

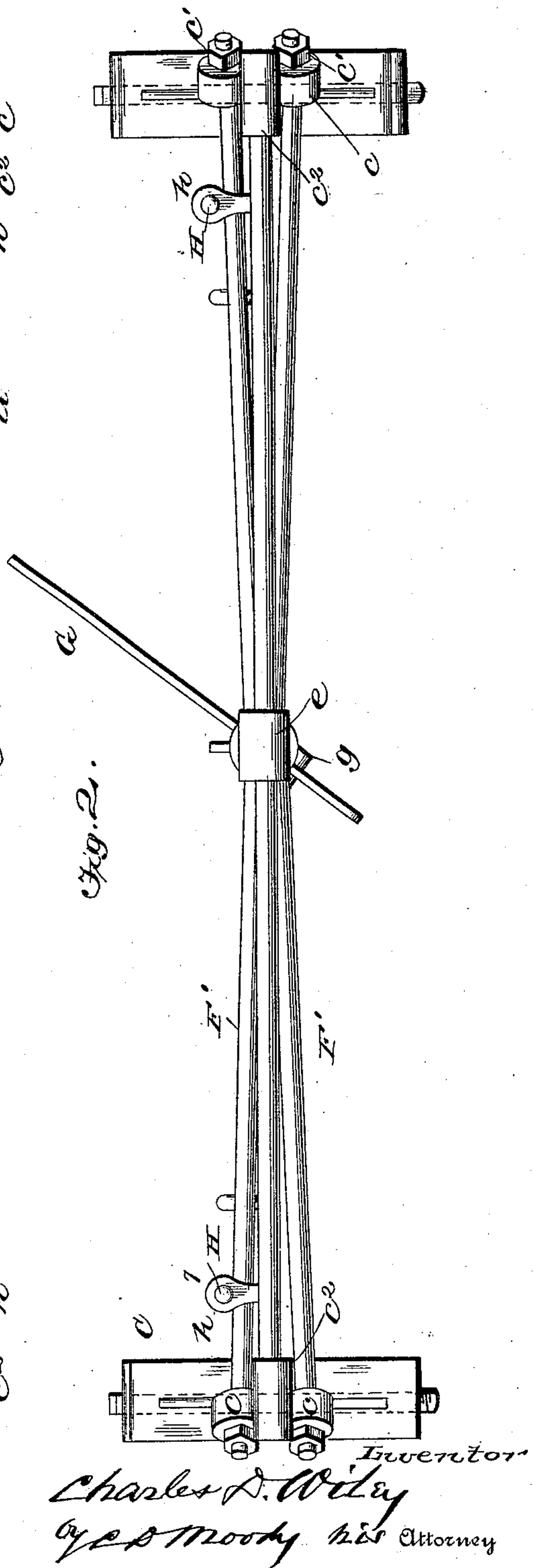
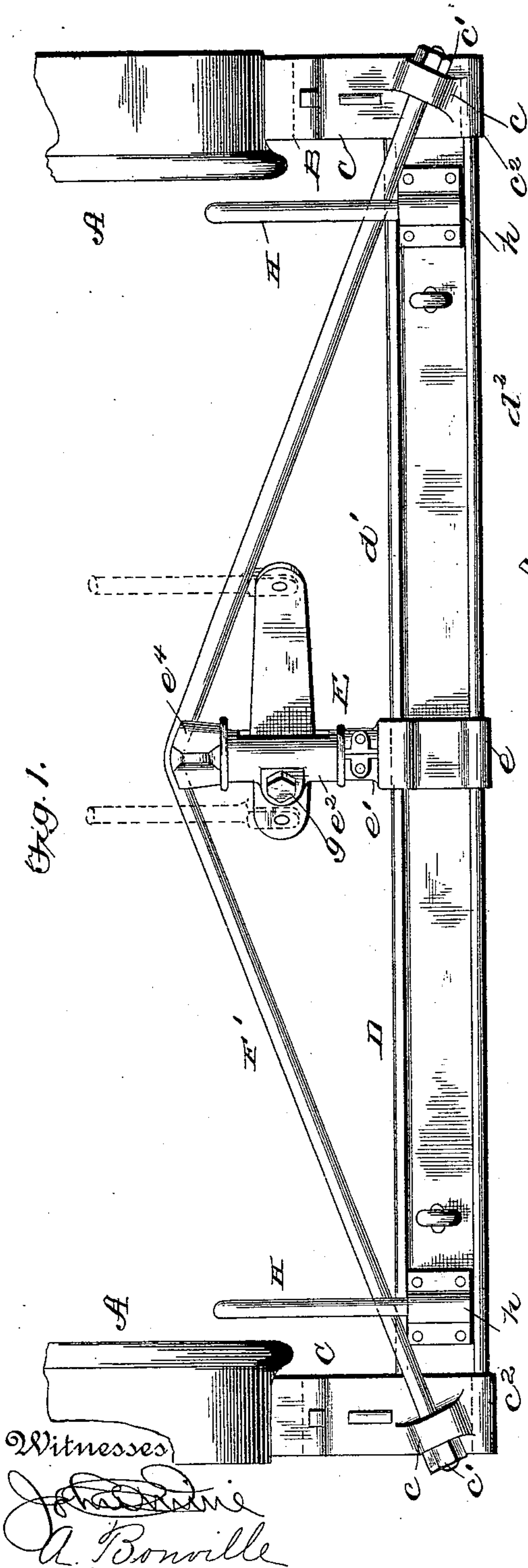
(No Model.)

