

(No Model.)

J. H. FOOTE.
SPRING WHIFFLETREE.

No. 377,026.

Patented Jan. 31, 1888.

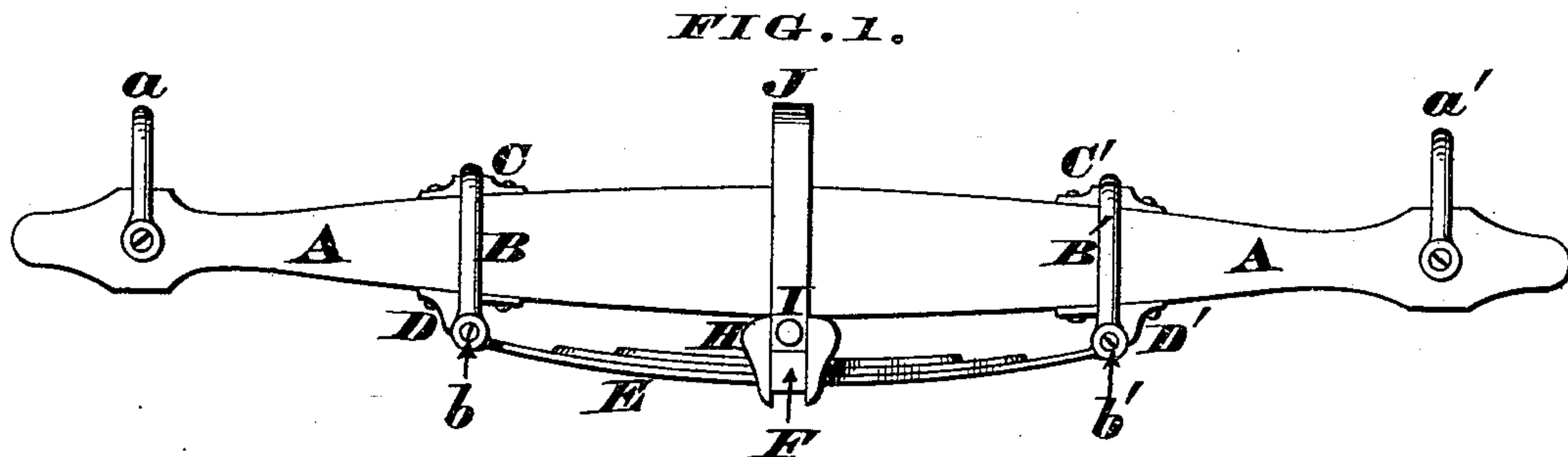


FIG. 2.

