

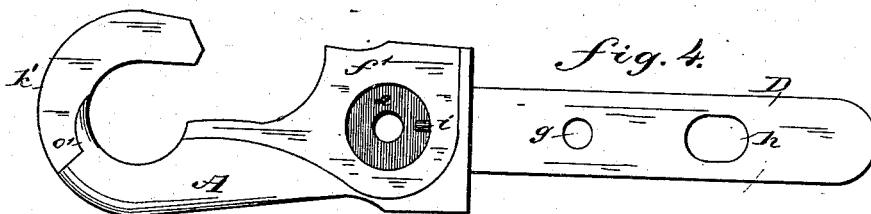
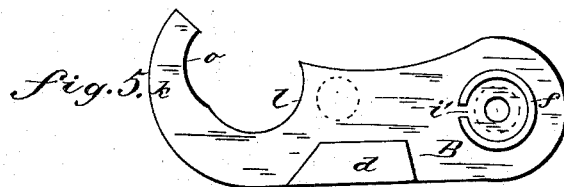
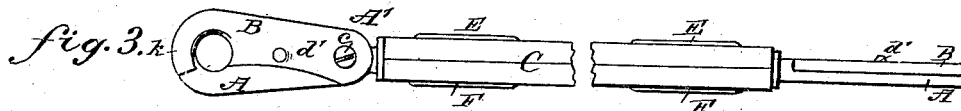
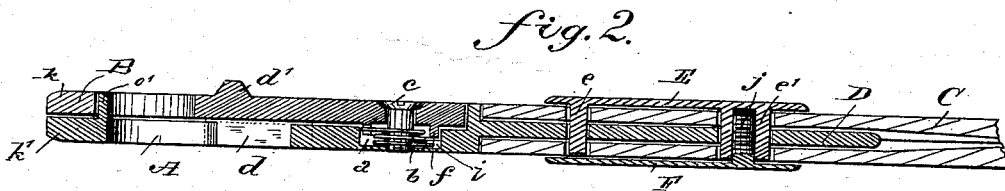
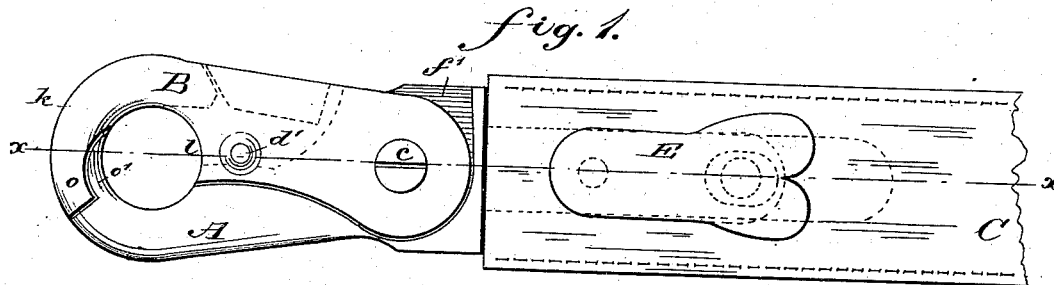
(Model.)

W. K. RAIRIGH.

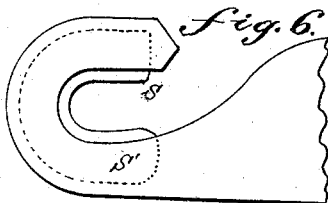
TRACE HOOK.

No. 265,143.

Patented Sept. 26, 1882.



WITNESSES:
Chas. Beyer
Chas. Luncott



INVENTOR:
W. K. Rairigh
BY *Munn & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM K. RAIRIGH, OF ST. PETERSBURG, PENNSYLVANIA.

TRACE-HOOK.

SPECIFICATION forming part of Letters Patent No. 265,143, dated September 26, 1882.

Application filed June 15, 1882. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM K. RAIRIGH, of St. Petersburg, in the county of Clarion and State of Pennsylvania, have invented certain
5 new and useful Improvements in Trace-Hooks, of which the following is a full, clear, and exact description.

My invention relates to improvements in trace-hooks; and it consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in
15 which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of one of the safety-hooks attached to the end of the trace or tug. Fig. 2 is a sectional elevation of the same, taken on the line *x x* of Fig. 1. Fig. 3 is a front elevation of a trace provided at the ends with the hooks. Fig. 4 is a plan view of the main part of the hook removed from the tug or trace. Fig. 5 is a similar view of the
25 under side of the hinged jaw portion of the hook removed from the main part of the hook; and Fig. 6 is a plan view, showing the means of making the hook noiseless.

