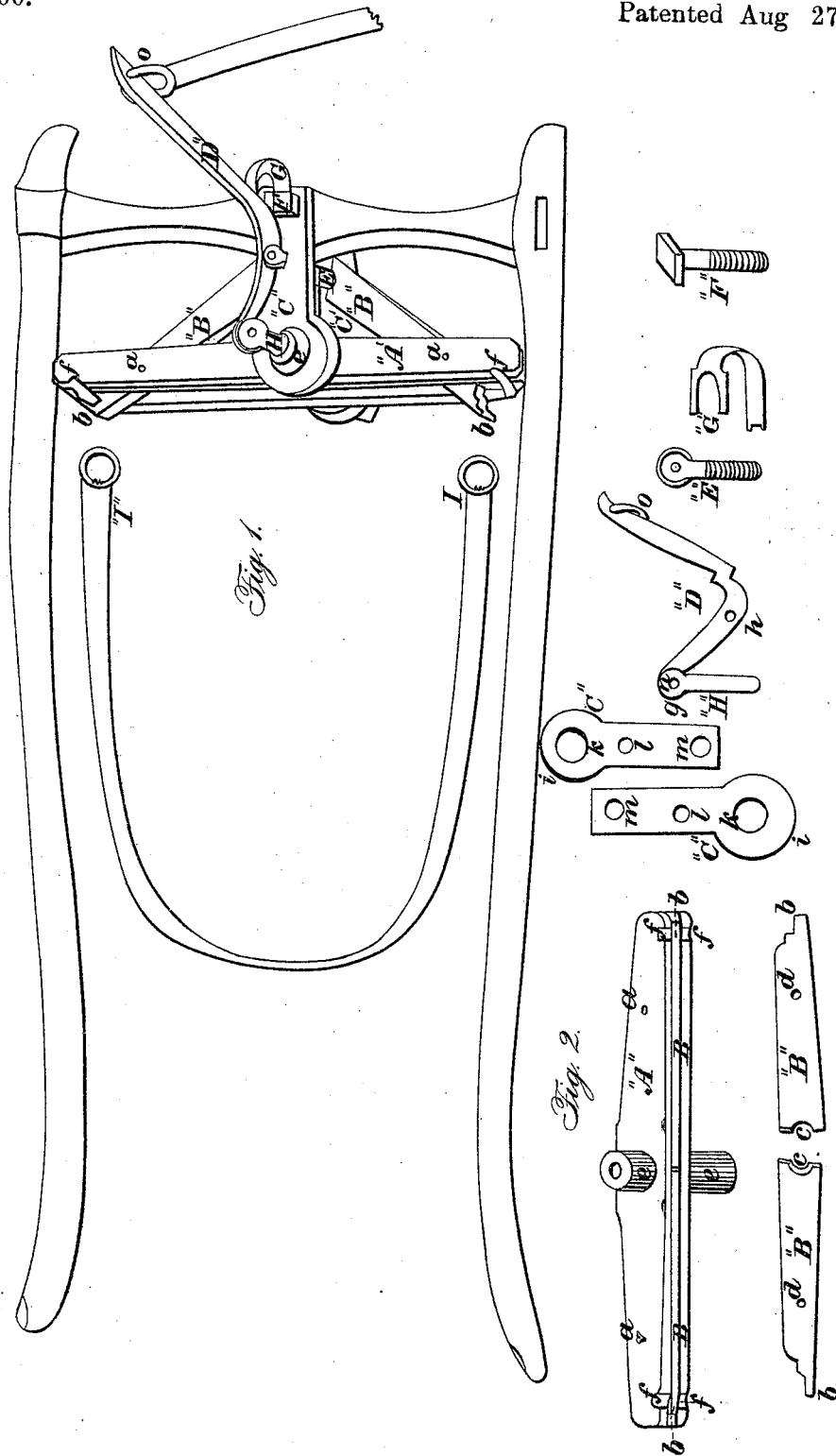


J. W. HARRISON.

Whiffletree.

No. 7,600.

Patented Aug 27, 1850.



# UNITED STATES PATENT OFFICE.

JNO. W. HARRISON, OF LOGANSPORT, INDIANA.

## DETACHING HORSES FROM CARRIAGES.

Specification of Letters Patent No. 7,600, dated August 27, 1850.

*To all whom it may concern:*

Be it known that I, JOHN W. HARRISON, of the town of Logansport, in the county of Cass and State of Indiana, have invented a new and useful Improvement on the swingle-tree, which I entitle the "safety-swingle-tree," invented for the purpose of preventing horses or other draft animals from running away with buggies, carriages, wagons, and sleighs; and I do hereby declare that the following is a clear, full, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification; in which—

Figure 1 is a perspective view of the safety-swingle-tree and its apparatus attached to the cross piece of the buggy shaft; Fig. 2 is a view of the safety-swingle-tree proper, consisting of a case or hollow swingle-tree closed at the ends, in the shape of a swingle-tree, and marked "A," and also two latches or slides, working therein by means of two pins passing through them and marked "B, B." Letter "A," as aforesaid, is a flat case or hollowed swingle-tree of the size and shape of an ordinary swingle-tree, and closed at each end; it has a flange or circular raising, marked *e e*, in the middle and on each side, through which are tubes to admit a king bolt, marked "H"; and has a notch or groove, marked *f f*, near each end in front.