2 Sheets—Sheet 1.

C. D. WILEY.
BRAKE BEAM.

No. 486,835.

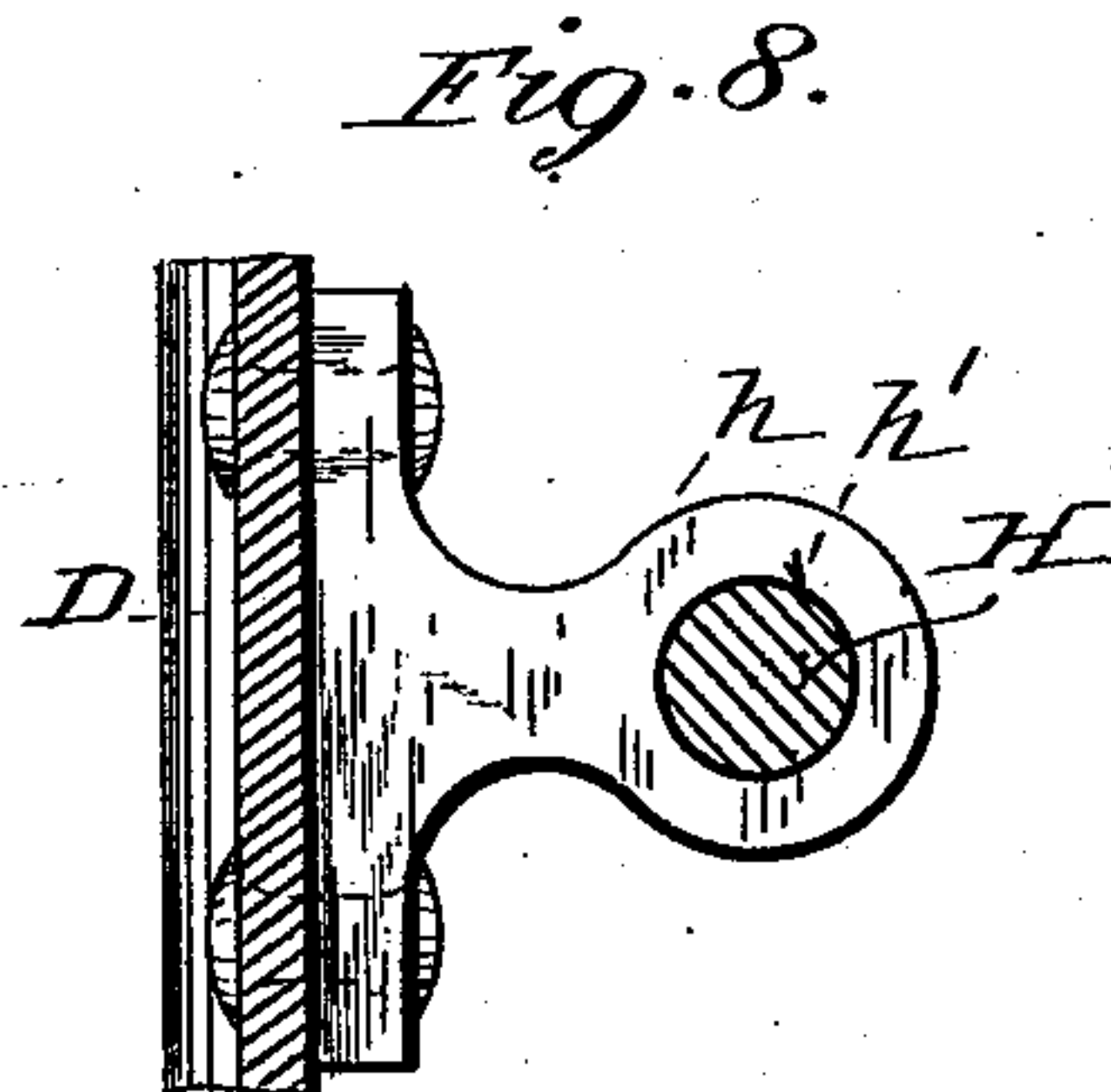
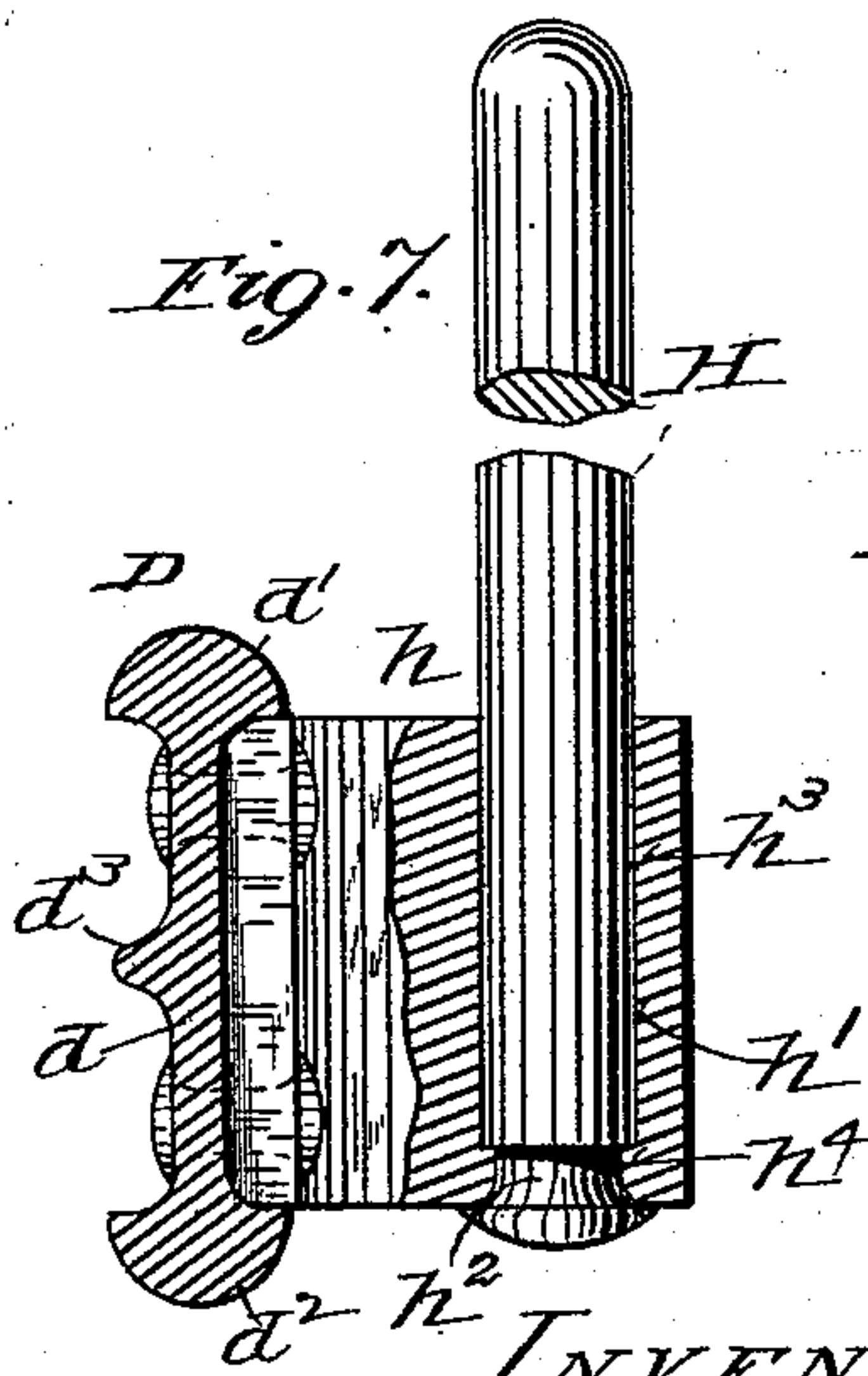
