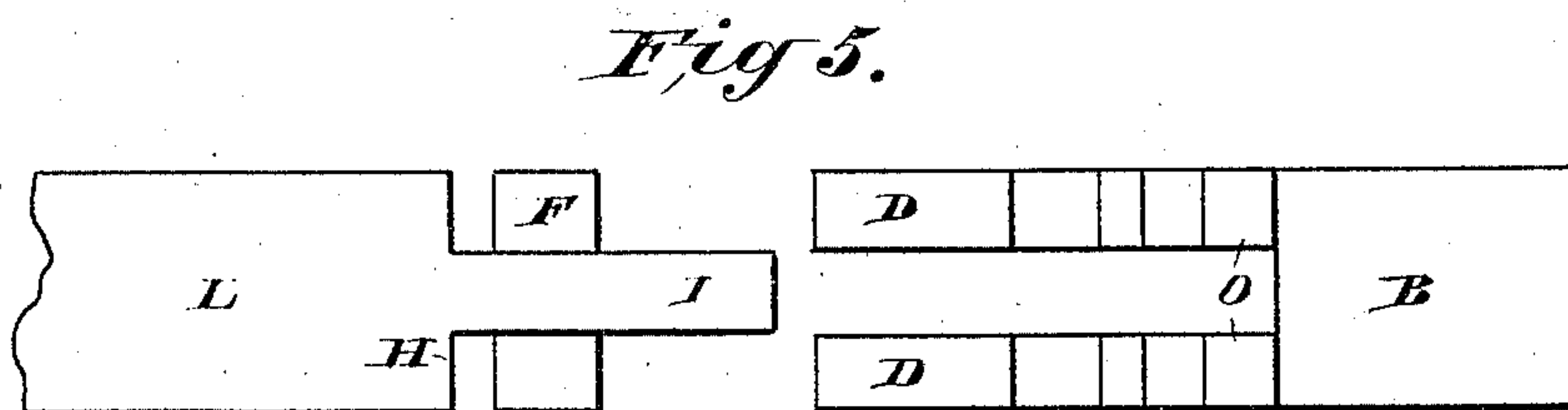
