

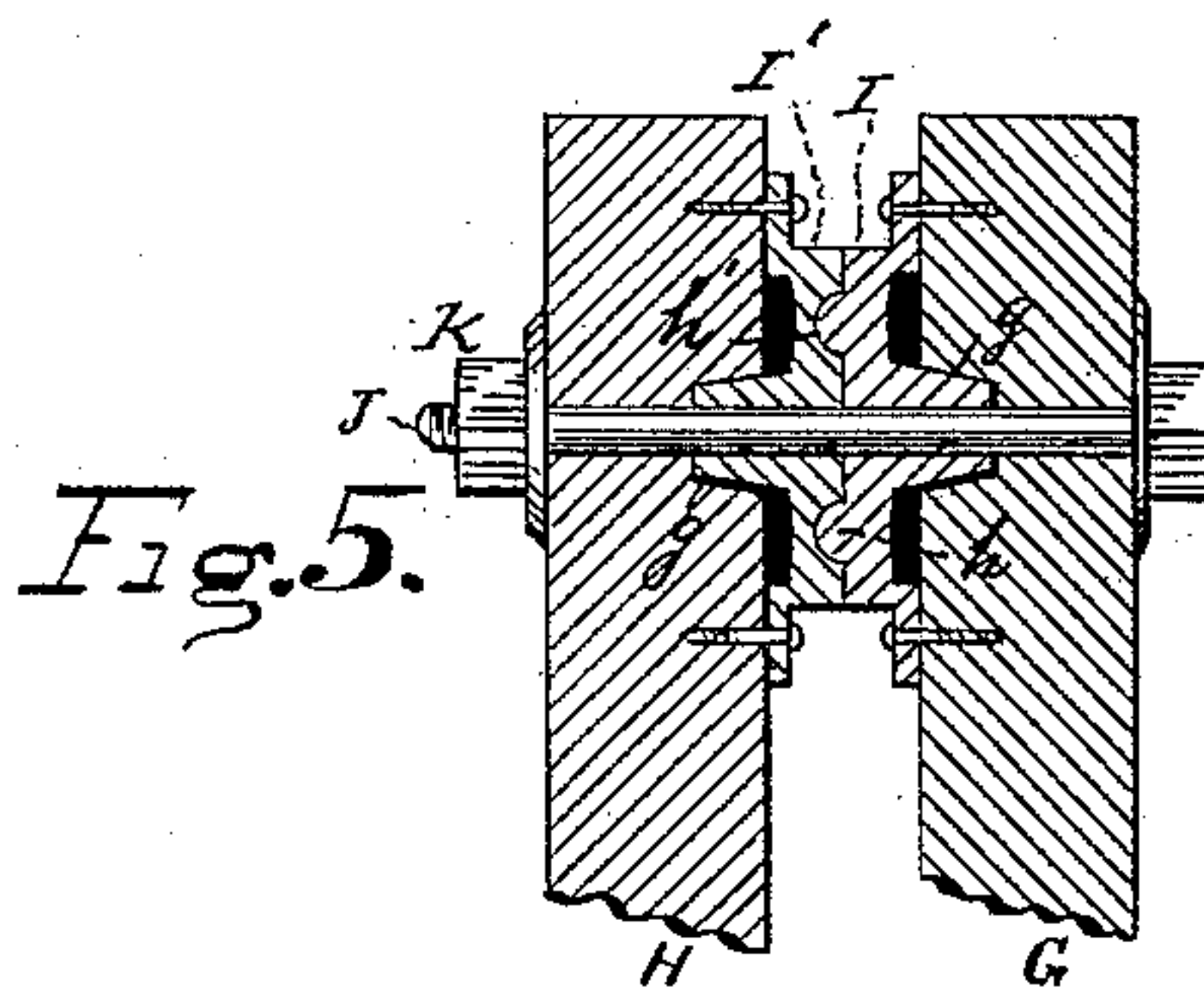
