

(No Model)

A. L. MCGREGOR.
SLEIGH KNEE.

No. 583,812.

Patented June 1, 1897.

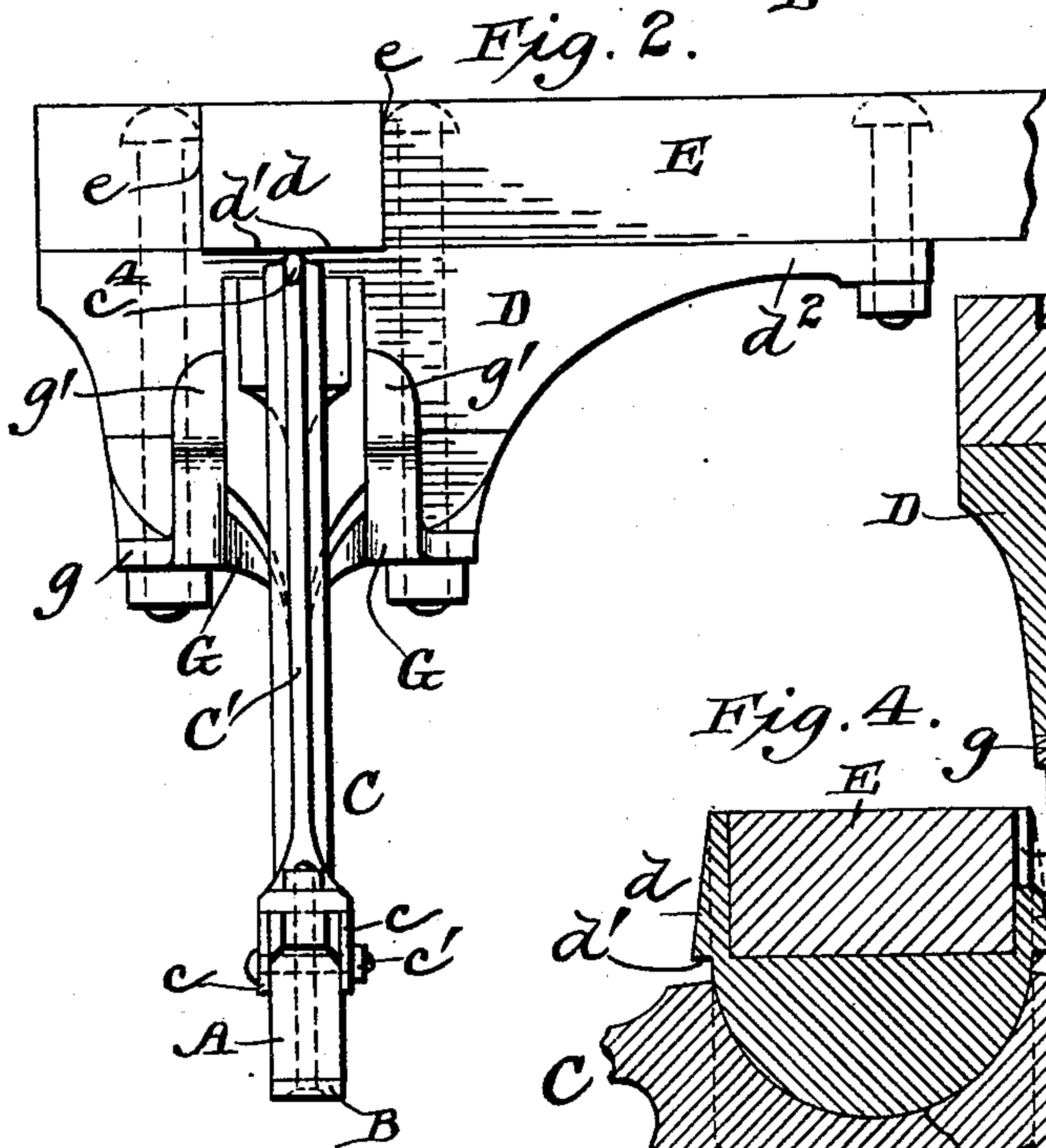
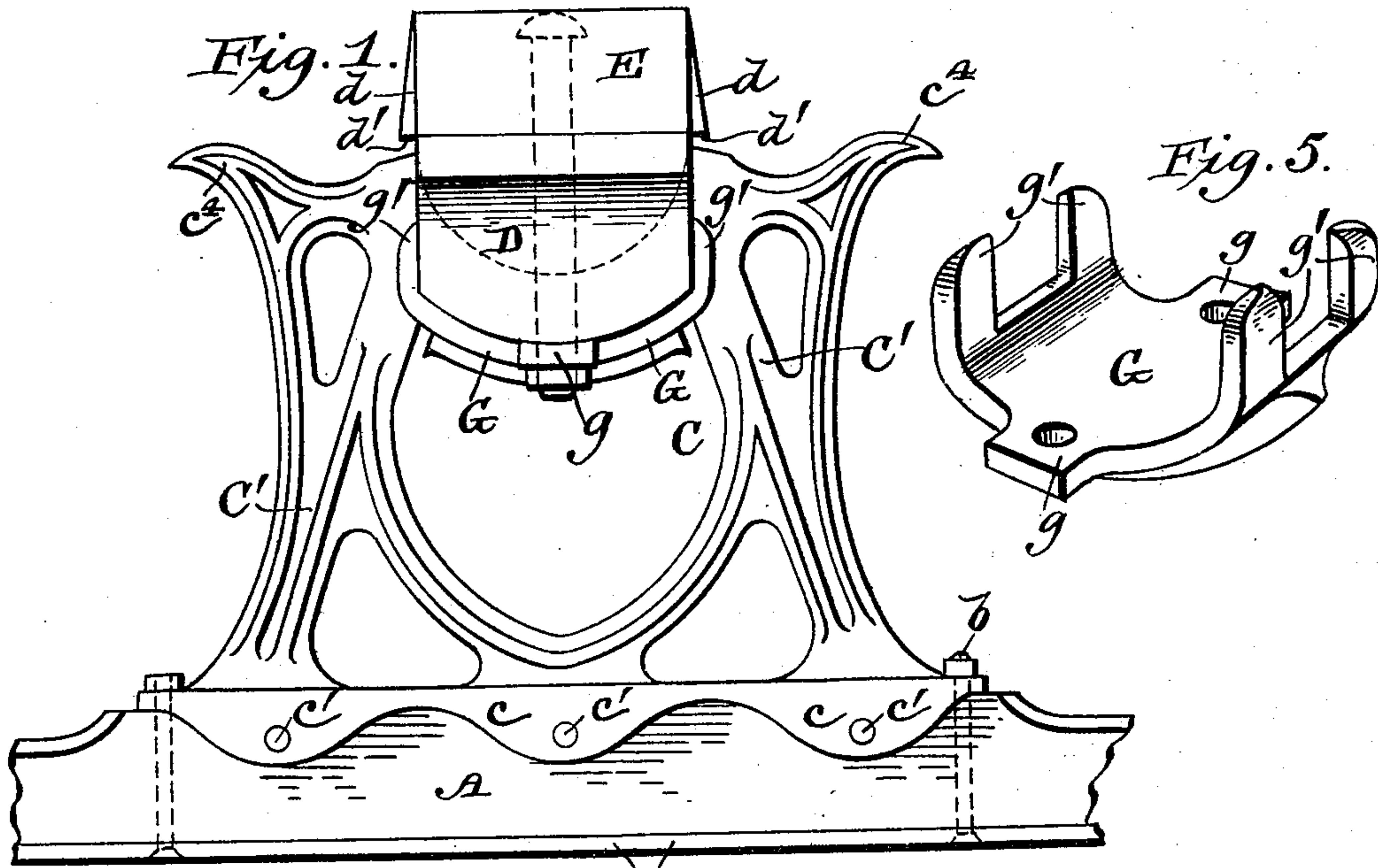