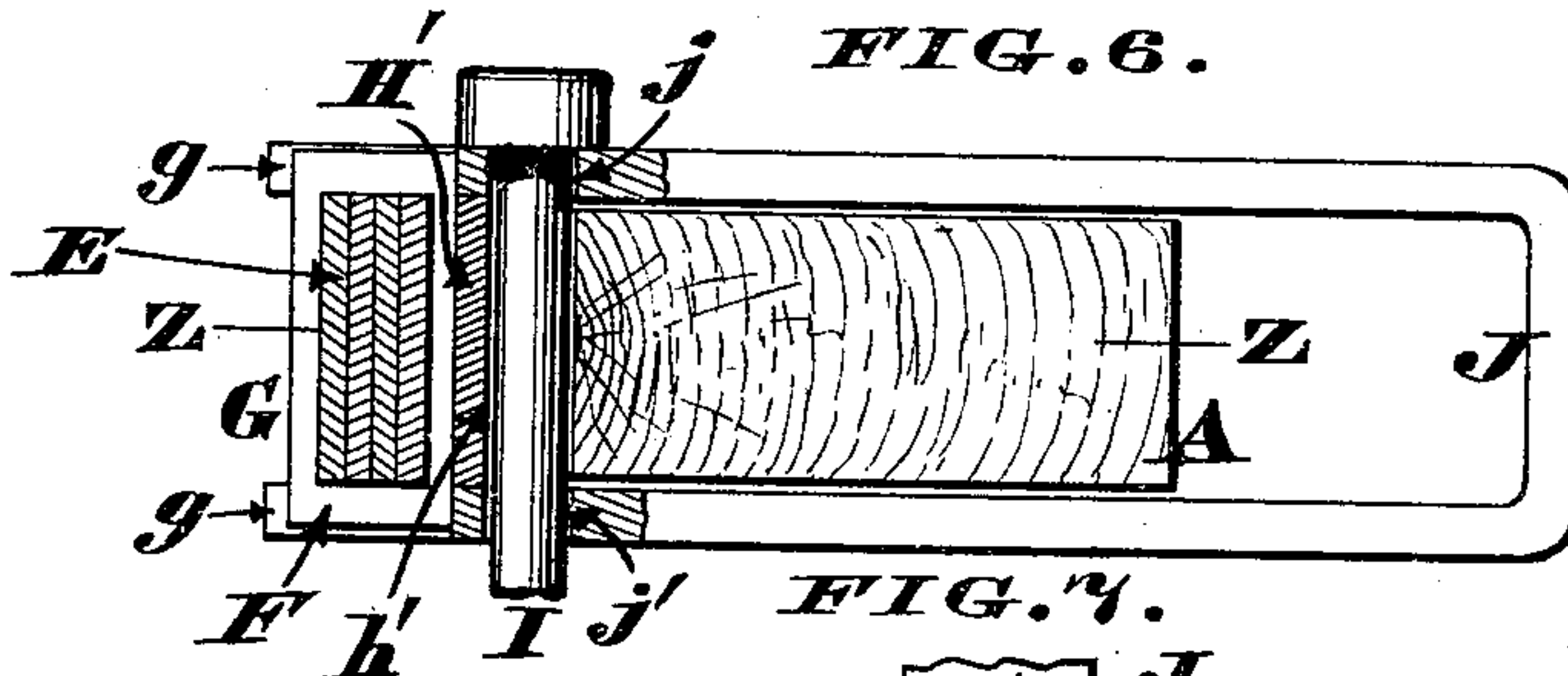
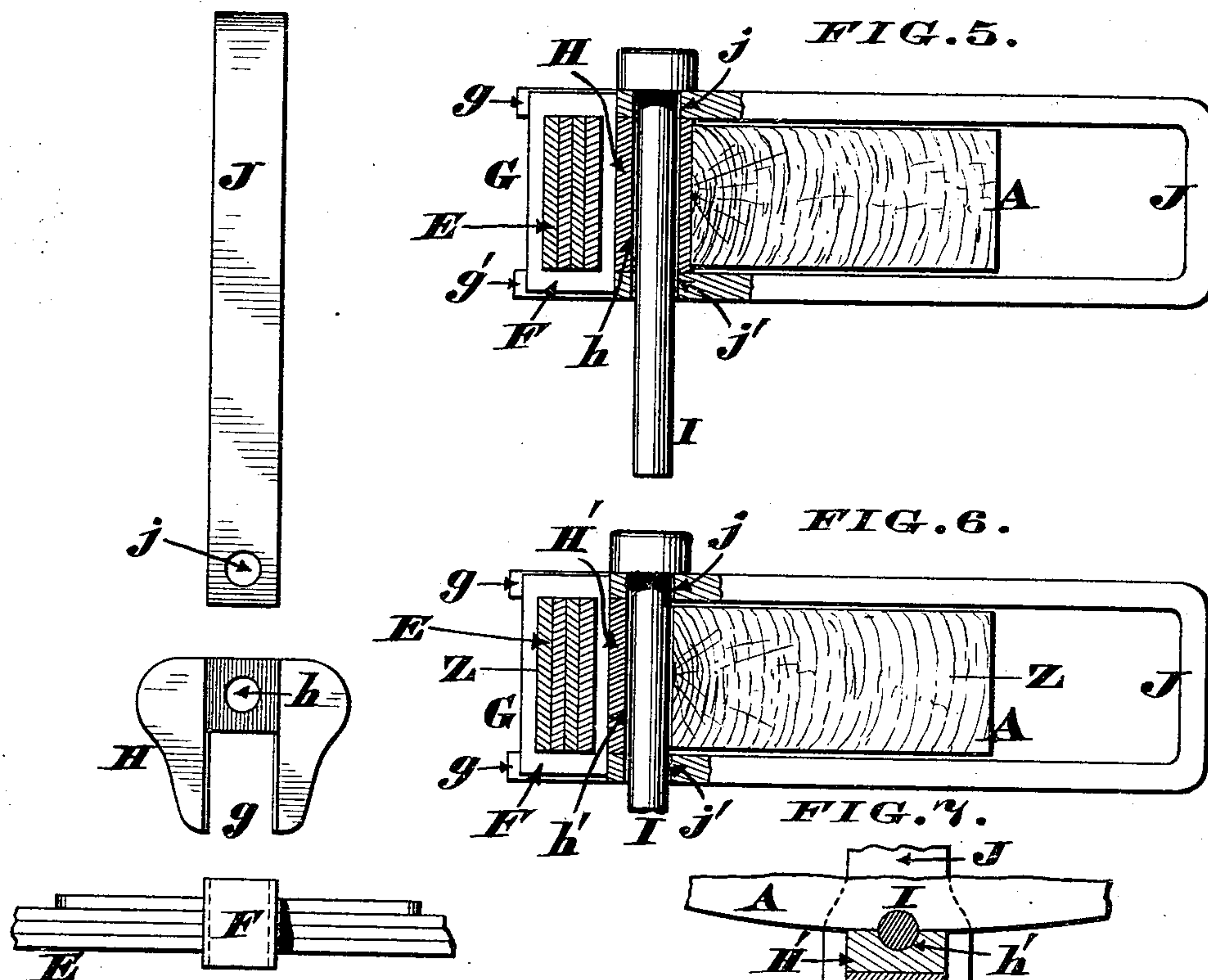