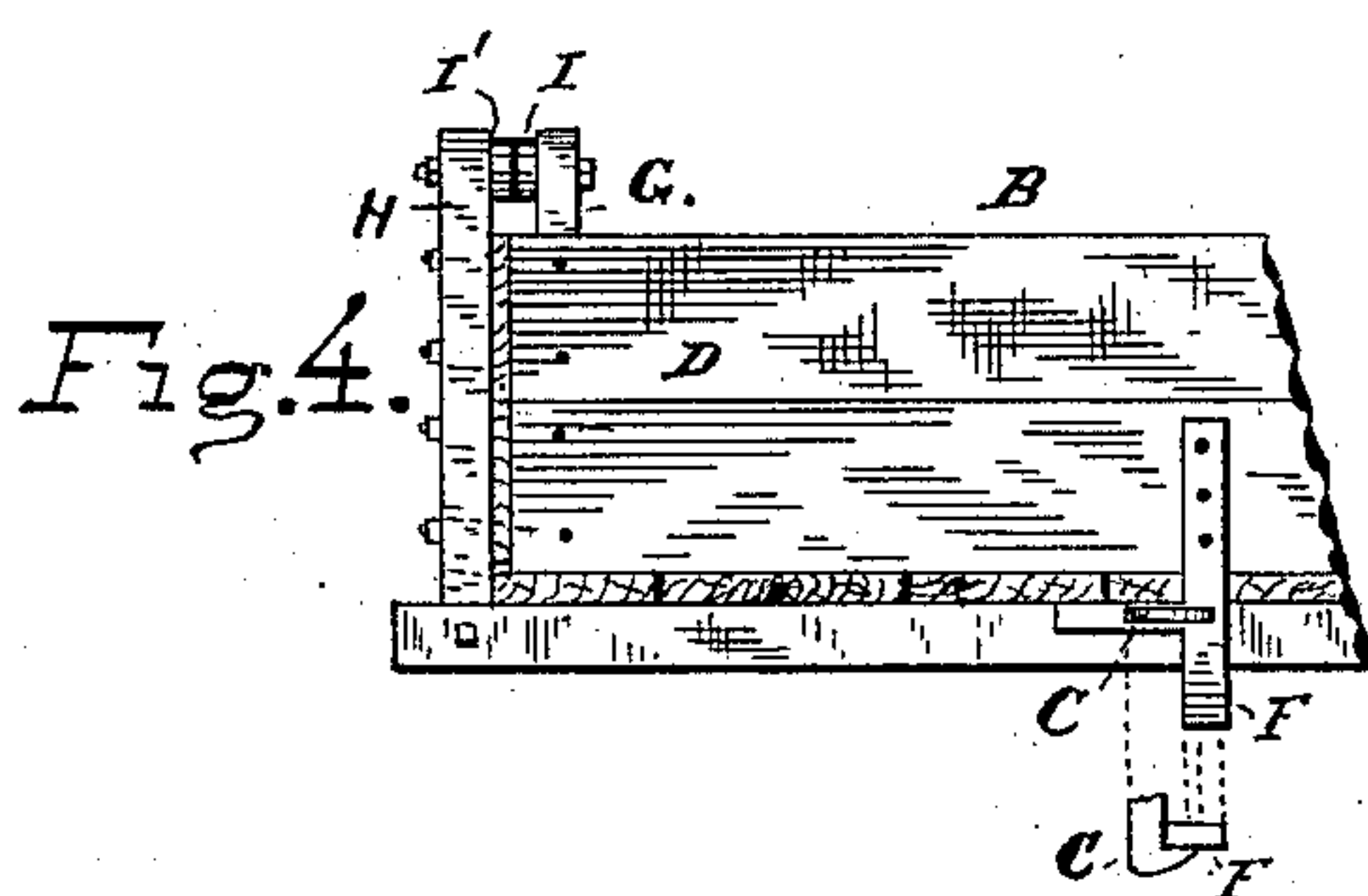
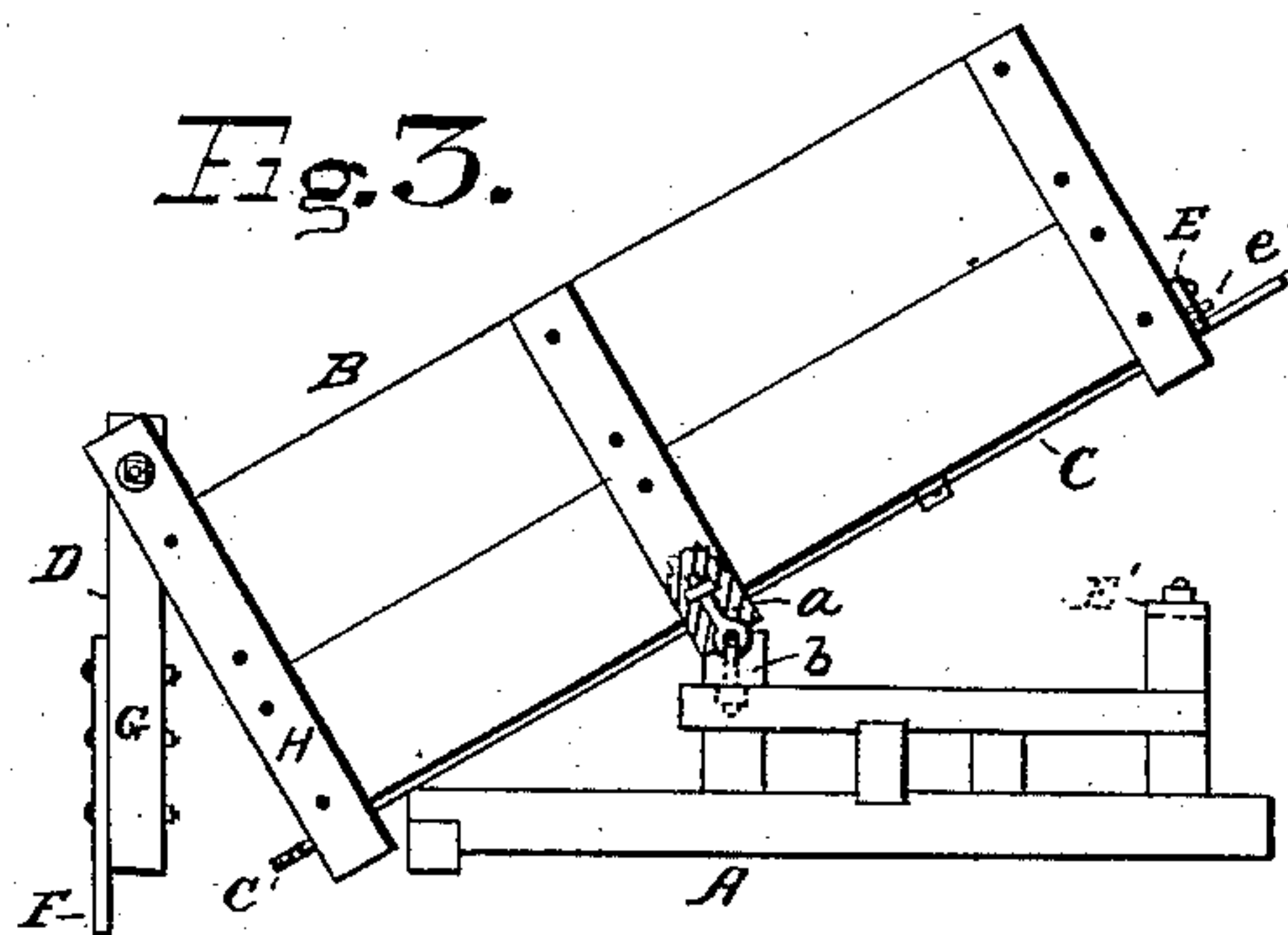
