C. H. NOYES.

ROTATABLE BARRIER PLATE FOR COCKEYES.

APPLICATION FILED AUG. 26, 1910.

988,494. Patented Apr. 4, 1911.

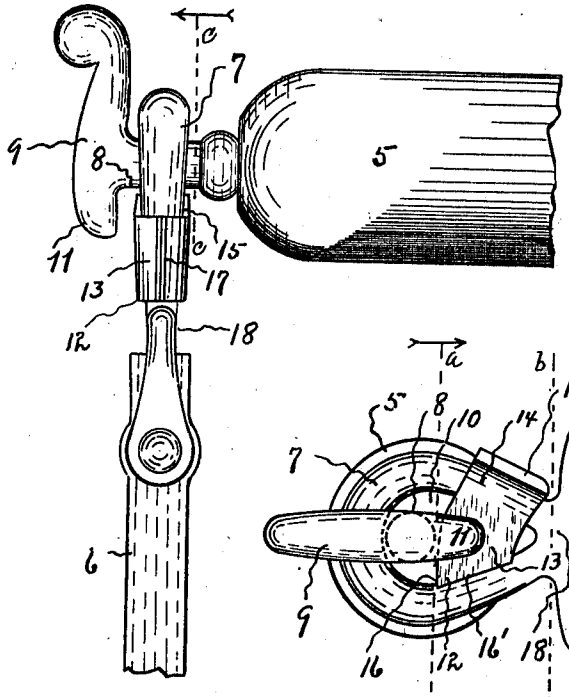

Fig. 1.

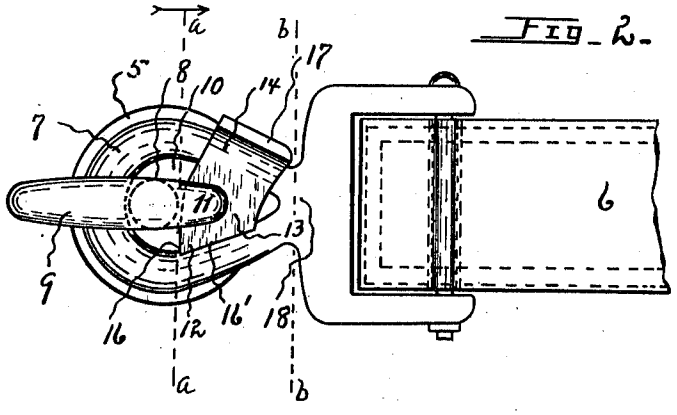

Fig. 2.

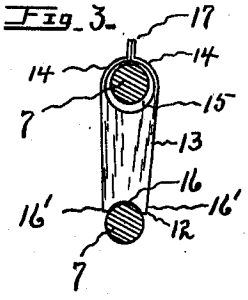

Fig. 3.

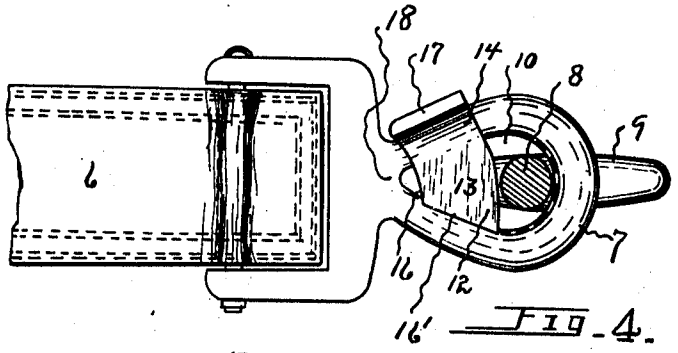

Fig. 4.

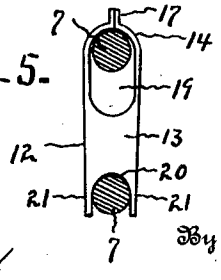

Fig. 5.

Witnesses

W. L. Day

Ralph F. Marsh.

Inventor

Charles H. Noyes,

By Hiram A. Sturges.

Attorney

UNITED STATES PATENT OFFICE.

CHARLES H. NOYES, OF OMAHA, NEBRASKA.

ROTATABLE BARRIER-PLATE FOR COCKEYES.

988,494. Specification of Letters Patent. Patented Apr. 4, 1911.

Application filed August 26, 1910. Serial No. 579,096.

To all whom it may concern:

Be it known that I, CHARLES H. NOYES, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Rotatable Barrier-Plates for Cockeyes, of which the following is a specification.

This invention relates to rotatable barrier-plates or safety guards for the cockeyes of harness traces, and has for its object to provide a means for preventing accidental detachment of the cockeye from the trace hook of the swingletree, the same to be reliable in operation and of simple construction so that it may be economically manufactured.

The invention includes a filler-member or barrier-plate mounted rotatably upon the loop and near the shank of the cockeye, adapted to fill the space within the loop forwardly of the trace-hook, or as much of this space as may be necessary to prevent a rearward movement of the cockeye after the latter has been mounted upon the hook of the swingletree, but which may be readily rotated, manually, when it is desired to detach the trace from the swingletree.