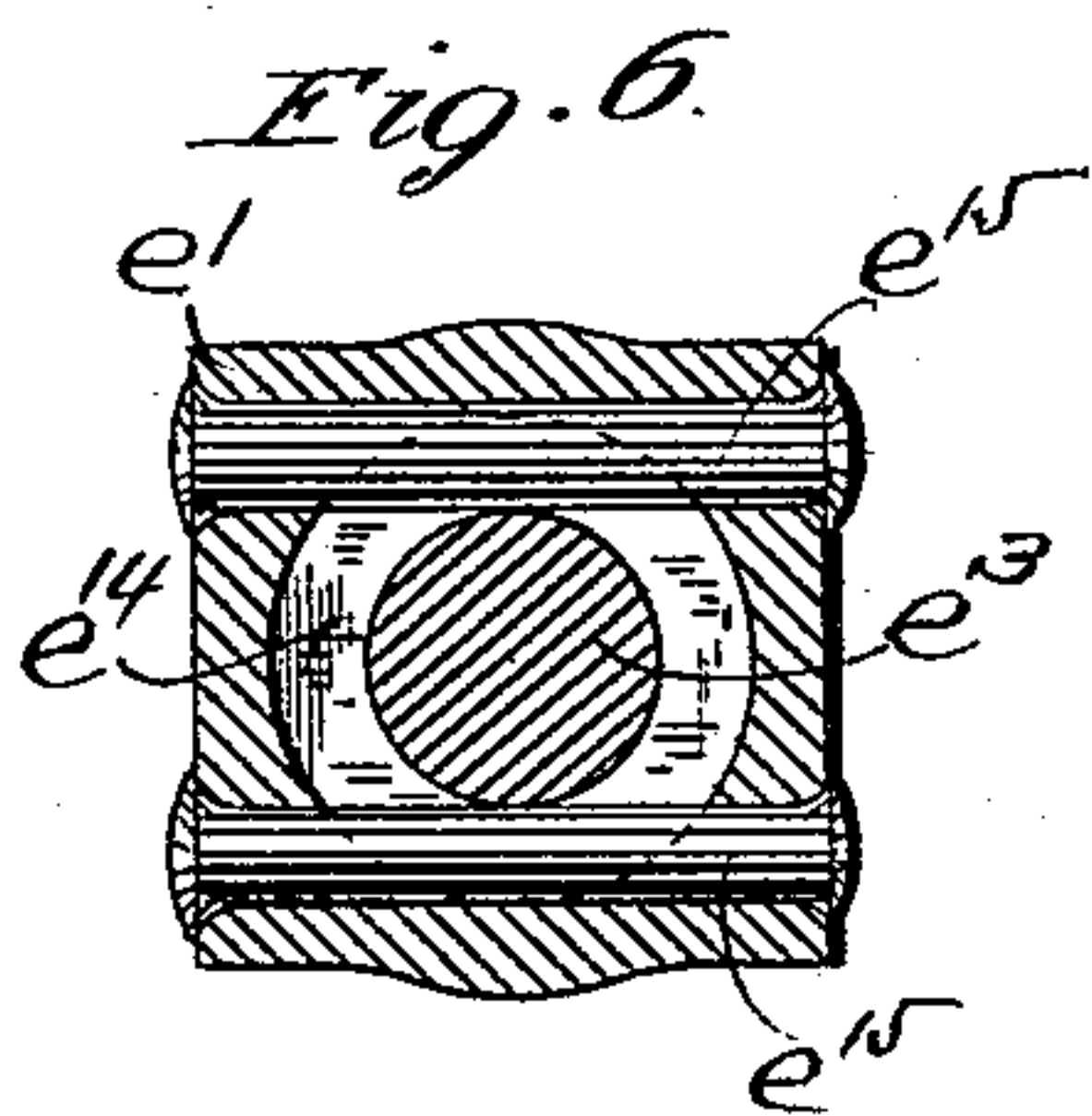