Letters "B, B," are flat latches or slides, to be placed and fitted in the case (A,) by means of two pins, marked *a a*, passing through the case and then, at the holes therein, marked *d d*. One end of each latch has a curve, marked *c c*, and on the other end, which is the draft end, there is a notched or hitching point, marked *b b*.

Letters "C C" are plates or stirrups alike in form and construction; each one has an enlarged and circular end, marked *i i*, and has three holes through it—the larger one, marked *k k*, in the enlarged end; another in the middle, marked *l l*, and another near the other end, marked *m m*. The holes *l l* and *m m*, in one of the stirrups are threaded so as to receive a screw, which is the only difference between the construction of the stirrups.

Letter "D" is a lever, which is fitted at its end, into the grooved head, marked *g*, of a king bolt, marked "H," by means of a pin marked *n* upon which it works; it

has a pin hole in its middle, marked *h*, and a strap ring marked *o* at its power end.

Letter "E" is a groove headed screw bolt. Letter "F" is a flat headed screw bolt.

Letter "G" is a force spring; its proper position reversed in the drawing.

Letters "I I" represent the traces and rings to be hitched to the safety swingle-tree.

This safety-swingle-tree, and its apparatus consisting of the said stirrups, lever and king bolt, grooved and flat headed bolts, and force spring, I in general construct of wrought iron; and the case or hollowed swingle-tree is in general formed by two bars of iron of the necessary proportions being so drawn out by hammering as to leave the flanges (*e e*) raised from the body of the bars in the middle thereof, which flanges are then bored through, in the usual manner, so as to form their tubes, and are then turned and finished by the file; the ends are then welded together, and grooved in the front, in the usual manner. The latches "B, B," the stirrups "C, C," the lever "D," the king bolt "H," the grooved head screw bolt "E," the flat head screw bolt "F," and the force spring "G," are in general formed of bar and plate iron of the proper forms, in the usual way and manner of the blacksmith.

A set of buggy shafts of the ordinary kind being obtained, the safety-swingle-tree and its apparatus are thereto attached for use in the following manner:—a hole is bored perpendicularly through the cross piece, at its middle, so as to admit through it the flat headed bolt "F." The stirrup, whose holes, *l* and *m* are not threaded for the screw, is then fitted upon the cross piece of the shafts, by passing the flat headed bolt "F" through the hole *m* of the stirrup, and the cross piece—the force spring "G" being first placed upon the end of the stirrup and under the head of the bolt. The safety swingle-tree, consisting of the case and latches aforesaid, is then placed up to said stirrup, and either of the flanges (*e e*) elevated through the hole (K) in the rounded end; the other stirrup is placed up to the cross piece underneath the upper stirrup—the hole (K) being placed to and fitted around the flange on the lower side of the swingle-tree—and is first fastened there by screwing bolt "F" into the threaded hole (*m*) of the stirrup. The grooved headed screw bolt (E) is placed through the

upper stirrup at the hole (L) and is screwed firmly into the lower stirrup at the threaded hole (L). The lever, "D," is then placed, at hole "h," in the grooved head of the screw bolt, "E"; and is fitted therein by a pin running through the head at "n" and through the lever at "h"; and which is its fulcrum. The king bolt (H,) being fitted as aforementioned to the lever, is pushed down through the tubes of the flanges (e e,) and when the latches, B B, are closed as in Fig. 2—between and fitting to the curves (c c) of the latches; to which place it is kept by the force spring (G) bearing against the back of the lever.

The operation of the safety swingletree and its apparatus consist simply, when open as in Fig. 1, in fitting the trace rings ("Q Q") to the hitching points (b b) of the latches, and bringing the latches around so as to fit in and parallel to the case; which will inclose the trace rings firmly between the points (b b) and the grooves (f, f,) and will also bring the curver (c c) in contact, and in range with the tubes of the flanges (e e)—forming one continuous tube therewith. The king bolt is then let down through such continuous tube, and holds the latches firmly to their places—the king bolt being kept more securely to its place by means of the force spring pressing against the back of the lever. The strength and security of both, the latches and the king bolt, consist in the point at which the latches are fixed to their places by the pins (a a); which is one third the distance from the hitching point toward the curved end. The swingletree is kept securely to its place by means of the larger holes (K K) fitting around

the flanges, and the stirrups themselves secured by means of the two bolts "E" and "F". When the safety swingletree is in use, and it is desired to unhitch the horse from the same, either for the purpose of avoiding the danger of his running away with the buggy, or for the purpose of simply letting him out of the shafts at leisure, that object is at once attained, by the driver's pulling the strap (o) attached to the lever, and raising the king bolt (H); the curves (c c) being free, and the hitch points (b b) being pulled around and out of the case by the horse, the trace rings slip off, and he is disengaged from every part of the vehicle.

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

The application to buggies and other vehicles drawn by horses or other draft animals, of a new and useful improvement on the swingletree—which I entitle the safety swingletree—together with its apparatus consisting of a lever and king bolt, a grooved headed screw bolt, a flat headed screw bolt, a force spring, and two stirrups combined, as above described, which, upon the king bolts being raised as above described, will allow the horse to become unhitched and to pass off freely from the same and every part thereof without danger to the same or to persons therein contained; using in the construction of the same, wrought iron or any other durable material that will insure the desired object.

JOHN W. HARRISON.

Witnesses:

B. Z. BURCH,  
GEO. W. SHAFFER.