A represents the main part of the hook; and
30 B represents the latch or jaw part of the hook, which is hinged by means of the screw *c* upon the main part, and is adapted to close the entrance thereto, as shown in Figs. 1, 2, and 3. The main part A of the hook is properly recessed, as shown at *f'*, Fig. 4, to receive the
35 jaw portion B, and is cast with the circular chamber *a*, in which the coiled spring *b* (shown in Fig. 2) is placed. One end of this spring impinges upon the projection *i*, formed in the
40 chamber *a*, (shown in Fig. 4,) while the other end rests in the slot or opening *i'*, made in the circular rim *f*, cast on the inner face of the jaw B. The spring is thus held so as to always keep the jaw B closed against the main
45 part A of the hook, except when opened by the hands for attaching the hook to or detaching it from the hame, single-tree, or trace-chain. For conveniently opening the jaw B, I cast it with the lug *d* upon the under side and the lug
50 *d'* upon the upper side, as clearly shown in the drawings. For attaching the hook to the tug

or trace C, I cast the main part A of the hook with the tang D, which is formed with the perforation *g* and larger opening *h*, and is adapted to pass between the plies of the tug, as shown
55 in Fig. 2. The tug is formed with openings to correspond with the openings *g* and *h* of the tang D. In these openings in the tug and tang are placed the projections *e e'*, formed upon the under side of the clamp-plate E. The projection
60 *e'* is screw-tapped, as shown in Fig. 2, to receive the screw-threaded stud *j*, formed upon the opposite clamp-plate, F, which stud, being screwed to place in the projection *e'*, clamps this plate F and the plate E upon the tug, and
65 completes the attachment of the hook to the tug. The plate F is so formed that its forward end serves as a lever for screwing the stud *j* tightly into the tap of the projection *e'* and unscrewing the same therefrom, and the plates E
70 and F, besides being efficient and convenient means for attaching and detaching the hook to and from the tug when in place upon the tug, serve also as ornaments to the tug. The
75 outer end of the jaw B is formed with the hooked portion *k*, which, when the jaw is closed, laps upon the hooked portion *k'* of the main part A of the hook, as shown in Figs. 1 and 2, and with the curved shoulder *l*, which entirely
80 closes the entrance to the main part of the hook, as shown in Fig. 1, and this shoulder is overlapped by the hook *k'*, which reaches below or beyond it in the manner shown, so that no movement or pressure of the hook or of the
85 ring or staple placed in it will open the jaw B. The extreme end of the jaw B is slightly cut away, as shown at *o*, and when the jaw is closed shuts over the lip *o'*, formed upon the main portion A, which furnishes additional security
90 against danger of the jaw B being accidentally opened.

In most instances the tang B will be made so that the broad sides of the hook when attached to the tug will be parallel with the sides of the tug; but in other instances the
95 tang will be so formed that the broad side of the hook will stand at right angles to the sides of the tug, as shown at A' in Fig. 3. The end of the tug which has the latter style of hook is the forward end, and this hook is to be attached to the ring or staple in the hame of the
100 harness. The rear end of the tug has the

hook with its broad sides arranged parallel with the sides of the tug, and is adapted to be attached to the single-tree or trace-chain, as the case may be.

- 5 To prevent any noise or rattling of the hook, it is packed with rubber, as shown at *s* in Fig. 6. The hook is cast hollow or with a recess, *s'*, as shown in dotted lines in Fig. 6, and the strip of rubber *s* is forced into the cavity, 10 where it will remain and prevent all rattling of the hook from contact with the single-tree or staple in the hame.

Having thus fully described my invention, I claim as new and desire to secure by Letters 15 Patent—

1. The hook cast with the recess *s'*, in combination with the rubber packing *s*, whereby the hook is made noiseless, substantially as described.

2. The main part A of the hook, formed with the tang D, having the holes *g* and *h*, in combination with the clamp-plates E and F, the former being formed with the projection *e* and screw-tapped projection *e'*, and the latter being formed with the screw-threaded stud *j*, substantially as and for the purposes set forth. 20 25

3. The combination, with the main part A, provided with the recess *a* and projection *i* in said recess, of the jaw B, provided with the rim *f*, having slot *i'*, the screw *c*, and the coiled 30 spring *b*, substantially as and for the purpose set forth.

WILLIAM K. RAIRIGH.

Witnesses:

W. L. BLAKSLEE,
C. H. MARTIN.