# H. K. PORTER.
## Carriage-Irons.

No. 146,093. Patented Dec. 30, 1873.

FIG. 1.

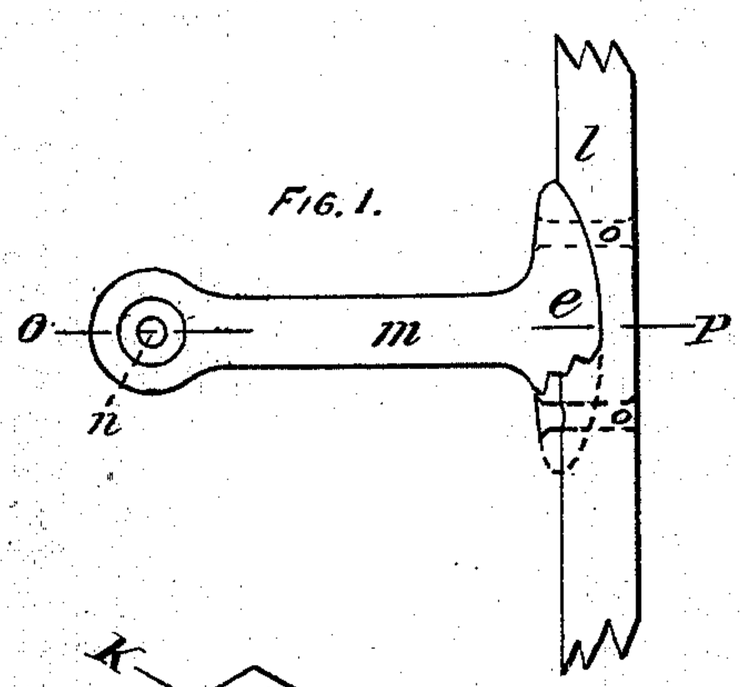



FIG. 2.

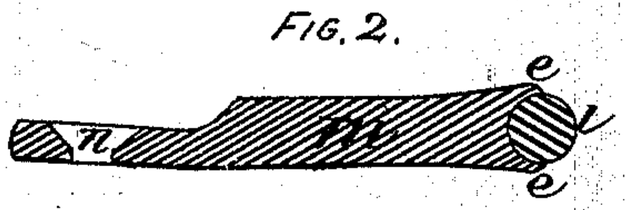



FIG. 3.