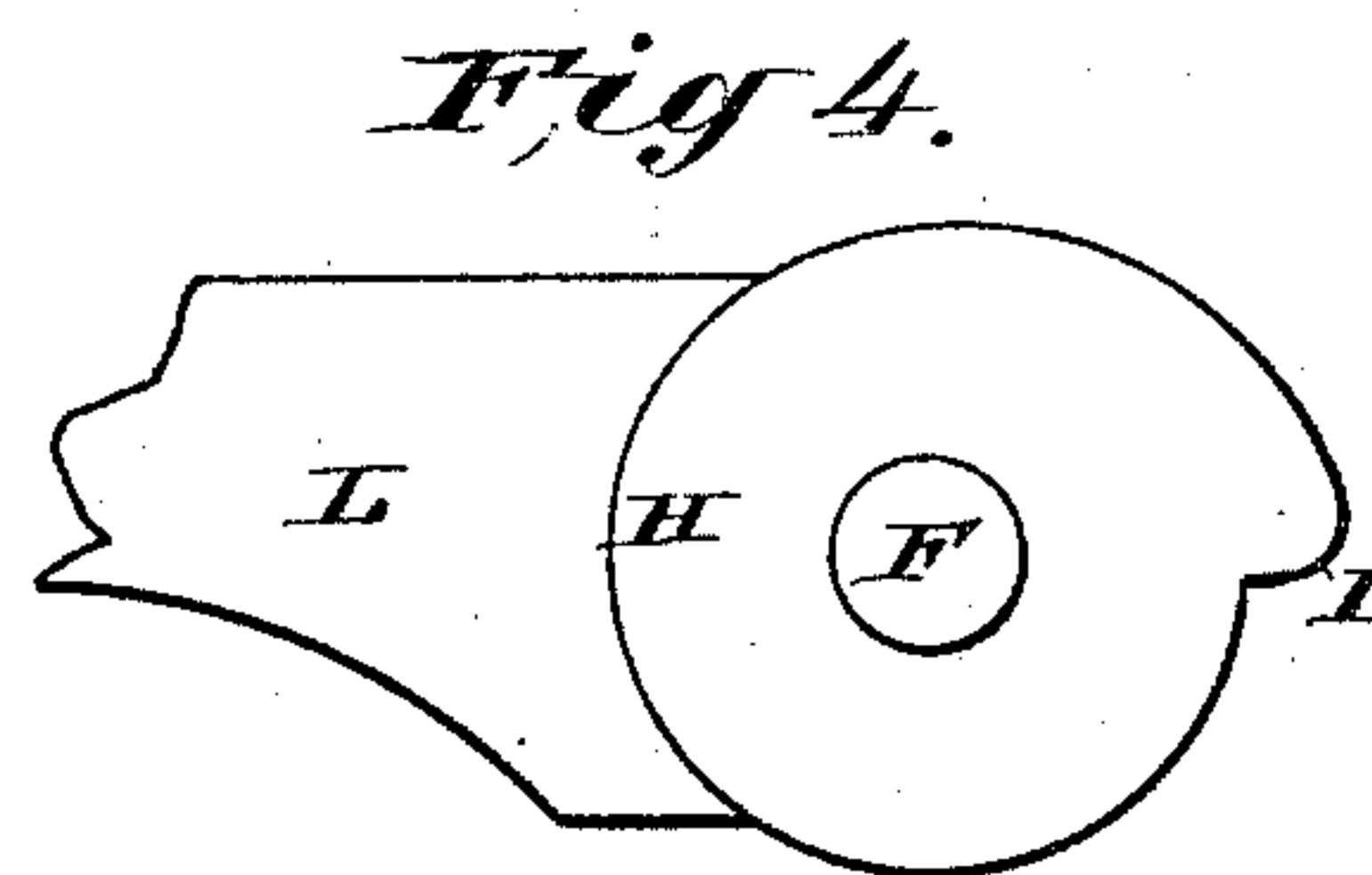
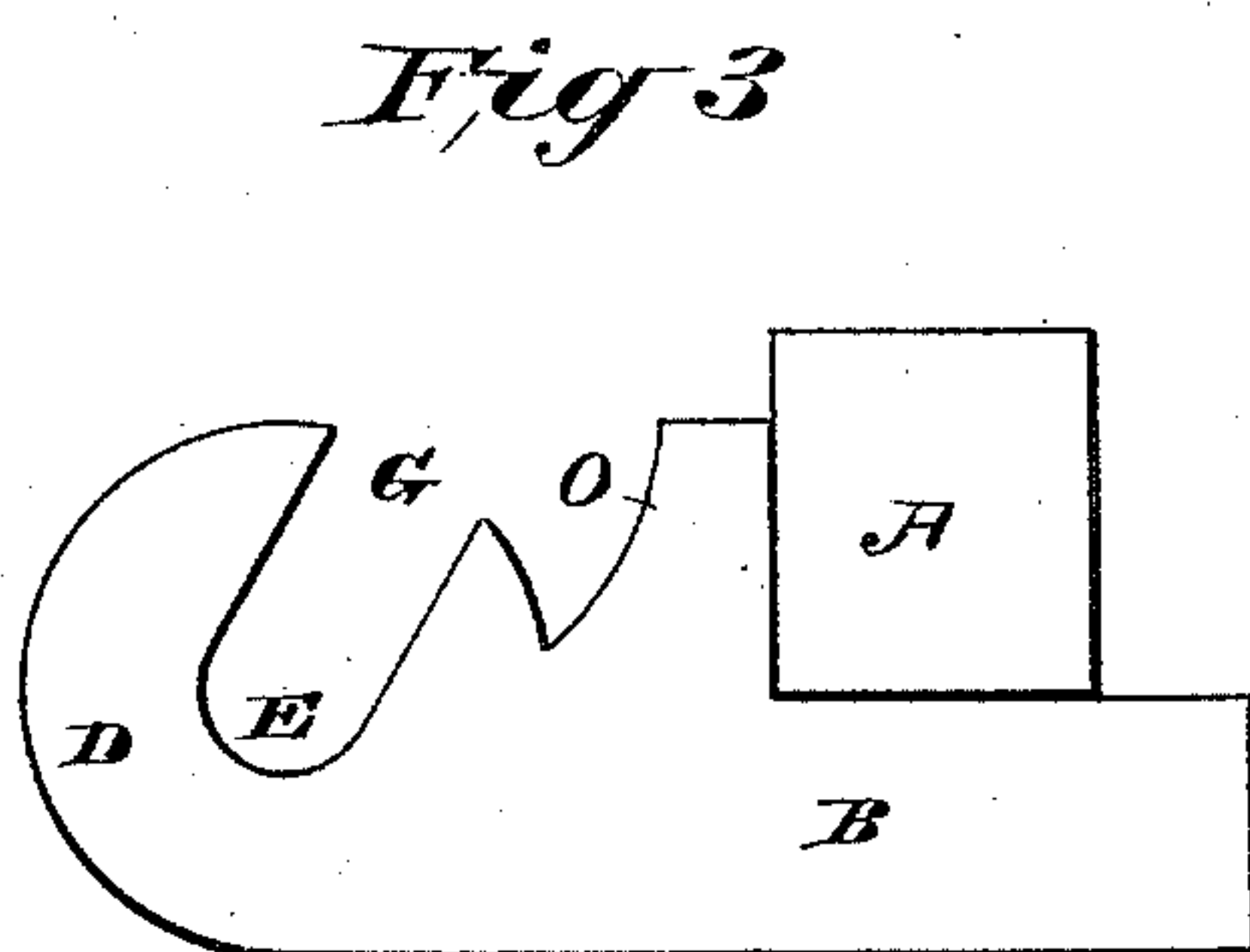