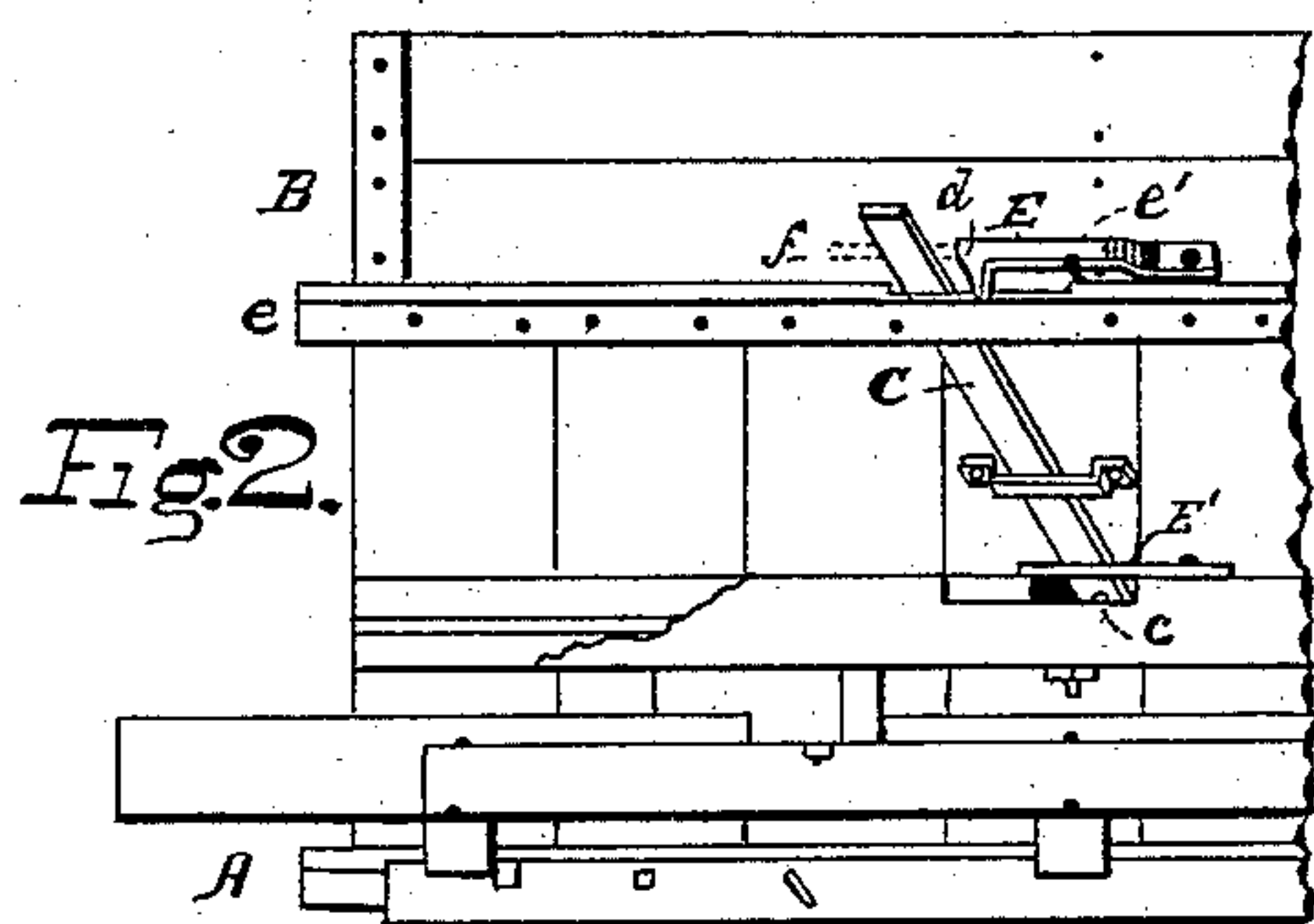
