

(No Model.)

H. G. DAVIS.
METALLIC RAILROAD SLEEPER.

No. 500,473.

Patented June 27, 1893.

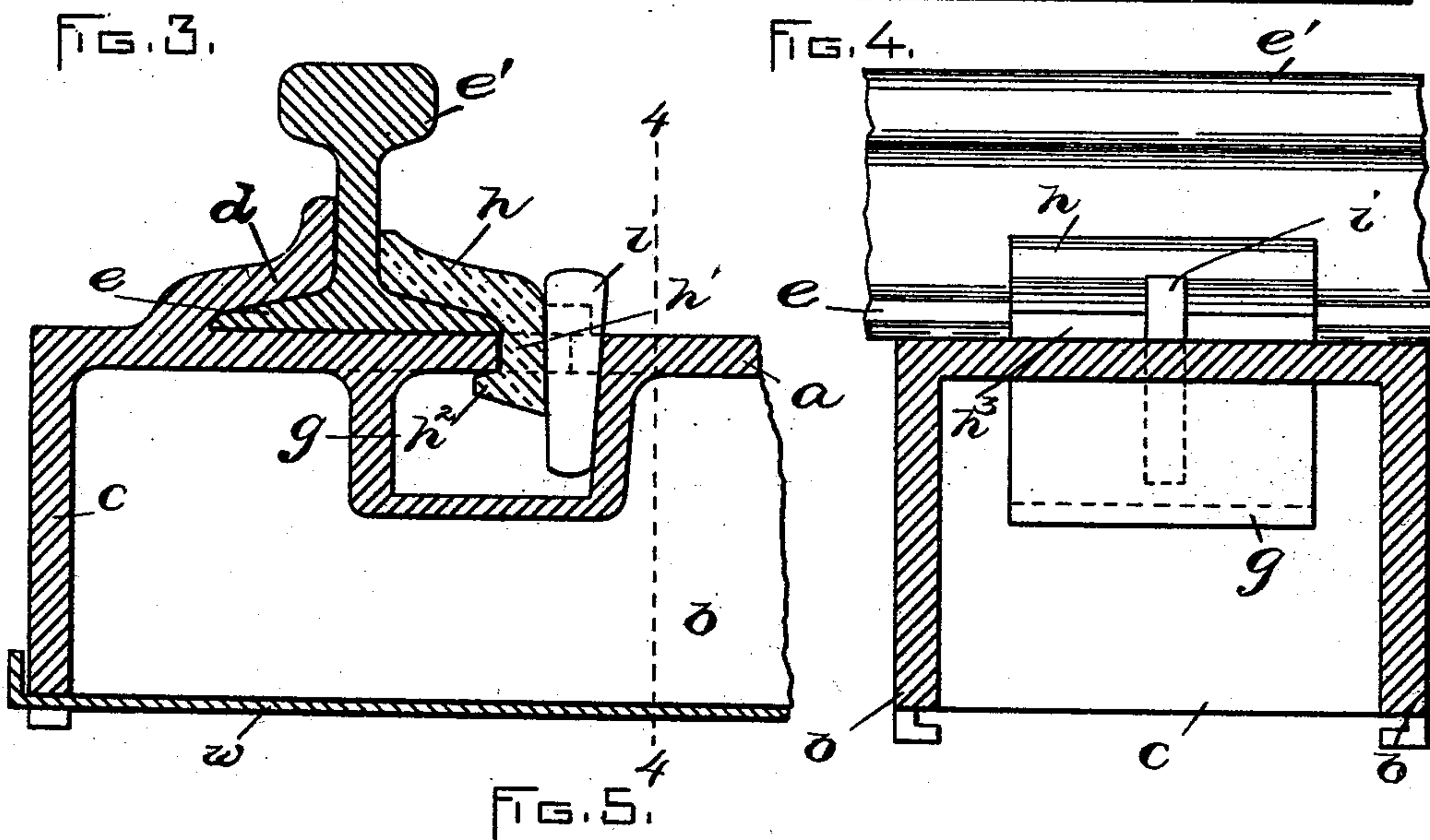
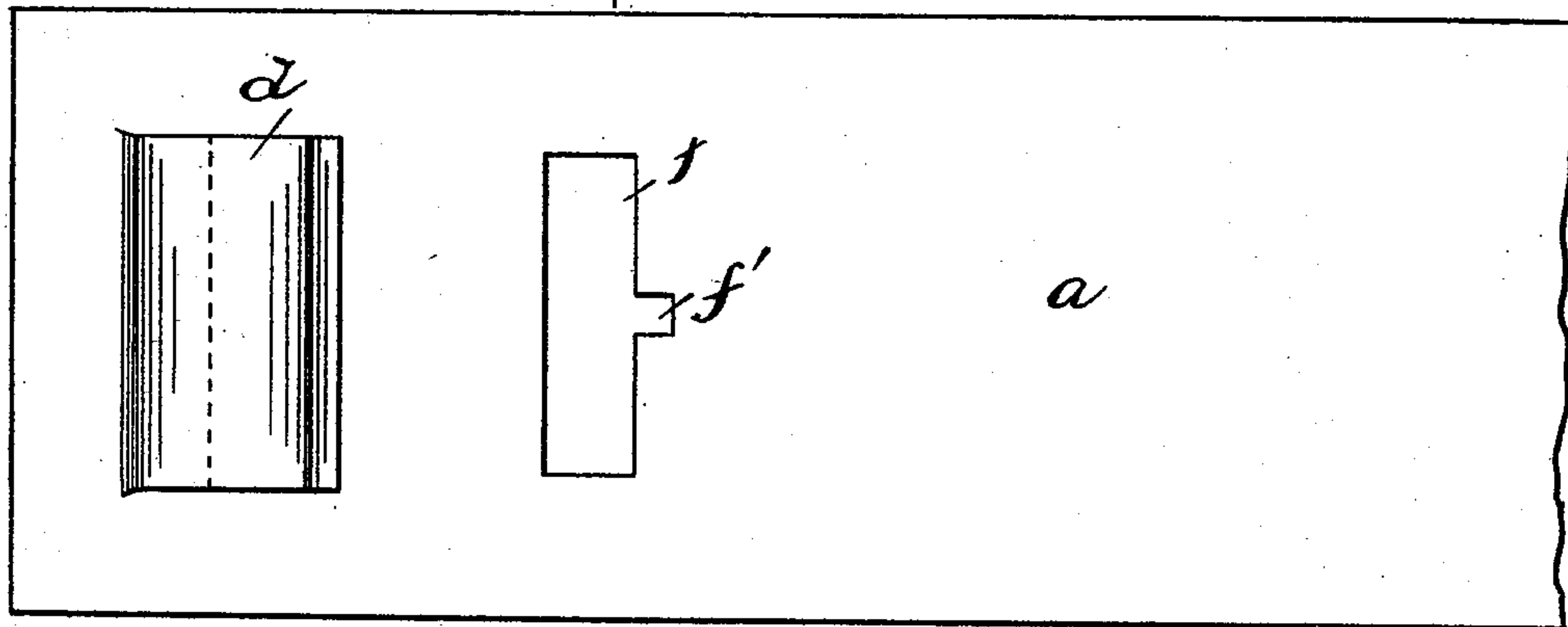