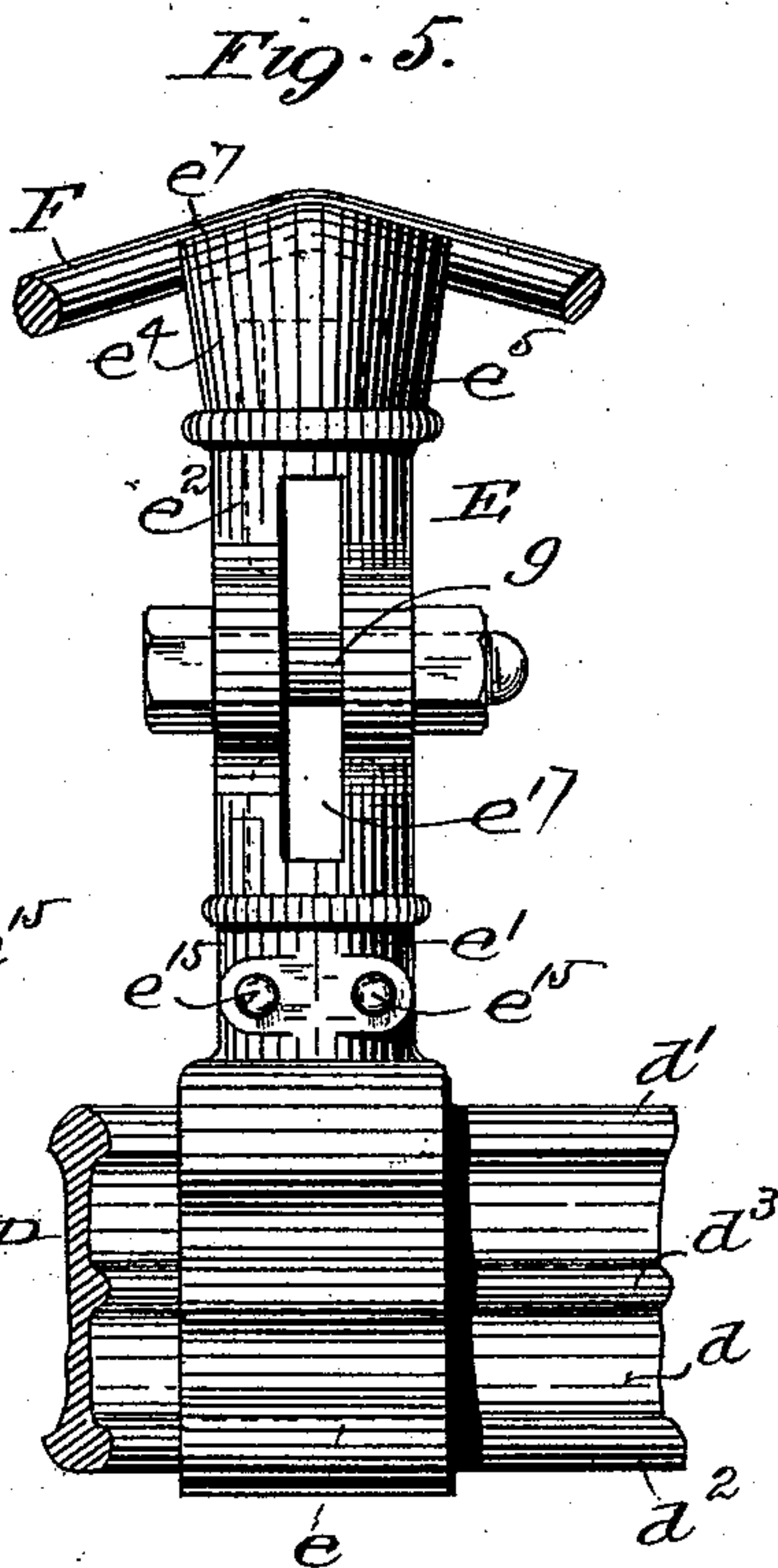
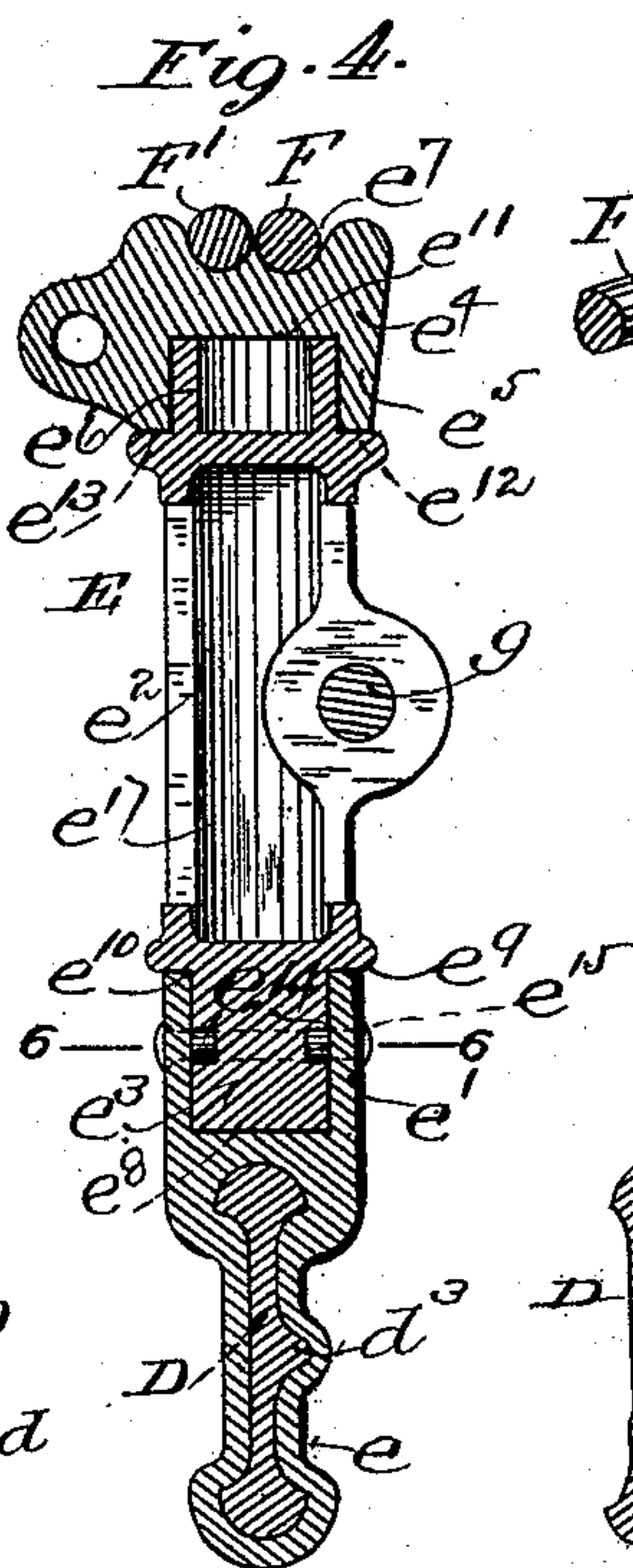