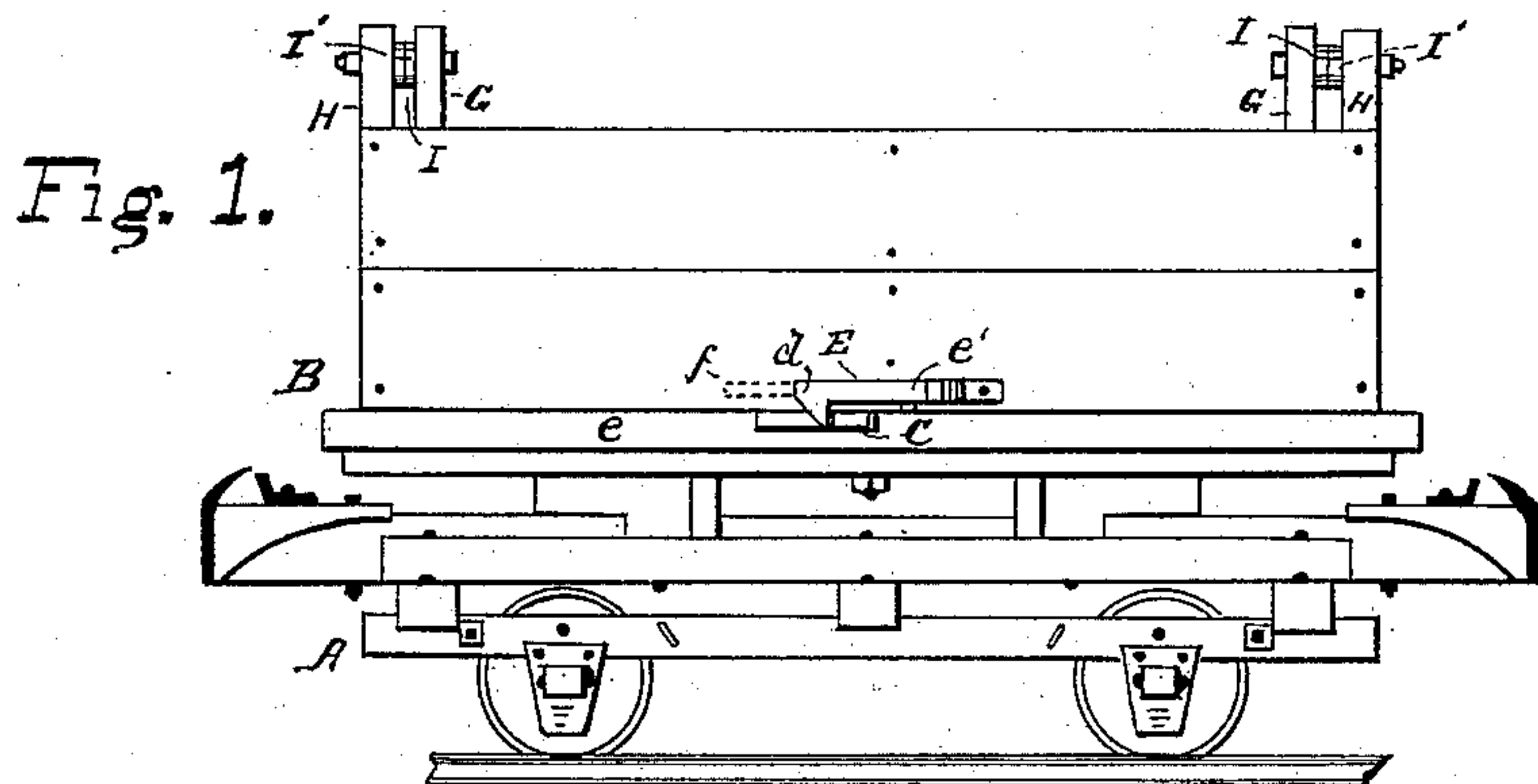
(No Model.)