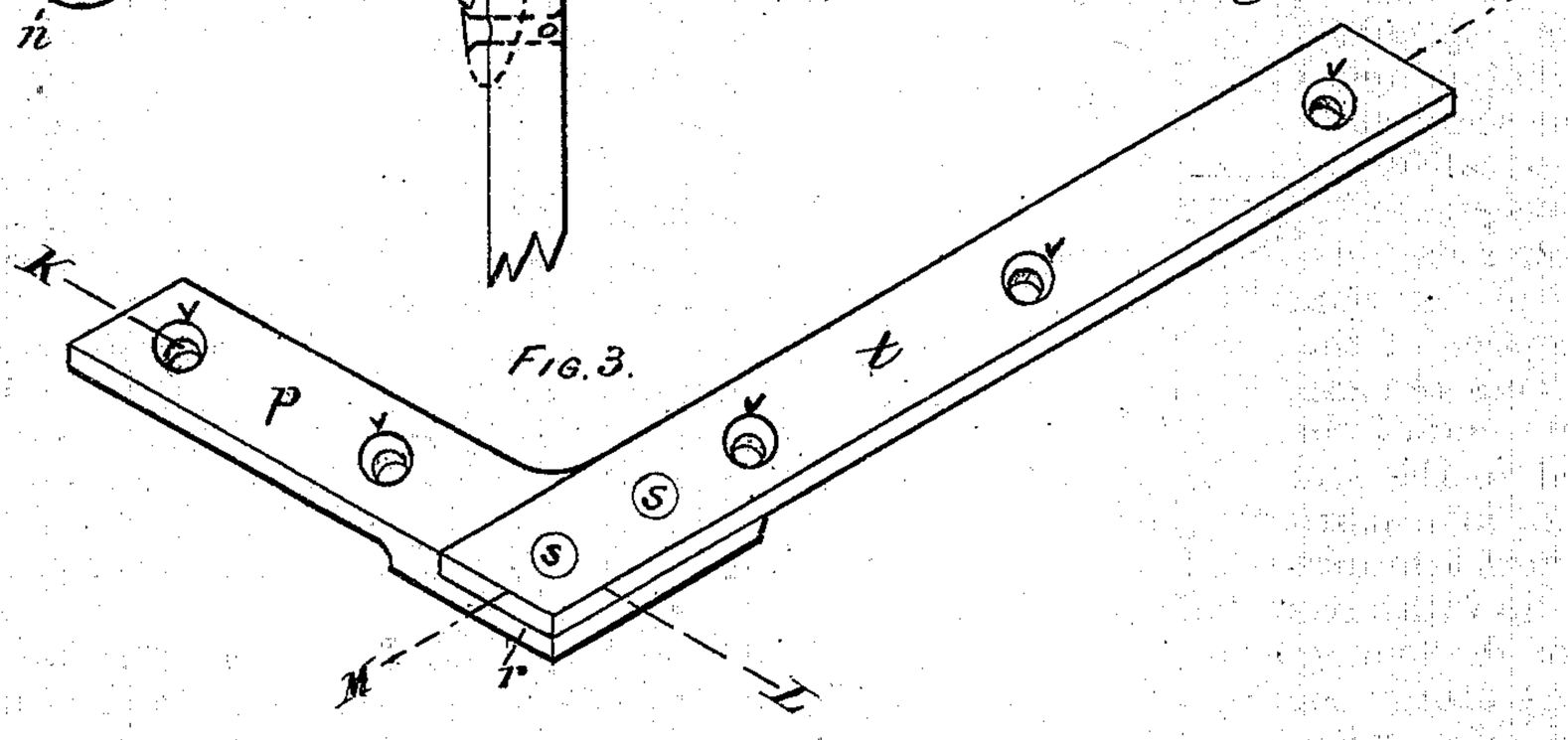



FIG. 4.

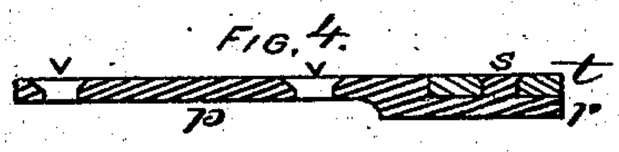
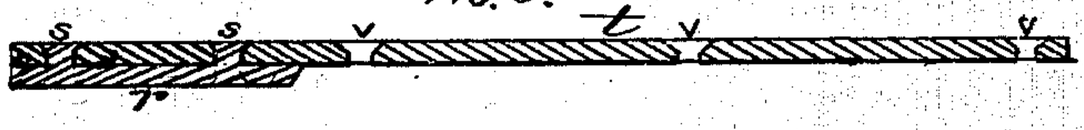



FIG. 5.




WITNESSES.

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## IMPROVEMENT IN CARRIAGE-IRONS.

Specification forming part of Letters Patent No. **146,093**, dated December 30, 1873; application filed February 3, 1873.

*To all whom it may concern:*

Be it known that I, HENRY K. PORTER, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Carriage-Irons, of which the following is a specification:

This invention relates to improvements in the rails for seats and the edge irons for the corners of so-called "box-bodies;" and the invention consists, first, in the combination of wrought-iron rods and cast-metal brackets having a semi-tubular flange formed at one end for the reception of the rod, to which it is secured by rivets, brazing, or other means, while the opposite end of the bracket is formed to be attached to the seat in any desired manner; second, in constructing the corner iron with the short arm formed of cast metal, with a recessed lip with pivots cast thereon, for the reception of the longer arm, which is secured to the short arm by said pivots, which enter holes in the long arm, and are riveted therein.

Figure 1 is a top or plan view of the seat rail and foot, a portion of the socket of the latter being broken away to show the rivet. Fig. 2 is a vertical section taken on line O P, Fig. 1. Fig. 3 is a perspective view of the corner iron. Fig. 4 is a vertical section taken on line K L, Fig. 3; and Fig. 5 is also a vertical section taken on line M N, Fig. 3.

*l*, Fig. 1, represents a wrought-iron rod, and *m* is a cast-metal foot or stud, secured to the seat by a screw in hole *n*, while the opposite end is formed with a semi-tubular flange, *e*, which receives the rod *l*, and is secured either by means of the rivets *o o*, or by being soldered or brazed thereto. *p*, Fig. 3, is the short arm of the corner iron, which has an offset angle-plate, *r*, upon which the pivots *s s* are cast, and which pass through holes in the long arm *t*, and are riveted therein, as shown in Figs. 4 and 5. The plates *p* and *t* being of equal thickness, and the set-off of angle *r* being equal to their thickness, therefore the upper surface is the same as if the iron were cast or forged in one piece, while much of the expense of either process is avoided, and especially the difficulty of casting when the irons are of narrow width, and the long arm of a length of one and a half feet or more.

Having thus described my invention, what I claim is—

1. The combination of the wrought-metal rod *l* and the cast-metal stud *m*, having the right-angle semicircular-grooved flange *e*, constructed and combined substantially as described and shown.

2. The combination of the cast-metal angle or arm *p*, formed with the offset lip *r* and riveting-pivots *s s*, and the straight arm *t*, constructed and combined substantially as described and shown.

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