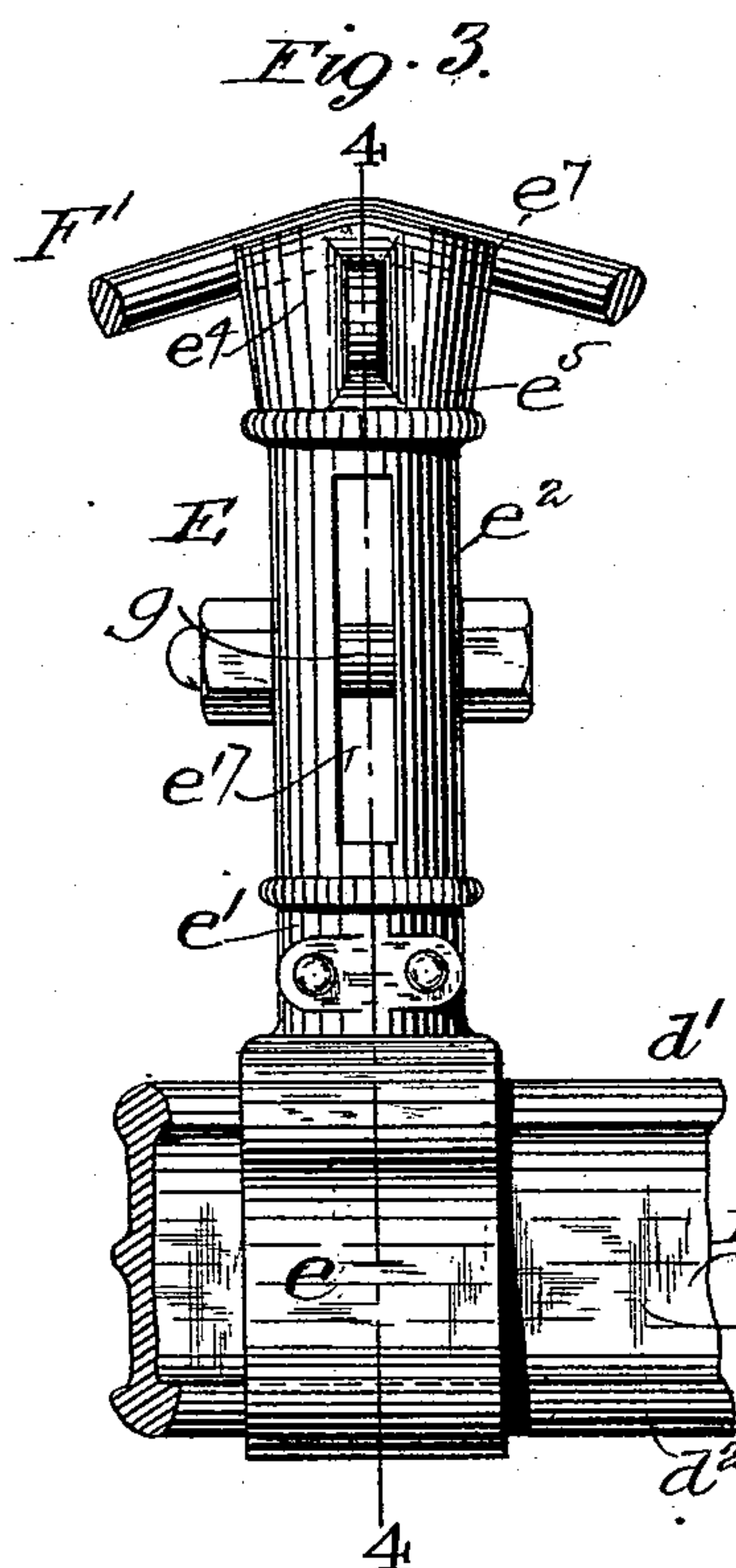
Patented Nov. 22, 1892.