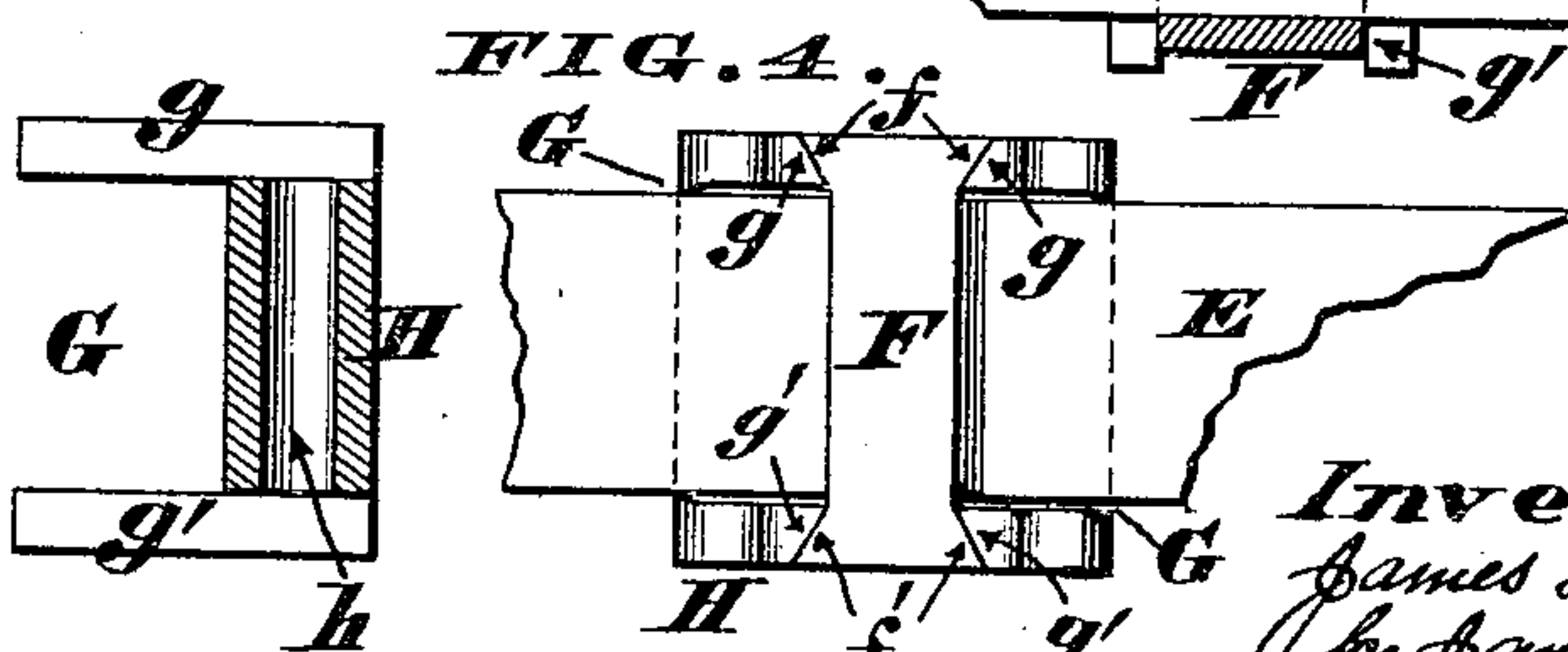