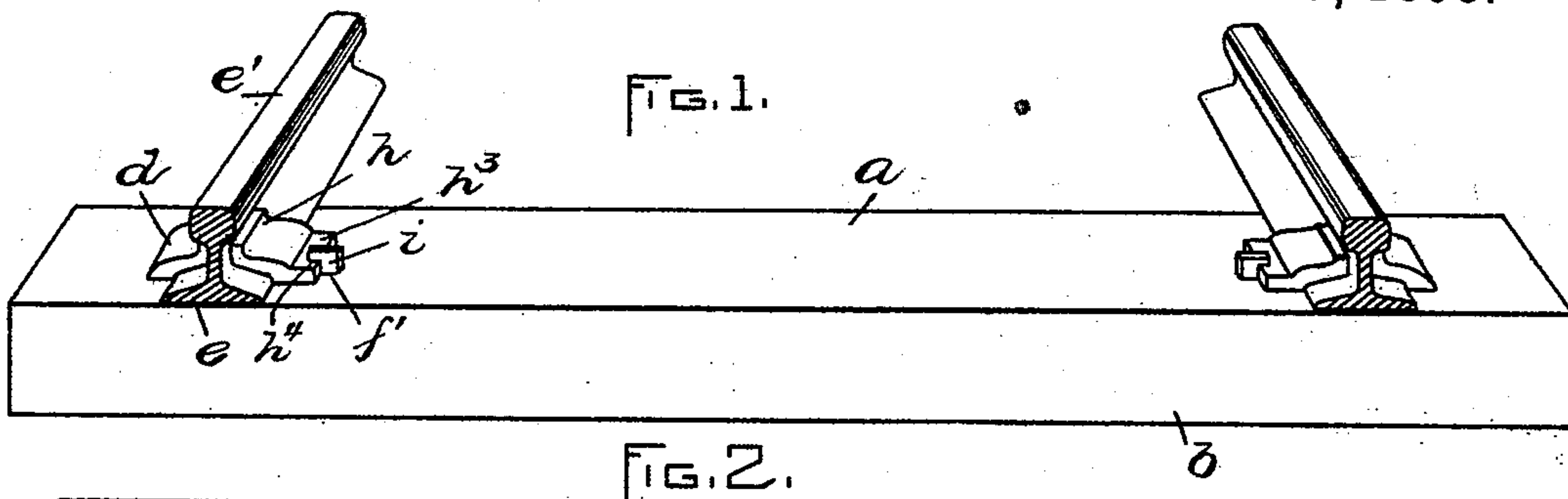
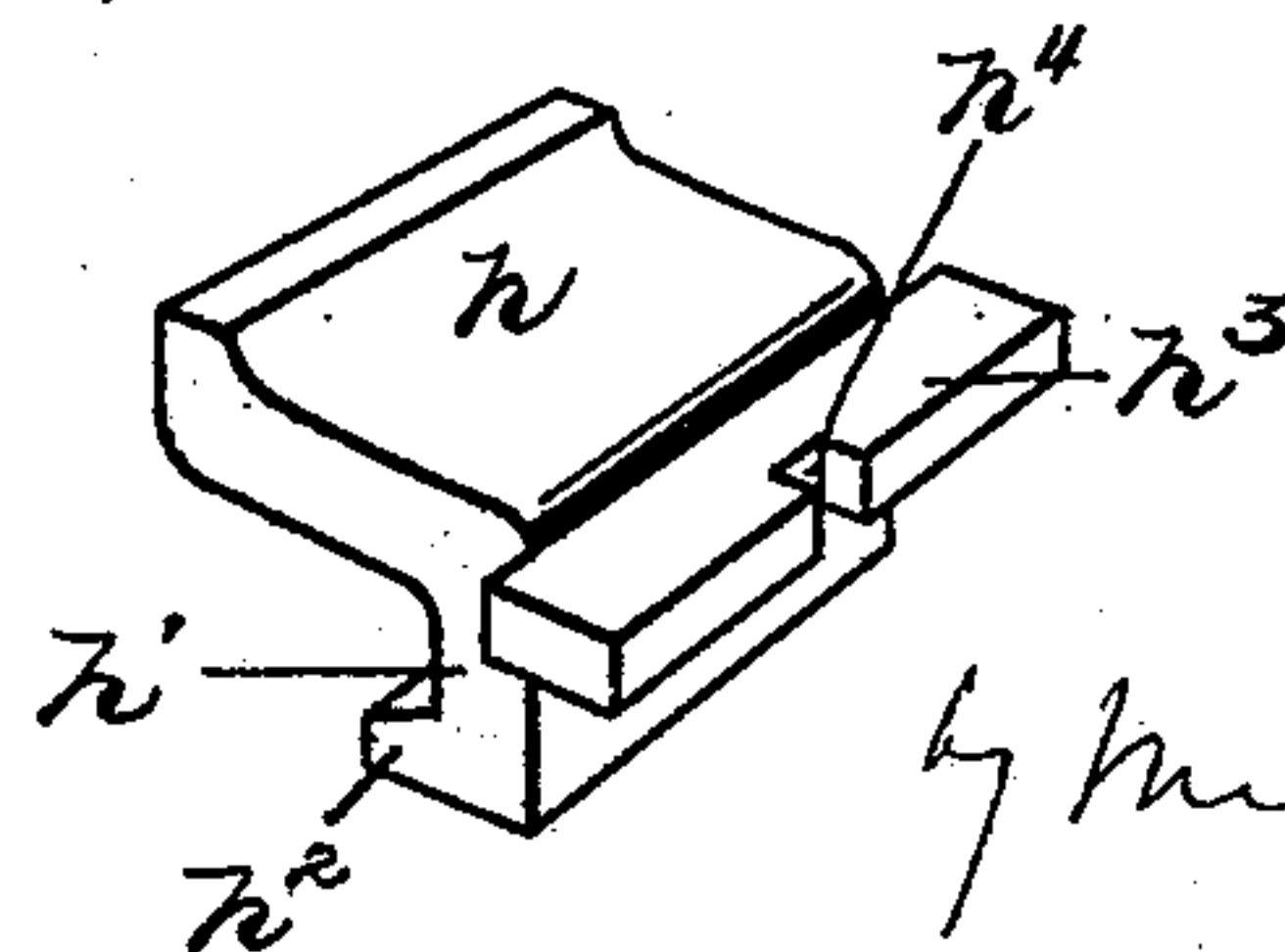


