

J. T. CLARK.
RAILROAD-RAILS.

No. 133,131.

Patented Oct. 10, 1876.

Fig. 1.

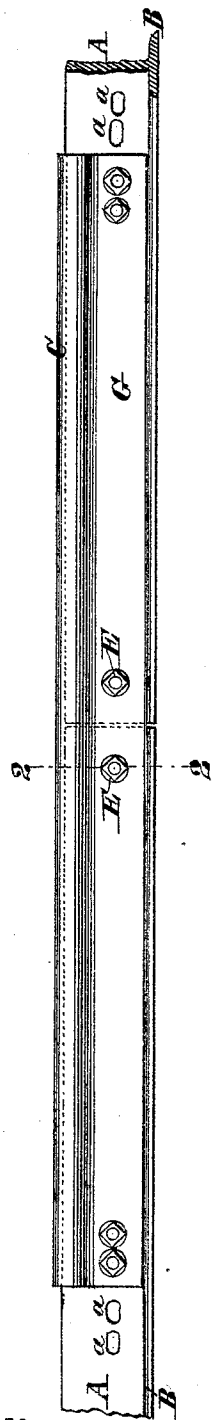
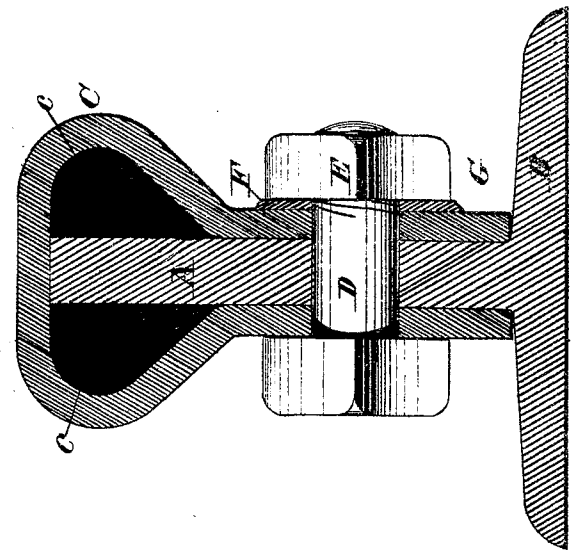


Fig. 2.



WITNESSES

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JOHN T. CLARK, OF AUGUSTA, GEORGIA, ASSIGNOR OF PART OF HIS RIGHT
TO CHARLES R. STONE AND JOHN G. MARSH, OF SAME PLACE.

IMPROVEMENT IN RAILROAD-RAILS.

Specification forming part of Letters Patent No. **183,131**, dated October 10, 1876; application filed
August 30, 1876.

To all whom it may concern:

Be it known that I, JOHN T. CLARK, of Augusta, in the county of Richmond and State of Georgia, have invented a certain new and useful Improvement in Railroad-Rails, of which the following is a specification:

My invention relates to a compound rail consisting of two parts, which may be so placed as to break joints, and thus form a continuous track.

My compound rail is made up of a lower part, consisting of a base and a vertical web rolled in a single piece of wrought-iron, and an upper part, consisting of steel bent in U form, inverted to embrace the vertical web, and leave within the head of the rail hollows or cavities, as hereinafter described, to render the head or wearing portion of the rail elastic. The two parts are connected together by horizontal bolts passing through apertures, some or all of which are elongated in customary manner, to permit of the expansion and contraction of the rail.

In the accompanying drawing, Figure 1 is a side elevation of my improved compound rail. Fig. 2 is a vertical transverse section of the same on a larger scale on the line 2 2, Fig. 1.

The vertical web A and base B are formed in one piece of wrought-iron, by rolling in substantially the shape represented. The tread of the rail is formed by a steel cap, C, which is bent in the shape shown, so as to cover the vertical web A, extend down the sides of the same, and leave within the head cavities *c*, of sufficient size to render the head of the rail elastic without impairing its strength. The cap C and lower portion A B are securely fastened together by bolts D D and nuts E E, passing through corresponding apertures in the vertical portions G G of the cap C and the web A. Some or all of these apertures are elongated longitudinally of the rail, as shown at *a* in Fig. 1, in order to permit free expansion and contraction of the metal caused by variations in temperature. Washers F are

placed under the nuts. The said washers may be of any preferred kind, constructed and adapted to lock the nuts, so as to prevent their unscrewing. The central portion of each cap-section C is placed directly over a joint between two base-sections, A B A B, as illustrated in Fig. 1, so that the joints between the cap-sections are removed from the joints between the base-sections, and hence a continuous rail is produced.

A great advantage results from the particular manner of constructing the cap-piece C so as to form cavities *c* within it on either side of the vertical web A. This will be seen to effectually prevent any hammering of the wheels against a solid or rigid body of metal, the line of violent strain and hammering of the wheels against the external shoulders of the rails being compounded of vertical pressure derived from the weight of the engine and cars, and the horizontal force derived from the lateral pressure of the wheel-flanges.

It will further appear that the rail possesses great strength by reason of the solid vertical web A, which supports the weight of the superincumbent body, and the oblique shoulders of the cap C, which are well formed to sustain and resist the lateral pressure without injury. The durability of the rail is thus greatly increased, as the liability to lamination, which with rails of ordinary construction takes place on the external shoulders of the rail, is entirely obviated.

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

A continuous or compound rail constructed, as herein described, of a web and base, A B, and a steel cap, C, applied thereto so as to leave cavities *c*, as and for the purpose set forth.

JOHN T. CLARK.

Witnesses:

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