FIG. 3.



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UNITED STATES PATENT OFFICE.

JAMES H. FOOTE, OF CINCINNATI, OHIO.

SPRING-WHIFFLETREE.

SPECIFICATION forming part of Letters Patent No. 377,026, dated January 31, 1888.

Application filed September 23, 1887. Serial No. 250,534. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. FOOTE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Spring-Whiffletrees, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention is an improvement on the spring-whiffletree seen in application No. 230,330, filed by me in the United States Patent Office March 10, 1887, in which application the spring is shown inserted in a socket at the rear end of a housing or keeper that surrounds the whiffletree, and is pierced to admit the wagon-hammer; but in the present case the keeper that holds the spring is a comparatively small block or casting, pierced or grooved vertically to admit said hammer, which latter couples said block to a strap or band surrounding the whiffletree, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a plan of a whiffletree provided with my improved spring attachments. Fig. 2 is an enlarged plan of the strap, detachable keeper, and a portion of the spring separated from the whiffletree. Fig. 3 is a section of the keeper taken in the plane of its vertical perforation. Fig. 4 is a rear elevation of the keeper and a portion of the spring. Fig. 5 is a vertical section of the whiffletree, strap, keeper, and spring, said section being taken in the plane of the wagon-hammer. Fig. 6 is a similar section of a modification of the invention. Fig. 7 is a horizontal section of the same taken at the line $z z$.

The whiffletree A, singletree-connections $a a'$, shackles B B', bolts $b b'$, concave bearings C C', and stops D D', being the same as described in the aforesaid application, need no further explanation.

Bolts $b b'$ pass through eyes at the opposite ends of a plate-spring, E, which may be composed of one or more leaves united by a band, F, the top and bottom of said band being provided with outwardly-flaring edges $f f'$, as seen in Fig. 4. These flaring edges of the band fit snugly within the converging grooves $g g'$ of an open-ended socket, G, situated either at the rear end of the strap J, or of a small

block or keeper, H, the latter having a vertical perforation, h , to admit the wagon-hammer I. This metallic strap or band J is so bent as to surround the front, top, and bottom of whiffletree A, the perforated portions of said strap being inserted within the grooves $g g'$. $j j'$ are the perforations of this strap, which apertures receive the hammer I. When these attachments are properly fitted together, which attachment can be accomplished in a few minutes, the opposite ends of the spring normally bear against the stops D D', while the rear edge of the whiffletree is in contact with the front of keeper H, as more clearly seen in Fig. 5, but the instant the horses begin to pull said spring bends accordingly, thereby drawing itself away from said stops, the shackles B B' swinging within their concave bearings C C' to permit this play of the spring. Consequently the spring preserves the horses from any injurious strains in starting the wagon, thereby rendering the draft easier on the animals and preventing breakage of the whiffletree and its connections.

In the modification of my invention, (seen in Figs. 6 and 7,) the block or keeper H' is not pierced, as in Fig. 3, but is simply grooved vertically in front, as at h' , to admit the wagon-hammer I. Whichever of these constructions may be employed, it is preferred to use the dovetail devices $f f' g g'$ for coupling the spring-band F to the keeper H, because this coupling binds together the upper and lower parts of the open-ended socket G, thereby preventing them being sprung apart, and securing the strap J to the whiffletree A without piercing the latter. Finally, by making the keeper H or H' separate from the strap J the manufacture of the attachments is cheapened, said strap being simply a "drop forging," requiring no special fitting nor finishing.

I claim as my invention—

1. A whiffletree attachment consisting of a perforated strap or band, and a detachable keeper coupled to said strap by the wagon-hammer, said keeper being provided at rear with an open-ended socket within which a leaf-spring is inserted, substantially as described.

2. A whiffletree surrounded by a strap that is coupled to a detachable keeper by the wagon-hammer, in combination with a plate-spring

inserted within an open-ended socket at the rear of said keeper, the extremities of said spring being jointed to said whiffletree, substantially as described.

5 3. The whiffletree A, shackles B *b* B' *b'*, plate-spring E, band F, and detachable keeper H, having a perforation, *h*, and open-ended socket G, in combination with the pierced strap J *j j'* and wagon-hammer I, for the purpose described.

10 4. The combination, with a whiffletree, of the detachable keeper H, having at rear an

open-ended socket, G, within which is inserted the band F of a plate-spring, E, said socket being provided with converging grooves *g g'*, 15 to admit the outwardly-flaring edges *f f'* of said band, as herein described.

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

JAMES H. FOOTE.

Witnesses:

JAMES H. LAYMAN,
RANKIN D. JONES.