Fig. 3.

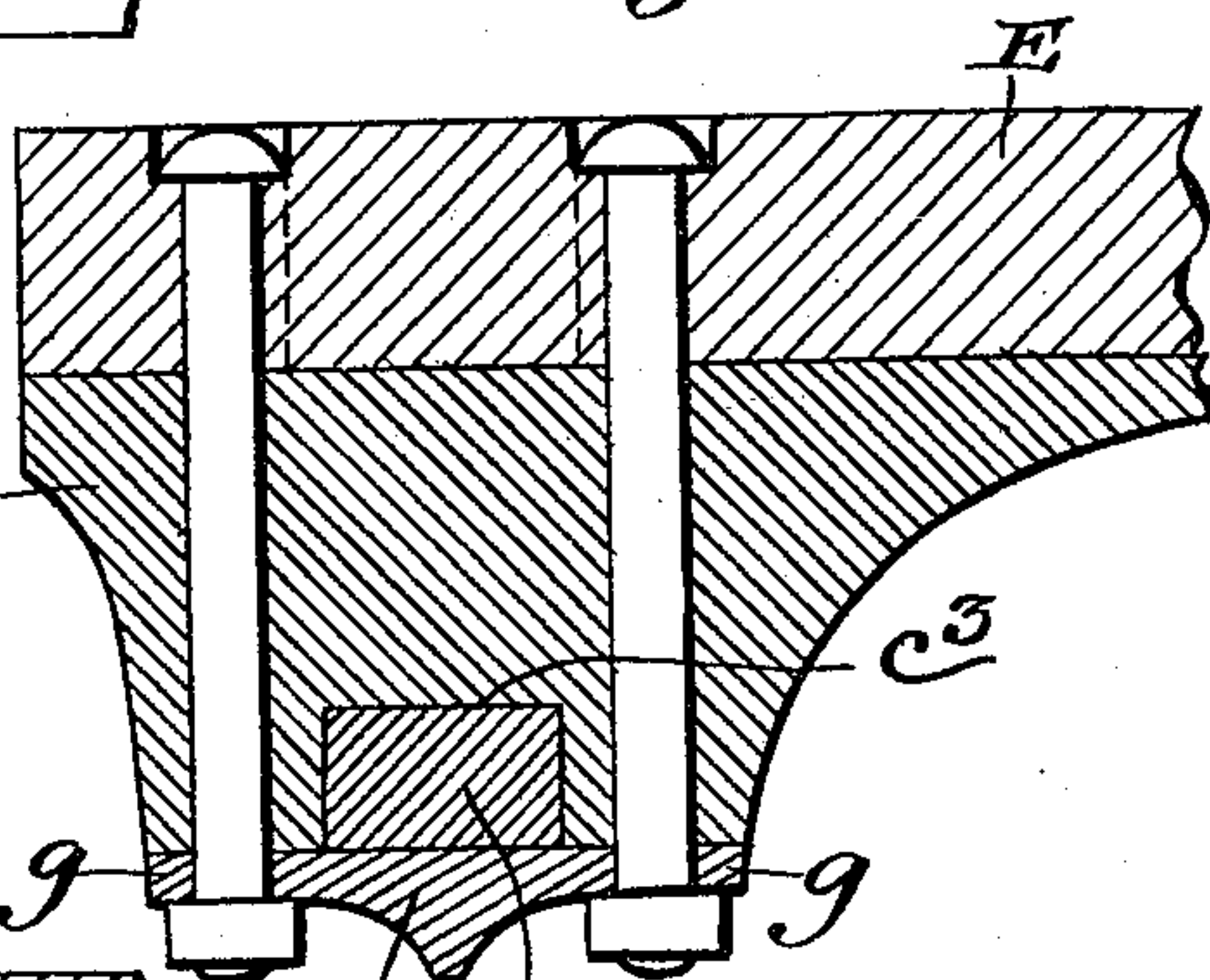
