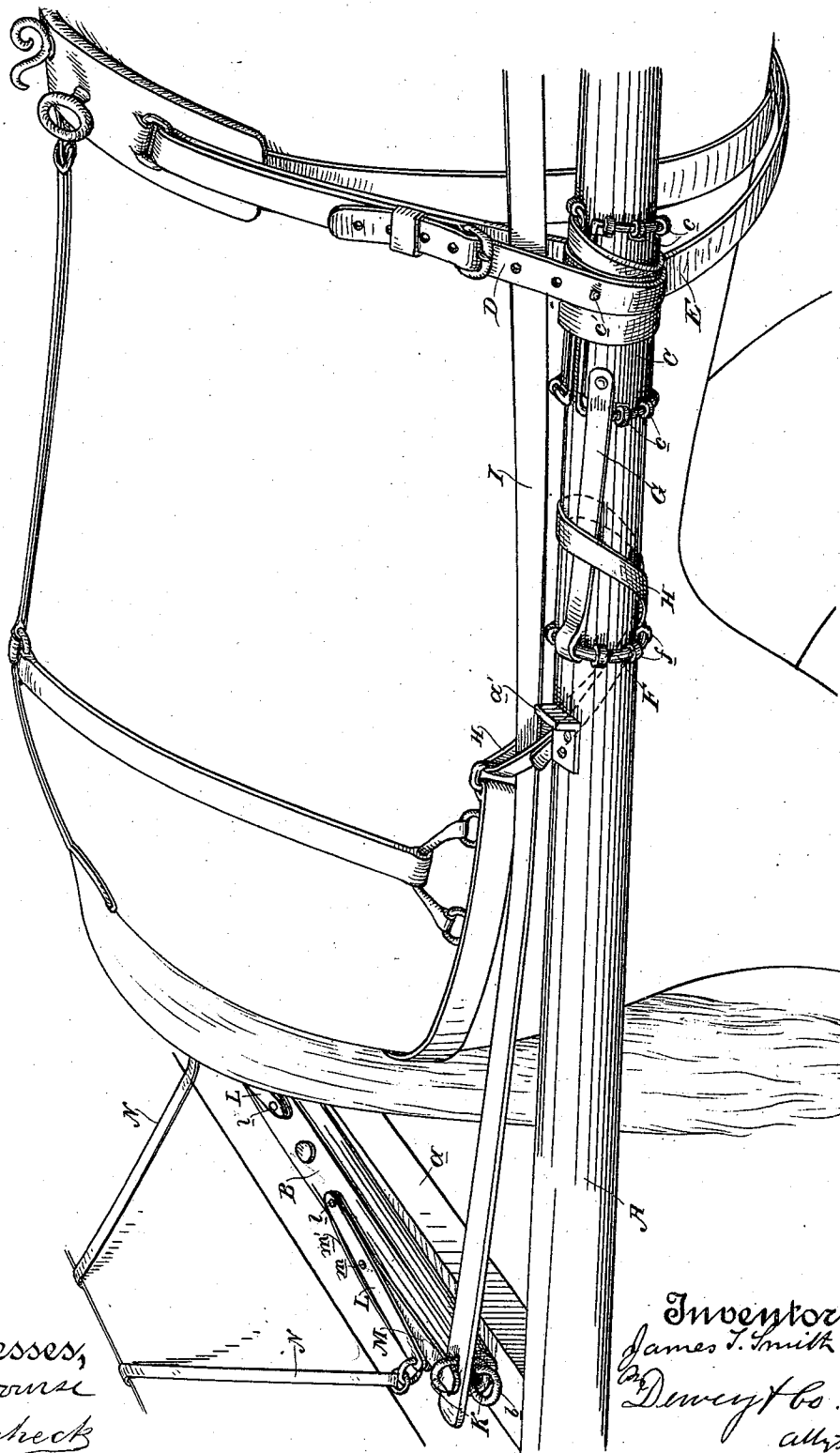


(No Model.)

J. T. SMITH.
SAFETY HARNESS.

No. 486,238.

Patented Nov. 15, 1892.



Witnesses,
G. H. House
H. F. Clocheck

Inventor
James T. Smith
Dewey & Co.
attys

UNITED STATES PATENT OFFICE.

JAMES T. SMITH, OF OROVILLE, CALIFORNIA.

SAFETY-HARNESS.

SPECIFICATION forming part of Letters Patent No. 486,238, dated November 15, 1892.

Application filed August 7, 1891. Serial No. 402,043. (No model.)

To all whom it may concern:

Be it known that I, JAMES TYLER SMITH, a citizen of the United States, residing at Oroville, Butte county, State of California, have invented an Improvement in Safety-Harness; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of harness in which the traces are attached to the whiffletree by means of a trip connection under the control of the driver; and my invention consists in the constructions and combinations of devices which I shall hereinafter fully describe and claim.