FIG. 5.



WITNESSES:

A. D. Hemmings
Charles Davis

INVENTOR:

H. G. Davis
by Knight Brown & Co.
Attys

UNITED STATES PATENT OFFICE.

HENRY G. DAVIS, OF EVERETT, MASSACHUSETTS.

METALLIC RAILROAD-SLEEPER.

SPECIFICATION forming part of Letters Patent No. 500,473, dated June 27, 1893.

Application filed March 20, 1893. Serial No. 466,803. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. DAVIS, of Everett, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Metallic Railroad-Sleepers, of which the following is a specification.

This invention relates to an improvement in metallic sleepers for use in the construction of railroads.

The object of the present invention is to provide a metallic sleeper, of such a construction that it may be firmly embedded in the road-bed and constitute a solid base for the rails to rest upon, the sleeper being at the same time of comparatively light weight, and permitting economy of material in its construction.

A further object is to provide improved means for fastening the rail to the sleeper.

To these ends, the invention consists in certain novel features of construction and arrangements of parts, which will be described hereinafter and pointed out in the claims.

Referring to the accompanying drawings, which illustrate a construction for carrying out my invention: Figure 1 shows a perspective view of a sleeper constructed in accordance with my invention, the rails appearing in cross-section. Fig. 2 shows a top or plan view of one end of the sleeper. Fig. 3 shows a sectional view, on an enlarged scale, of the sleeper and rail. Fig. 4 shows a cross-section of the sleeper, and a side view of the rail and fastening-clip, the section being taken on the line 4—4 of Fig. 3. Fig. 5 shows a perspective view of an improved form of fastening-clip.

The same letters of reference indicate the same parts in all the figures.