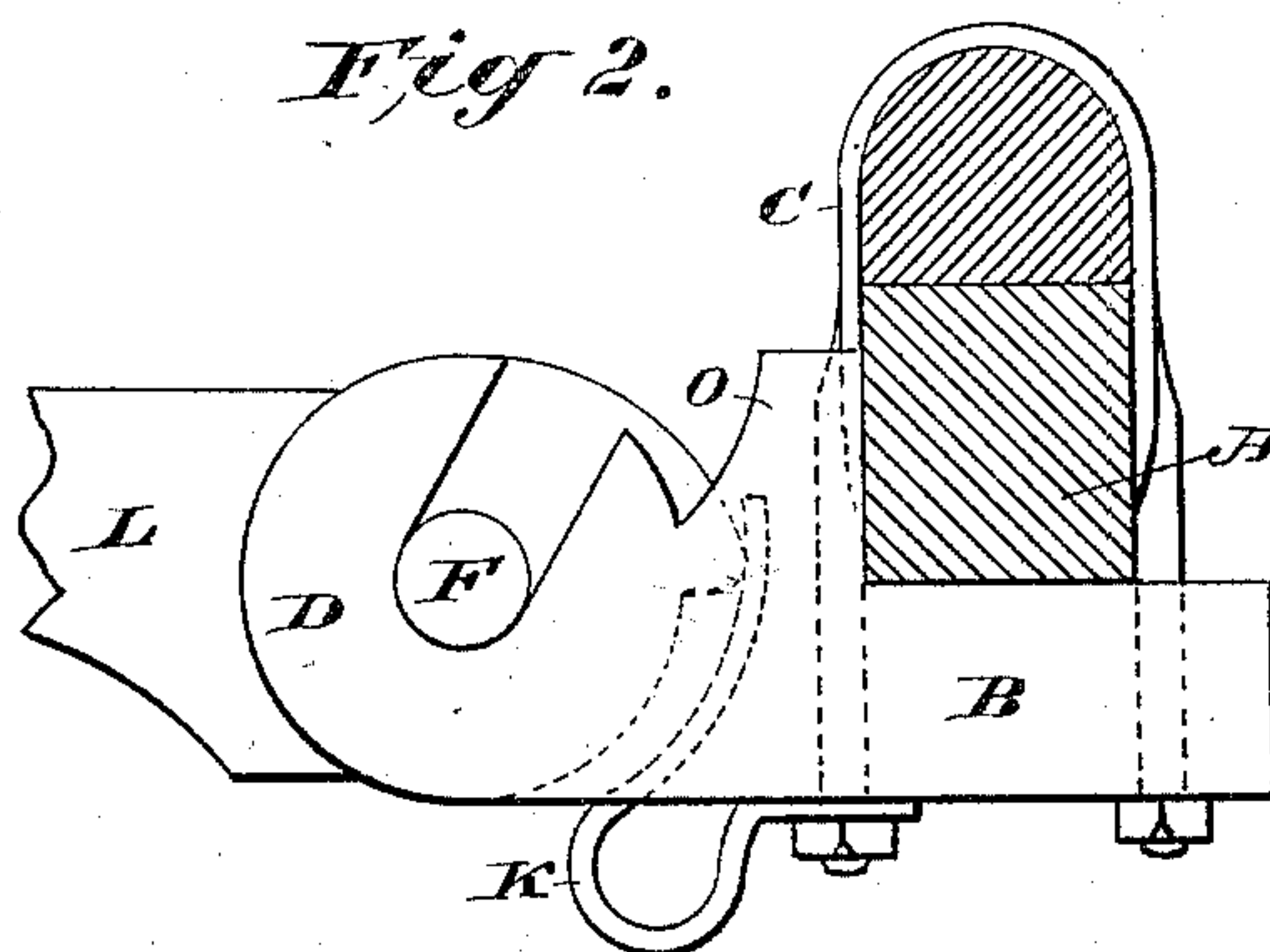