C. E. BARBER & T. F. FINIGAN.

DUMPING CAR.

No. 387,618.

Patented Aug. 14, 1888.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES E. BARBER AND TIMOTHY F. FINIGAN, OF WATERLOO, NEW YORK,
ASSIGNORS TO CORNELIUS J. RYAN, OF FLUSHING, NEW YORK, AND
JOHN B. McDONALD, OF BALTIMORE, MARYLAND.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 387,618, dated August 14, 1888.

Application filed December 17, 1887. Serial No. 258,194. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. BARBER and TIMOTHY F. FINIGAN, citizens of the United States, and residents of Waterloo, in the county of Seneca and State of New York, have invented certain new and useful Improvements in Dumping-Cars, of which the following is a specification.

This invention relates to that class of dumping cars which dump the load at the side of the track.

Our purpose is to improve the means employed for tilting the car and for releasing and fastening the gate. We also aim to improve the means employed for hinging the gate to its posts, all of which we will now describe, making reference in so doing to the accompanying drawings, in which—

Figure 1 is a side elevation of a dumping-car embodying our improvements. Fig. 2 is a like representation showing the box in its tilted position. Fig. 3 is an end elevation of the car, showing the box in its tilted position. Fig. 4 is a rear view of the car, and Fig. 5 is a sectional detail illustrative of the means employed for hinging the gate.

Like letters of reference indicate like parts.

A represents the truck, and B the box or receptacle for the load. The box is hinged to the truck-frame in such a manner as to be capable of being so tilted as to dump or deposit the load at the side of the track. In the example shown eyebolts *a*, Fig. 3, are secured to the box, and engage or interlock with loops or staples *b*, secured to the truck-frame in such a manner as to permit the tilting movement referred to; but the manner of hinging the box to the truck is not a feature of our present invention, and we do not, therefore, here intend to be restricted thereto, as any other means suitable for that purpose may be employed in a car embodying our improvements.

