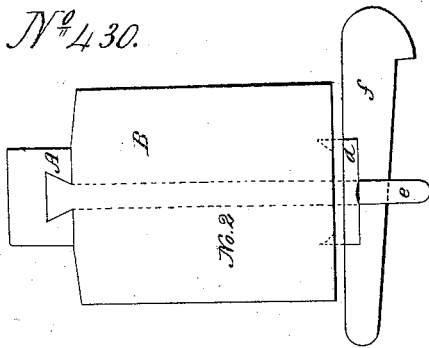


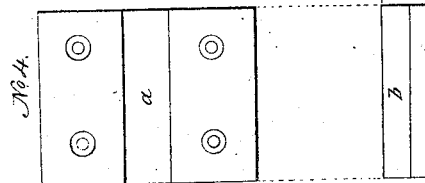
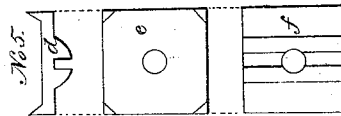
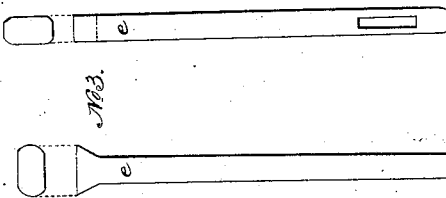
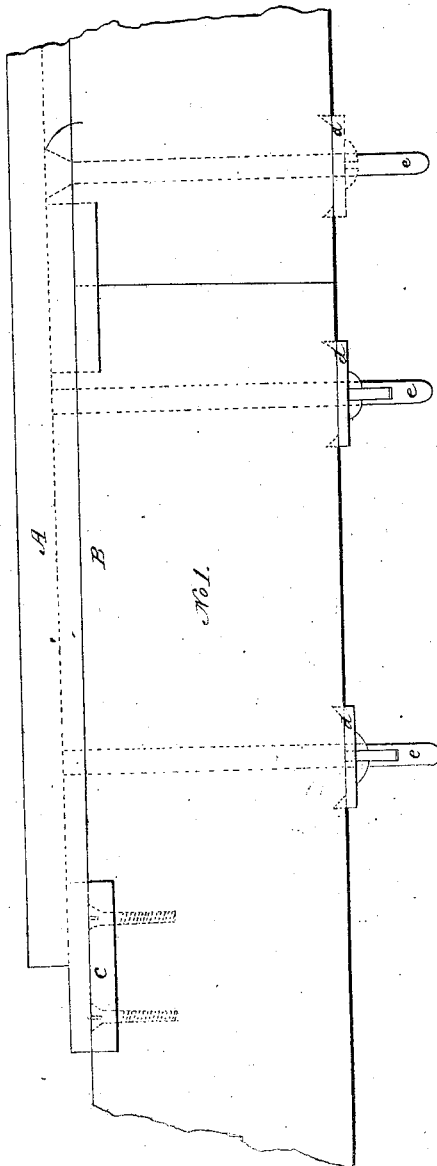
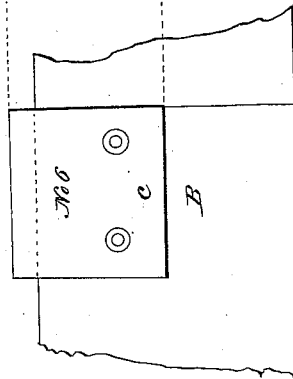
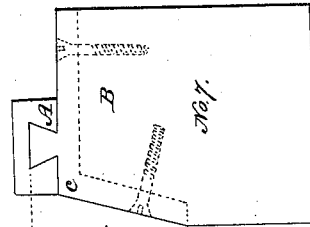
# *P.H. Dreyer.*

## *Railroad Rail.*

*No. 430.*



*Patented Oct. 18, 1837.*



# UNITED STATES PATENT OFFICE.

PETER HENRY DREYER, OF NEW YORK, N. Y.