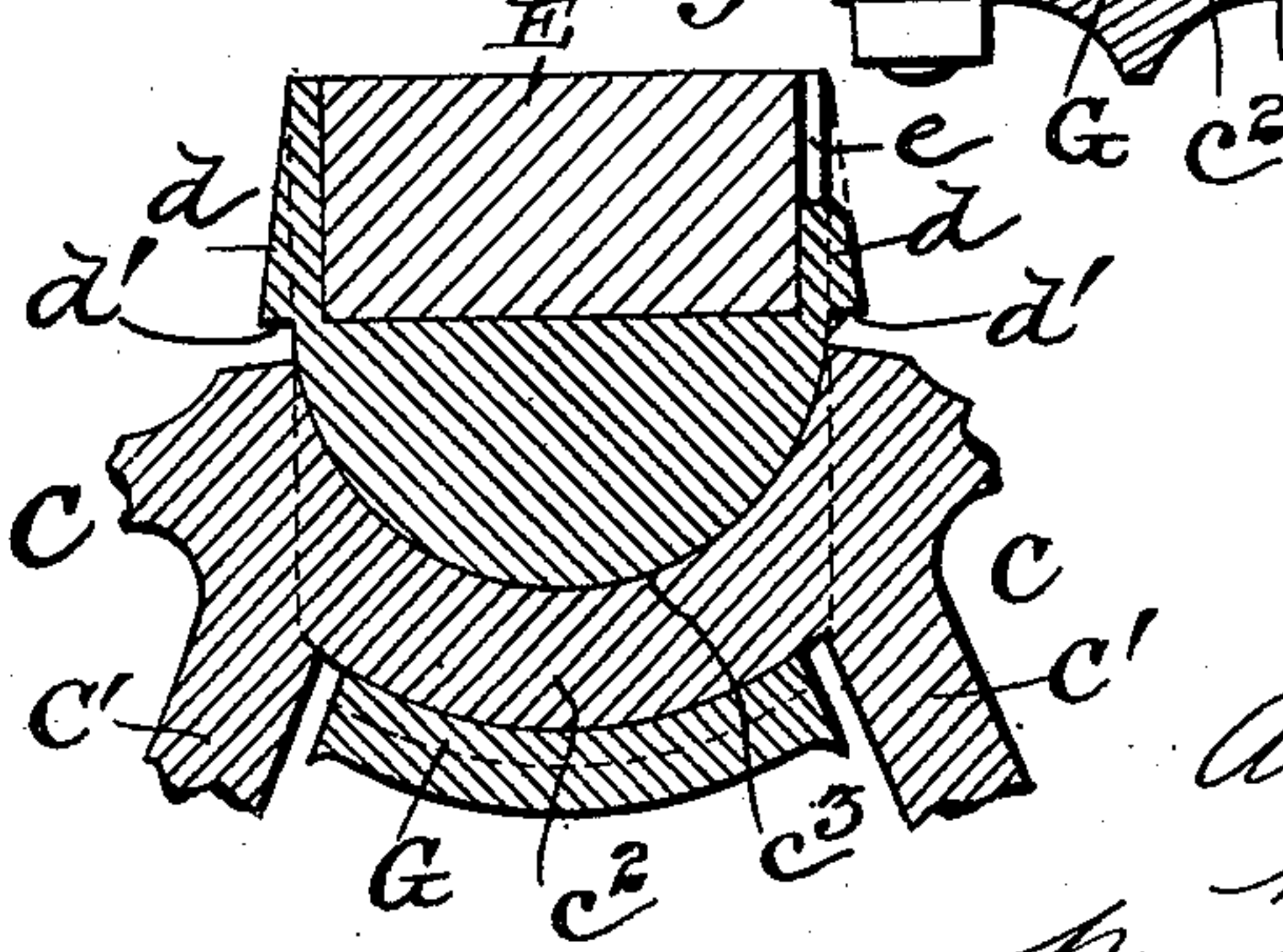