Referring to the accompanying drawing for a more complete explanation of my invention, the figure of the drawing is a perspective view of my safety-harness.

A is one of the shafts of the vehicle, of which *a* is the cross-bar, and B is the whiffletree upon said cross-bar.

C is a band or sleeve of suitable material, preferably made of a single piece of metal bent into circular form with its meeting ends disconnected, so that it may expand or contract to fit any size of shaft. This sleeve C is fitted freely and loosely upon the shaft, (one on each shaft), so that it may slide easily thereon. To assist in this sliding, it may have end antifriction-rollers *c*, as shown.

D is the ordinary shaft-bearer of the back-band. This fits upon and encircles the sliding sleeve C, being held thereon in a suitable manner, as by means of the points *c'* on the band projecting through holes in the shaft-bearer.

E is the belly-band or girth, which is also secured to the sliding sleeve C.

F is a stop-ring fitted loosely over the shaft, and it may be provided with antifriction-rollers *f* to enable it to slide freely upon the shaft. This ring is connected with the sleeve C by means of the extension-strap G.

H is the breeching-strap made double, so that it may pass forwardly through the ring and around the shaft, embracing the extension-strap G, as shown. Upon the top of the shaft is a fixed stop *a'*, against which the ring F is adapted to come in contact.

I is a trace.

The operation of the harness as far as described is as follows: The sliding sleeve C,

which carries the shaft and to which both the shaft-bearer and the belly-band are secured, being adapted to move freely upon the shaft, the horse never pulls from the back-band, but always from the trace, nor does he hold back by the back-band, because upon pulling back the ring F, coming in contact with the fixed stop *a'* on the shaft, is arrested at its upper portion, while the lower portion continues to move back, which has the effect of tightening the end of the breeching-strap which embraces the shaft, so that it clamps upon said shaft firmly, thereby enabling the horse to hold back by the breeching, no holding back being done by the back-strap, as the sleeve C simply slides freely on the shaft. Another effect of this construction is that when the traces are released from the whiffletree the horse can walk out from between the shafts carrying the entire harness with him, as the sleeve C simply slides off the shaft, and all the parts being connected with said sleeve are carried off with them.

Secured to the end lug *b* of the whiffletree is a link K, which is fitted freely thereon, so that it may turn forwardly from a vertical to a horizontal position.

Pivoted at *l* upon the top of the whiffletree is a lever L, to which is pivoted at the point *m* the trip-catch M, the end of which projects beyond the lever. A spring *m'*, carried by the lever, bears upon the inner end of the trip-catch and serves to hold the lever and catch in line normally.

N is a strap the end of which is secured to the end of the lever L, and said strap extends backwardly within reach of the driver.

The link K being in a vertical position upon the end lug of the whiffletree, the trace is brought back and its loop is fitted over the upper end of said link. The projecting end of the trip-catch is fitted through the upper end of the link K above the trace, and when in this position it prevents the link from turning over forwardly, and thereby holds the trace to the whiffletree. Now when it is desired to release the trace the strap N is pulled upon, which has the effect of pulling backwardly on the bar L. This backward movement of the lever separates it from the trip-catch and causes said catch to withdraw (by reason of its point of connection with the

lever) from the link, and as soon as this withdrawal is complete the pull on the trace causes the link K to turn forwardly through a quarter-turn, whereby the trace slips from
5 the link and is thus free. It will be seen, therefore, that in case of a runaway the driver can instantly release the traces, whereby the whole harness will slide forwardly free of the shafts and allow the horse to become dis-
10 gaged.

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

1. In a safety-harness, and in combination
15 with the shaft-bearer and belly-band, a sliding split sleeve fitted to move freely on the shaft and to which the shaft-bearer and belly-band are attached, said sleeve carrying anti-
20 friction-rollers in its end, a ring to which the breeching-strap is attached, fitted to move freely on the shaft back of the sliding sleeve and to have its rearward movement limited by a stop on the shaft, and a strap connecting

the ring and sleeve, so that the two move together, substantially as herein described. 25

2. In a safety-harness, and in combination with the shaft-bearer and belly-band, a sliding sleeve fitted to move freely upon the shaft and to which the shaft-bearer and belly-band
30 are attached, the extension-strap connected with the rear of said sleeve, a ring fitted to move freely upon said shaft, connected with said extension-strap and adapted to be limited in its backward movement by a stop on the
35 shaft, said sleeve and ring being each provided with antifriction-rollers which bear on the shaft, and the breeching-strap passing through the ring and embracing the shaft and extension-strap, substantially as herein de-
40 scribed.

In witness whereof I have hereunto set my hand.

JAMES T. SMITH.

Witnesses:

J. M. MCGEE,
ABE. COHEN.