C. D. WILEY.
BRAKE BEAM.

No. 486,835.

Patented Nov. 22, 1892.



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A. Bonville

INVENTOR
Charles D. Wiley
by C. D. Moody
his atty

UNITED STATES PATENT OFFICE.

CHARLES D. WILEY, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-SIXTEENTH
TO GEORGE W. BENNETT, OF SAME PLACE.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 486,835, dated November 22, 1892.

Application filed January 25, 1892. Serial No. 419,244. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. WILEY, of St. Louis, Missouri, have made a new and useful Improvement in Brake-Beams, of which the following is a specification.

The improvement relates partly to the form of the beam, partly to the means for trussing the beam, partly to the fulcrum and the mode of attaching the brake-lever thereto, and also to minor details of the construction, all substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a plan of the improved beam in position; Fig. 2, an elevation of the beam from the outer side thereof, and Figs. 3 to 8, inclusive, details upon an enlarged scale, Fig. 3 being a top view of the fulcrum, including the immediate portions of the beam and truss; Fig. 4, a section on the line 4 4 of Fig. 3; Fig. 5, a bottom view of the fulcrum and adjoining parts of the beam and truss; Fig. 6, a section on the line 6 6 of Fig. 4; Fig. 7, a section on the line 7 of Fig. 2, omitting the truss-rod; and Fig. 8, a section on the line 8 8 of Fig. 7.