## MODE OF CONSTRUCTING AND FASTENING IRON RAILS ON THE TIMBERS OF RAILWAYS.

Specification of Letters Patent No. 430, dated October 18, 1837.

*To all whom it may concern:*

Be it known that I, PETER HENRY DREYER, of the city of New York, in the county and State of New York, have invented a new and Improved Mode of Constructing, Fastening, and Securing Iron Rails on Timbers of Railways; and I do hereby declare that the following (with the annexed drawings) is a full and exact description thereof.

I lay the dovetail grooved iron rail represented by A in Figure 1, from its side and A, Figs. 2 and 7, from its end, in the timber or stringpiece B, Figs. 1, 2 and 7, after the iron bolt with a dovetailed upperpart, Fig. 3, *e, e*, has been passed through the wood and is so turned, that the dovetailed groove of the rail can pass the top of the bolt, which must be straight one way and dovetailed the other, as is shown by Fig. 3, *e, e*. This being done, the rail is pushed forward on the dovetailed plate Fig. 4, *a, b, c*, Fig. 1, C, C, Fig. 6, *c*, and Fig. 7, *c*, so far, that the next rail to be laid on can meet it on the middle of this plate, and then the dovetailed bolt is so turned from below, that the same and the dovetail of the plate perfectly fasten and secure the rail by its dovetailed groove on the timber or stringpiece of the railway, when the wedgekey is driven through the open lower part of the bolt and its grooved plate, which is slipped from below over the bolt up to the timber after the bolt is turned to receive the wedgekey. See Fig. 3, *e*, Fig. 2, *d, e, f*, and Fig. 5, *d, e, f*.

For further explanation I delineate separately in Fig. 4, the cast iron dovetail plate, in *a*, from the top or upper surface, *b*, from its side and *c*, from its end. In Fig. 5, the cast iron bolt or wedging plate with its groove, *d*, showing the lower part with the groove from two sides, *e*, the upper surface with four prints, to be pressed into the wood by the wedgekey and *f*, the underneath part or surface with the groove. In Fig. 6, the exact size of a cast iron dovetail plate for a rail of one inch or less thickness as it is fastened to the inside of the stringpiece by two screws, whereof one is likewise

to be seen in Fig. 7, *c*, and another of the two fastening it to the top of the timber, 50 which Fig. 7, shows the end of a dovetail grooved rail of one inch thickness with *c*, the end of the cast-iron dovetailed plate and the screws by which it is fastened to the top and inside of the stringpiece or timber. 55 In Fig. 8, the end of a dovetail grooved rail of two inches thickness.

The peculiar advantages of my new plan to secure the iron rail on the stringpiece by the greatest mechanical power of the wedge 60 are obvious and may be brought under the following principal heads, viz: 1. The continuity of the upper surface of the rail in all cases, whether the foundation may yield to weight passing over it or not, there 65 being a complete bond between the iron and the wood. 2. The removal of the dangers of the old mode of fastening the rail by spikes through holes of the plate rail or spikes driven in at the sides of the edge- 70 rail, because my dovetailed bolt can never rise. 3. The considerable saving of costs in the dovetail grooved iron rail, which is of equal strength and durability with the present more costly shape and weight of the rail 75 in common use. 4. The ease with which for repairs, without injuring the timber and iron, the rails can be removed and replaced, which requires only the removal of the wedgekey and the turning of the bolts, no 80 spikes being used, besides the unscrewing of two dovetail plates for any distance of the road.

What I claim as my invention and desire to secure by Letters Patent, is— 85

The dovetail grooved rails, dovetailed bolts and plates and grooved wedge plates, applied to the construction of railways, by which means and the wedgekey the iron dovetail grooved rail is perfectly and most 90 substantially secured on the stringpiece or timber of the railroad.

PETER HENRY DREYER.

Witnesses:

EBENEZER PALMER,  
JOHN H. DREYER.