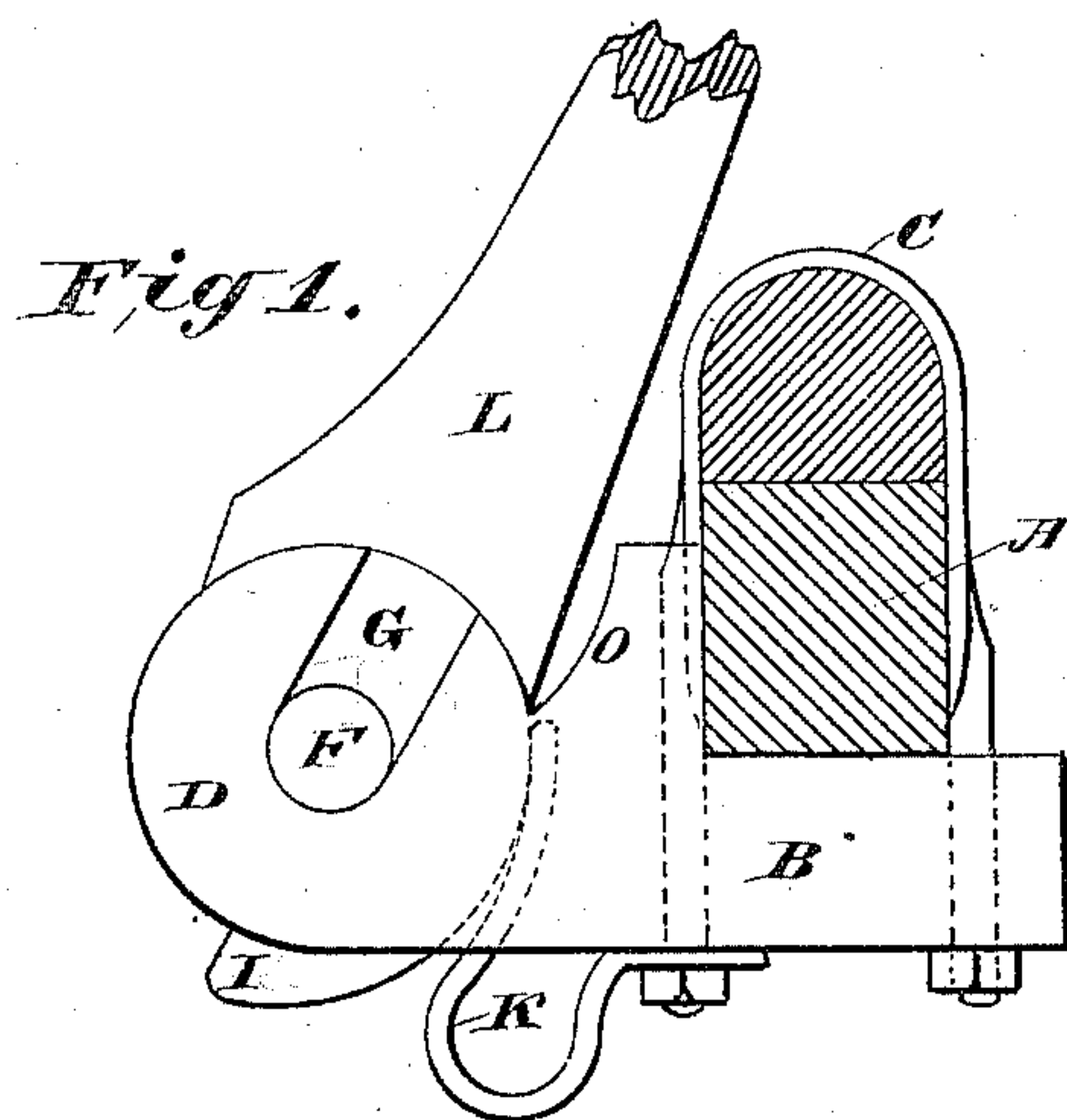