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALLAN L. MCGREGOR, OF VIRGINIA, MINNESOTA.

SLEIGH-KNEE.

SPECIFICATION forming part of Letters Patent No. 583,812, dated June 1, 1897.

Application filed February 3, 1897. Serial No. 621,829. (No model.)

To all whom it may concern:

Be it known that I, ALLAN L. MCGREGOR, a citizen of the United States, residing at Virginia, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Sleigh-Knees; and I do hereby 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.

My invention relates to sleigh-knees, and more particularly to that class of knees which are provided with a knuckle-joint, whereby they are capable of an oscillating movement with respect to the sleigh-body.

It consists in certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 represents a side elevation of a portion of a sleigh-runner, showing my improved knee. Fig. 2 represents an end view of the runner, showing the manner of attaching the knuckle to the beam of the sleigh. Fig. 3 represents a transverse cross-section through the knuckle-joint. Fig. 4 represents a longitudinal cross-section through the said knuckle-joint, and Fig. 5 represents a detail view of the clip for securing the members of the knuckle together.

A in the drawings represents a sleigh-runner, B the shoe secured thereto, and C the knee.

My improved knee is preferably cast of suitable metal provided at its lower end with attaching-flanges c , adapted to embrace the upper edge of the sleigh-runner B. Bolts c' , passing through the said flanges and the runner, secure the knee to said runner. I also preferably extend the shoe-bolts b through the end portions of the knee-base for further securing the said knee to the runner. The knees C are formed with inclined standards C' C' , which converge toward the knuckle-joint at the upper end. A connecting portion c^2 joins the upper ends of these standards and is concaved upon its upper surface to form a seat c^3 to receive the upper member of the knuckle. Upon the outer sides of the standards C' C' are cast the skid hooks or

supports c^4 c^4 , which are slightly concaved at their ends, as illustrated in Fig. 1 of the drawings. Upon either side of the standards and skid-hooks strengthening-ribs are preferably cast. The upper member of the knuckle D is secured to the under side of the cross-beam of the sleigh-body and is provided with vertical lugs d d , adapted to engage and fit in suitable recesses e , formed in the sides of the beam E. The vertical lugs d d are also provided with shoulders, as d' d' , which are adapted to limit the oscillating movement of the members of the knuckle-joint. The upper knuckle member D is preferably provided with an extension d^2 , which extends along the under side of the beam E toward the center thereof, the said knuckle member D being bolted to the said beam E. In order to secure the members of the knuckle-joint together, I employ a clip G, adapted to fit beneath the said socketed portion c^3 . The surface which engages said clip G is concentric with the surface of the knuckle-seat c^3 . The said clip is provided with extensions g g , which are provided with perforations to receive the beam-bolts which pass through the upper member D of the knuckle. By means of these bolts the clip G is securely held in position, the said clip in turn holding the members of the knuckle firmly yet movably in place. The clip G is also provided with vertical lugs g' g' , adapted to embrace the upper member D of the knuckle for further holding the said clip securely in position.

It will be seen that by my invention I am enabled to construct a sleigh-knee of very simple form and yet one possessed of great strength and firmness, and that a knuckle-joint is provided which, though permitting of an oscillating movement, does not weaken the knee or render the same less effective for the purpose of supporting the sleigh-body.

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

1. In a sleigh-knee, the combination with a runner, of a standard having a socket at its upper end, a bearing secured to the sleigh-beam and having depending ribs forming a groove between them for receiving the socket, and a clip adapted to bridge the said groove

for securing the two members together to form a knuckle-joint, substantially as described.

2. In a sleigh-knee, the combination of inclined standards having bolting-flanges upon their lower ends for engaging the sleigh-runner and having a socket at their upper ends, an upper knuckle member secured to a beam of the sleigh, and having parallel depending ribs forming a bearing-groove for receiving the said socket and a clip adapted to bridge the said groove and having its ends secured to the said ribs for movably holding said knuckle member in said socket and skid-supports upon said standards, substantially as described.

3. A sleigh-knee consisting of upright standards having a socket at their upper ends, said socket forming one member of a knuckle-joint, an upper knuckle member secured to the under side of the cross-beam, said member adapted to engage the socket in the standards and having limiting-shoulders to limit the oscillation of the members of said knuckle-joint, substantially as described.

4. A sleigh-knee consisting of a standard suitably secured to the sleigh-runner and a knuckle bearing member having upwardly-extending vertical lugs adapted to embrace the cross-beam and to engage recesses in the said beam, said member being bolted or otherwise secured to said cross-beam, and forming the upper portion of the knuckle, the said standard being provided with a socket consisting of a segmental bearing-bar to receive

the said member and forming the other member of said knuckle substantially as described.

5. A sleigh-knee consisting of two members, the upper member being secured to the cross-beam and having a segmental bearing-face and the lower member secured to a sleigh-runner and having a segmental bearing-bar at its upper end provided with an upper and lower bearing-surface struck from the same center and a segmental clip secured to the upper member and adapted to embrace a portion of the lower member and engage the lower concentric bearing-surface of the said segmental bearing-bar for holding them together, substantially as described.

6. A sleigh-knee comprising in its construction a standard secured at its lower end to a sleigh-runner and having a socket in its upper end forming one member of a knuckle, an upper member secured to a cross-beam and adapted to work in said socket, a clip for movably holding the said members together, said clip being provided with vertical flanges for engaging the upper member of the knuckle and flanges whereby it may also be bolted to the said upper member, substantially as described.

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

ALLAN L. MCGREGOR.

Witnesses:

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W. WENTON BROWN.