C is a lever pivoted to the box B, (or to its frame bars or beams,) as, for example, at the point *c*, Fig. 2, so as to permit the lever to be vibrated from right to left, or in the direction of the ends of the car. This lever is arranged, as shown, upon the bottom of the car-box, so as not to be interfered with by the load or by the contents of the box, and extends across the box from side to side. One end of the said lever

is hook shaped and projects slightly from that side of the car on which the gate D is hung, and the opposite end projects sufficiently from the opposite side of the car to be grasped, or to serve as a handle to permit the lever to be vibrated with facility.

E is a hook or catch pivoted to the front side of the car-box, and so arranged as to temporarily lock or hold the lever C in the position it occupies while retaining the gate in its closed position, or while the car is loaded and its box is in a horizontal or level position, as will hereinafter be more fully explained. The hook-shaped end of the hook E is beveled, as shown at *d*, so that as the lever C is pushed or moved against this beveled portion the hook will thereby be raised, so as to permit the lever to pass underneath the hook, which will fall and engage the lever when it reaches the limit of its movement in that direction, thus temporarily retaining the lever in that position. It will be perceived that the hook E is raised automatically, or by the act of moving the lever C underneath it, sufficiently to be engaged in the manner described, and that it falls or gravitates to its engagement with the lever after the latter passes the point or engaging shoulder or offset of the hook. To prevent the hook E from assuming a pendent position, its free end may rest on the side rail or bar, *e*, of the box B; or a small pin, *e'*, may be arranged to support the said hook horizontally; or the hook may be elongated or extended beyond its bevel sufficiently to rest at all times upon the lever C, as indicated by the broken or dotted lines shown at *f*; but we do not here intend to be restricted to any particular means for retaining the catch E in position for engagement with the lever C.

F is a bar applied to the gate D, and adapted and arranged to be engaged by the hook-shaped end of the lever C when the gate D is closed, it being understood that the said gate swings to its closed position when the car-box is changed from a tilted to a horizontal position. To lock the gate temporarily in its closed position, it is only necessary to push the lever C sufficiently underneath the catch E to permit the latter to fall into engagement with the lever. This movement also carries the hooked end of the lever into engagement with the bar

F. To unlock the gate, release the lever C by lifting the catch E and move the lever out of engagement with the said catch. This latter movement will carry the hook-shaped end of the lever out of engagement with the bar F and allow the gate to swing open when the car is tilted for dumping the load.

E' is a fixed bar on the truck-frame, under which bar the lever C passes to lock the box B. G G are vertical bars or posts applied to the ends of the gate D, and H H are bars or posts applied to those corners of the box B to which the gate is hung. These bars all extend somewhat beyond the gate and box, as illustrated.

I and I' are metallic disks applied by means of screws or otherwise to the posts G and H, respectively, and these disks have hubs g g, which enter the said posts, as is indicated in Fig. 5. Both disks are centrally bored, as shown, to receive a bolt, J, which passes through them and also through the said posts. One of these disks—for example, the disk I—has an annular concentric rib, h, on its outward face, and the other disk has a corresponding groove, h', into which the rib h extends.

K is a nut on the outer or screw-threaded end of the bolt J.

Heretofore the strain or pressure of the load upon the closed gate has been resisted or borne mostly by the bolt referred to, or by its equivalent, and this strain has been sufficient under some circumstances to bend the bolt, and thereby prevent the gate from swinging freely.

It is the purpose of our invention to obviate this objection, and it will be perceived on reference to the drawings, and particularly on examination of Fig. 5, that when the parts serving as a hinge or joint for the gate are arranged together, as there shown, almost the entire strain is divided by the disks I and I' and the posts to which they are applied, the bolt merely performing the function, in conjunction with the nut K, of holding or clamping the parts properly in place.

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

The combination, in a tilting dumping-car having a swinging gate, of a truck having thereon a catch, E', a tilting box hinged to the said truck and having pivoted thereto a lever, C, and a gravitating lever-catch, E, the gate D, having thereon a bar or catch, F, the bars or posts G and H, the metallic disks I and I', having annular concentric ribs and grooves, and the bolts J J and their nuts, arranged for operation together substantially as and for the purposes specified.

Signed at Waterloo, in the county of Seneca and State of New York, this 13th day of December, A. D. 1887.

CHARLES E. BARBER.
TIMOTHY F. FINIGAN.

Witnesses:

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