The sleeper is in the form of a hollow cast-metal shell, which is rectangular, both in cross-section and longitudinal section, and is open on one of its longitudinal sides. The sleeper thus comprises a top *a*, sides *b* and ends *c*, the sides and ends or legs extending at right angles to the top. This construction allows the sleeper to be easily embedded in the road-bed, so that the material of the road-bed may fill its concavity and surround it on all sides. The top *a* of the sleeper will thus rest upon

the road-bed and form a solid base to support the rails.

A lug or flange *d* is formed integral with the top side of the sleeper, and is of form to take over the base-flange *e* of the rail *e'* and also fit against the web of said rail. A rectangular opening *f* extends transversely across the top of the sleeper, and has a notch *f'* at the middle of one of its longitudinal sides. A chamber *g* is formed below this opening, and is closed in on all sides, so as to exclude the material of the road-bed which fills the concavity of the sleeper. When the rail has been placed on the top of the sleeper and its flange engaged under the lug *d*, it is secured in place by means of a fastening-clip of improved construction, which will now be described. This clip comprises a portion *h*, formed to engage the base-flange of the rail; a flange-like portion *h'*, arranged to extend through the opening *f*, and provided with a lip *h²* to take under the top *a* of the sleeper; and a portion *h³*, which extends over that part of the opening *f* not occupied by the flange *h* and thus completely closes said opening. The said portion *h³* of the clip is provided with a notch *h⁴* corresponding with the notch *f'* at one side of the opening *f*. After this fastening-clip has been inserted through the opening *f* and moved toward the rail, so as to engage its lip *h²* under the top side of the sleeper, a key *i*, having the form of a wedge, is engaged with the notches *f* and *h⁴* and then driven downward so that its lower end projects into the chamber *g*. When this wedge is driven home, the rail will be securely held by the clip and the lug *d*. The chamber *g* is a feature of importance, for the reason that it provides a space into which the clip and securing-key or wedge may enter unobstructed by the material of the road-bed.

When the sleeper is to be inserted under rails already laid one of the flanges *d* should be detachably secured to the sleeper, in order that it may be removed to permit the endwise movement of the sleeper under the rails, and applied after the sleeper is in place. The said detachable flange may be secured by means similar to those shown for securing the flanges *h* or by any other suitable means.

When the sleepers are inserted under pre-

viously laid rails, a cover or false bottom *w* may be placed on the open side of the sleeper to retain the filling in the sleeper while it is being moved to place under the rails. Said
5 false bottom may be a piece of sheet metal, and may be withdrawn from under the sleeper after the latter has been properly located.

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

1. A metallic railroad sleeper consisting of a hollow casting having an integral lug or flange projecting from its upper side and adapted to take over the base-flange of the
15 rail on one side of the web thereof, and an opening in said upper side; a clip, constructed to take over the base-flange of the rail on the opposite side of the web, and to extend over the opening in the top side of the sleep-
20 er, and provided with a notch, said clip also provided with a portion which extends down through the said opening and has a lip or flange to take under the top side of the sleeper; and a key, constructed for insertion through
25 the opening and adapted to engage the notch in the clip.

2. A metallic railroad sleeper consisting of a hollow casting having an integral lug or flange

projecting from its upper side and adapted to take over the base-flange of the rail on one 30 side of the web thereof, and an opening in said upper side, with a notch at one side of said opening; a clip, constructed to take over the base-flange of the rail on the opposite side of the web, and to extend over the opening in 35 the top side of the sleeper, and provided with a notch, said clip also provided with a portion which extends down through the said opening and has a lip or flange to take under the top side of the sleeper; and a key, arranged 40 to engage the notch in the clip and that at one side of the opening in the top side of the sleeper.

3. The combination with a metallic railroad sleeper open at one side, of a cover or 45 false bottom adapted to temporarily close said open side, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 14th day of 50 March, A. D. 1893.

HENRY G. DAVIS.

Witnesses:

A. D. HARRISON,
M. W. JACKSON.