands may be employed, and any suitable metal used for their construction. Blocks with any number of pulleys may be used, and washers (*i*) are placed on the ends of the axis B, said washers covering the ends of the bands to prevent the escape of oil. One washer only is shown in Fig. 2.

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

The bands E, F, one or more, interposed between the axis B, and the eye or band D, of the pulley C, the bands E, F, being perforated as shown, and the axis B, provided with passages or apertures *f*<sup>1</sup>, *g*, for the purpose of lubricating the bands and axle; substantially as described, for the purpose specified.

JOHN M. RILEY.

Witnesses:

J. F. BUCKLEY,  
WM. TUSCH.