The same letters of reference denote the same parts.

Saving as it is modified or supplemented by the improvement under consideration, the present brake-beam is of the usual construction.

A A represent the car-wheels, B B the brake-shoes, and C C the brake heads or blocks.

The beam D is a solid straight bar quite deep in the direction in which the strain comes upon it, having a wide thin web d and thickened at its edges d' d^2 , and also, preferably, having a rib d^3 extending upon its web, substantially as shown. The beam at its ends is suitably attached to the brake-blocks and at its center it supports the fulcrum E. This last-named part is composed, mainly, of three parts—a band e , which passes around the beam and conforming in shape thereto and at its inner end extended to form a socket e' , a king-post e^2 , whose inner journal e^3 is held in the band-socket, and a cap e^4 , which at its inner end is shaped to form a socket e^5 to receive

the outer journal e^6 of the king-post and at its outer end e^7 notched to receive the truss-rods F F'. The king-post and the band-socket e' are interfitted so that the extreme end e^8 of the post-journal touches the bottom of the socket and also so that the shoulder e^9 of the post rides upon the edge e^{10} of the socket, thereby providing two bearings for the post at its inner end. An analogous construction is employed at the outer end of the post, the end e^{11} of the outer journal of the post being in contact with the bottom of the cap-socket and the shoulder e^{12} of the post in contact with the edge e^{13} of the cap-socket. The king-post is thus made adjustable in the fulcrum to be adjusted to suit any desired position for the brake-lever. The king-post must also be connected with the band-socket, so as to resist a pulling strain. To this end the post-journal e^3 is grooved at e^{14} , and two pins e^{15} e^{15} are passed through the socket-wall e^{16} and the groove and riveted substantially as shown, and thus confining the post-journal within the socket in all positions of the post. The king-post is slotted at e^{17} to receive the brake-lever G; but this part, in the place of being pivoted at the center of the post, as heretofore has been the custom, has its pivot g arranged at the under side of the post, substantially as shown. This arrangement is desirable for this reason: The brake-lever when strained in use tends from the relation of the parts to draw the fulcrum slightly upward as well as in the direction of the length of the car, and by placing the lever-pivot as here shown the fulcrum is straightened. Two truss-rods F F' are used. They come together at the fulcrum, and at each end of the beam the rods diverge to come, respectively, upon opposite sides of the beam (which at that point is inserted in the brake-head) and are respectively passed through lugs c c upon the brake-head and held therein by means of nuts c' c' . The lugs are substantially in line with the center of the beam and upon opposite sides of the extended portion c^3 of the brake-head in which the beam is immediately inserted, and they are arranged or constructed,

substantially as shown, to enable the nut c' or whatever constitutes the shoulder upon the rod to have a square bearing to come against. In this manner a strong compact construction
5 is obtained at the end of the brake-beam at or near which point fractures are most likely to occur. H represents the arm used for keeping the brake-beam laterally in position. Each end of the brake-beam is provided with
10 one, substantially as shown. The special mode of constructing and supporting these pins is a feature of the improvement.

h represents a bracket or lug riveted to the beam and perforated at h' to receive the arm
15 H. Said arm toward its outer end h^2 is reduced in diameter, and the perforation h' is shaped to conform thereto, the inner portion h^3 of the perforation being large enough to receive the arm and the outer portion h^4
20 thereof being reduced to fit the end h^2 of the arm. The end h^2 extends through the perforation, and such extended portion is shaped to form a head upon the arm, and in this man-

ner the arm is readily and securely attached to the brake-beam. 25

I claim—

1. A brake-beam fulcrum consisting of a band having a socket, a cap having a socket and a king-post, said post having its ends journaled in said sockets, respectively, and
30 having its outer journal grooved and confined in said band-socket by means of pins, substantially as described.

2. The combination of the beam and the arm H, said beam being provided with the
35 bracket perforated as described, and said arm having its outer end fitted to said perforation and riveted against the outer end of said lug, substantially as described.

Witness my hand this 18th day of January, 40
1892.

CHARLES D. WILEY.

Witnesses:

C. D. MOODY,
W. J. KESL.