

(No Model.)

H. K. PORTER.
WHIFFLETREE IRON.

No. 336,016.

Patented Feb. 9, 1886.

Fig. 2.

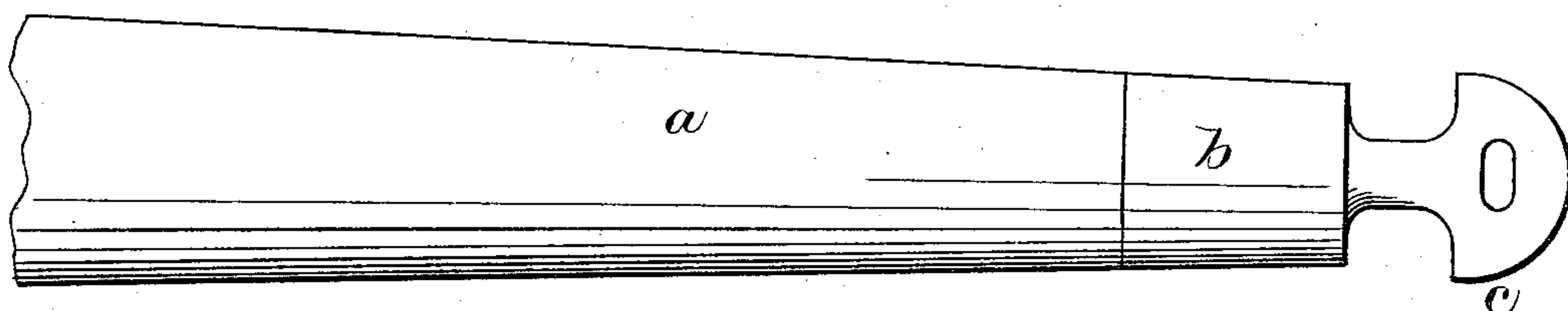
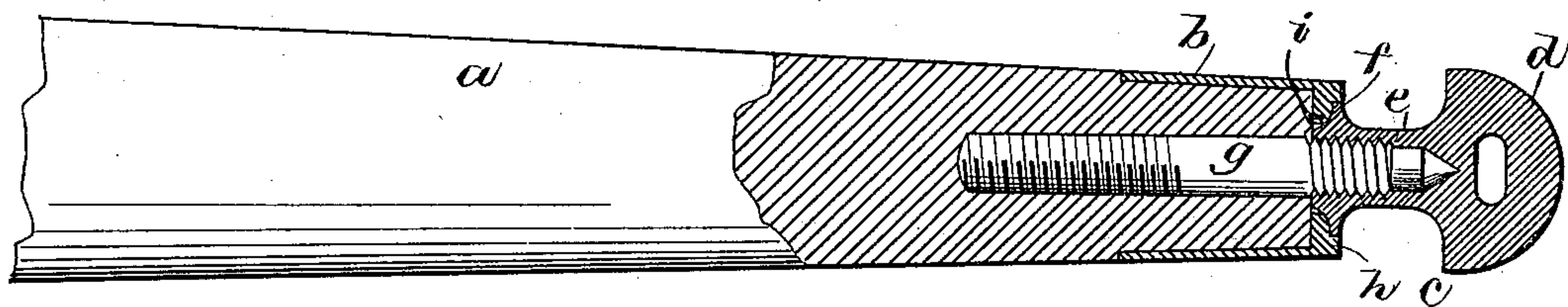


Fig. 1.



Witnesses
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HENRY K. PORTER, OF BOSTON, MASSACHUSETTS.

WHIFFLETREE-IRON.

SPECIFICATION forming part of Letters Patent No. 336,016, dated February 9, 1886.

Application filed February 16, 1884. Serial No. 120,912. (No model.)

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 a new and useful Improvement in Whiffletree-Irons, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

This invention relates to the irons which are secured to the respective ends of whiffletrees for the attaching of the harness-trace thereto; and the invention will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

In said drawings, Figure 1 shows in longitudinal section a whiffletree end provided with my improvements. Fig. 2 shows the same in plan.

In said views, *a* represents the whiffletree. *b* is the end ring, and *c* is the start, to which the trace is attached. Said start has heretofore been formed with a flattened head, *d*, a neck, *e*, a shoulder, *f*, and a shank, *g*, all as an entirety, and usually of malleable iron, the shank *g* being screw-threaded to facilitate its insertion in the whiffletree and to secure it therein.

My improvement in this behalf consists in forming said head *d* with the neck *e* and collar *f* as a casting of suitable metal, and securing the shank *g*, of wrought-iron or steel, therein in some suitable manner; and as an efficient method of accomplishing such union that herein shown, where the parts are male and female screw-threaded, is deemed preferable. This construction of the start enables me to preserve the graceful form of the head, which is only feasible in cast metal, and I avoid the weakness caused by "shrinks" in the shank when formed entirely of cast metal, while I am able to employ for that part metal of very high strength and tenacity.

As heretofore constructed, the rings *b* have been either of the "open" pattern—that is, without an inclosing end—or else have been of the close pattern, having an end that was a simple plane, with an opening for the reception of shank *g* of the start. My improvement in the ring consists in forming it with an end, *h*, having a recessed central portion, *i*, so as to form a seat for the collar *f* of the start, as shown. This method of seating the collar of the start in a recess in the ring serves to give a finished appearance, as only the outer curve of the collar is visible when the parts are in place upon the whiffletree, as shown in Fig. 2. The collar of the start being seated in such recess in the end of the ring, there is no need of the shank *g* fitting closely or at all in the central opening in the ring, which latter is in such case much larger than the shank. Such seating of collar *f* in a recess in the ring tends largely to relieve the shank from the strain which results from the force exerted upon neck *e* by the harness-tug.

I claim as my invention—

1. A whiffletree-start formed with a wrought-metal shank, *g*, and a cast-metal head, *d*, rigidly secured together, said head having a neck, *e*, to receive and support the trace, a shoulder, *f*, and a socket in said shoulder and neck to receive the end of the shank, substantially as specified.

2. The combination, with a whiffletree-start formed with a head, *d*, neck *e*, shoulder *f*, and shank *g*, of a ring, *b*, having an end, *h*, with an opening to freely admit shank *g*, and an annular recess surrounding said passage to receive flush with the end of the ring the said shoulder *f*, substantially as specified.

HENRY K. PORTER.

Witnesses:

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