(No Model.)

R. M. PAINTER.  
THILL COUPLING.

No. 284,053.

Patented Aug. 28, 1883.



Attest:  
Jacob Stough  
E. H. Campbell,

Inventor:  
Robert M. Painter.  
134 E. H. Campbell  
Atty.

# UNITED STATES PATENT OFFICE.

ROBERT M. PAINTER, OF WEST MANSFIELD, OHIO.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 284,053, dated August 28, 1883.

Application filed November 13, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT M. PAINTER, a citizen of the United States, and a resident of West Mansfield, in the county of Logan and State of Ohio, have invented a new and useful Improvement in Shaft and Tongue Couplers, of which the following is a specification.

My invention consists in providing a means of coupling buggy, carriage, or wagon shafts or tongues to the vehicle in such manner as to prevent rattling, and so that the shafts or tongue can be taken off without the use of wrench, screw-driver, or other implement, doing away with bolts and nuts entirely, and making it an easy task for any one to take off or put on shafts or tongue, or to change them in short order. The burrs that are usually on the bolts holding the shafts on are generally rusty, greasy, battered, and, besides soiling one's hands greatly, give much trouble, require one to have a wrench handy, and oftentimes the bolt turns with the burr, making it next to impossible to get the burr off at all.

With my attachment no wrench is necessary, no handling of dirty, greasy bolts, and the uncoupling is done at once, simply by raising up the shafts till they pass the perpendicular and lifting them from the coupling.

My attachment is fastened to the axle in same manner as now customary; but fastened to the lower end of the clip is a bent spring curving downward, and thence up against an eccentric on the rounded end of the shaft, yielding to the movements of the shaft, but always pressing against the end of it, keeping the shafts from rattling when traveling, but holding them up when raised.

Instead of the bolt usually used to hold the shafts on I have a permanent pivot (part of my coupler) attached, so as to prevent rattling.

It will be seen that the corresponding parts of my coupler, D and H, are in true arc, and concentric, having pivot F for a common cen-

ter, forming a perfect-fitting joint at all times, and are so arranged that in backing the strain comes upon these parts D H, instead of on the pivot.

Figure 1 is a side view of my coupler, with the shafts at rest after using, and in position to be lifted from their holders; and also shows the spring acting as a brake to keep the shafts up in position out of the way. Fig. 2 is a side view, with shafts in position for hitching the horse to. Fig. 3 is a side view of shaft-holder; Fig. 4, a side view of end of the shaft that fits in the holder; Fig. 5, a top view of the parts detached.

A is an end sectional view of axle; C, clip holding shaft-support to the axle; B, shaft-support, having square shoulder O, which abuts against the axle to sustain the strain in backing; D, curved end (in an arc) of B; G, slot in B for withdrawal or entrance of pivot F into the socket E; I, an eccentric on the rounded end of shaft L, which bears against spring K and prevents rattling; H, curved shoulder on shaft L, an exact arc fitting perfectly around the circular end D of shaft-holder B, which is thus held closely between the pivot F and arc H in every position it can assume, except that shown in Fig. 1. The shafts cannot be removed except in this position, but when so raised can be easily lifted out.

I sometimes make the rounded end D single instead of double, and the end of the shaft forked instead of single, and use a double spring; but the principle is the same as above.

What I claim is—

The combination, with the shaft-holder B, having circular end D, channel G, socket E, and spring K, of the shaft having circular chamber H, and pivot F, concentric with socket E and end D, and the eccentric end I, as and for the purpose specified.

ROBERT M. PAINTER.

Witnesses:

E. K. CAMPBELL,  
M. KERNAN.