In the construction of cockeyes for harness traces, the loop is generally formed oval in shape and of much greater length than the diameter of the shank of the hook of the swingletree, to the end that the cockeye may be conveniently mounted upon or removed from the hook. The traces often become slack when driving over uneven surfaces or down inclines, resulting in their rearward movement, said traces being bowed or bent outwardly and forcibly moved backward at this time; and the cockeye, by reason of these movements, becomes detached from the hook. By use of the herein described filler-member or barrier-plate, these objectionable results are prevented, this plate remaining reliably within the opening of the loop and filling a sufficient portion of the space thereof to prevent the rearward movement of the cockeye.

With the above mentioned objects in view, the invention presents a novel construction, combination and arrangement of parts as described herein and claimed, and as illustrated in the accompanying drawing, wherein,—

Figure 1 is a plan view of the end-portions of a swingletree and a harness trace, these parts being connected by a cockeye with a rotatable filler-member or barrier-plate mounted thereon and embodying my invention. Fig. 2 is a side view of the parts shown in Fig. 1. Fig. 3 is a sectional view of the cockeye between lines *a a* and *b b* of Fig. 2, to show an end view of the barrier-plate. Fig. 4 is a sectional view on line *c c* of Fig. 1. Fig. 5 illustrates a modified form of the barrier-plate.

Referring now to the drawing for a more particular description, numerals 5 and 6 respectively indicate a swingletree and a harness-trace, said trace being provided with a cockeye having an endless, metallic, holder-member, ring or loop 7 mounted upon the shank 8 of trace-hook 9 of the swingletree, these parts being of ordinary and well-known construction.

As ordinarily constructed, loop 7 has a greater length than width, and its opening 10 is oval in form, this being for the purpose of allowing the loop to be moved over the guard 11 of hook 9 after the loop has been seated upon shank 8, while mounting the cockeye upon the shank; and, as is well known, to disconnect the cockeye from the hook of the swingletree, the operator moves the front part of the cockeye outwardly and in a direction angularly with reference to the swingletree, the guard 11, by this operation, readily passing through the aperture of the loop, during the swinging movement of the trace.

When driving down an incline or over uneven surfaces, the cockeye often becomes detached from the swingletree, causing inconvenience and danger, the accidental detachment being caused by the rearward movement of the traces, said traces becoming slack and being bowed outwardly at this time. In order to prevent the cockeyes from becoming disconnected from the trace-hooks I provide the barrier-plate or filler-member 12 having a body-portion 13, the upper end of portion 13 being provided with curved arms or wall-portions 14 adapted to circumscribe the upper, elongated body-portion of loop 7.

As thus described the filler-member is formed with an aperture 15 at its upper end to provide a mounting upon the loop, this aperture being larger than the diameter of the loop so that it may be rotated thereon. It is preferably constructed of metal, and since the body portions of the loop are disposed one above the other, the filler-member

will normally remain within aperture 10 by reason of its weight. In order, however, that it may be reliably held within the aperture of the loop, a concaved groove or longitudinal recess 16 (Fig. 3.) is formed in the bottom or lower end of body-portion 13 thereby providing oppositely-disposed projections 16′ for a seating upon the lower body-portion of the loop.

In practice, when mounting the trace upon the trace-hook of the swingletree, the barrier-plate 12 is first partly rotated or manually swung upwardly, comb or holding-piece 17 being convenient for this operation, and after the loop of the cockeye has been seated upon shank 8 in the usual manner, the barrier-plate is swung downwardly to occupy a position within the aperture of the loop between shank 8 of the trace-hook and shank 18 of the cockeye, and it will remain in this position, partly by gravity and by reason of the fact that projections 16′, adjacent to groove 16, have bearings upon and outwardly of the lower part of the loop. At this time should the traces be forced rearwardly, as when driving down inclines, body-portions 13 of the barrier plate will make contact with the shank of the trace hook, and guard 11 of the hook will be prevented from passing through the aperture of the loop.

When it is desired to detach the cockeye from the swingletree the barrier-plate may be manually swung upwardly, after which the parts may be detached in the usual manner.

Comb 17 is formed by up-setting the terminals of wall portions 14 so that they may be disposed adjacent and parallel. They prevent overlapping of the ends of the wall-portions at the time they are formed in a curved shape to circumscribe the loop.

While I have described curved wall-portions 14 to provide a mounting upon the loop of the cockeye, I do not limit myself to this construction, for the invention consists broadly of a filler-member or body-portion rotatably mounted upon the loop and adapted to fill a part of the aperture thereof, to prevent longitudinal movement of said loop upon the shank of the trace-hook, and to prevent the guard of the hook from passing through the aperture of the loop; and to the end that the filler-member may discharge these functions, it is considered that it may be mounted rotatably upon the loop and supported in any suitable manner.

It is not considered to be a departure from the invention to provide the longitudinal aperture 19, elongated in cross-section, for a mounting of the barrier-plate or safety guard upon one part of the loop, the opposite end of said plate being provided with a deep recess or slot 20 to provide oppositely-disposed, elongated projections or wings 21 for engagement with the opposite part of said loop, since the function of parts and their operation are the same as already described, and this modification is shown in Fig. 5.

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

1. A safety guard for trace cockeyes, comprising, in combination with the loop of the cokeye, a filler-member having attenuated curved wall portions formed upon one of its sides, its opposite side having a groove formed therein; said member adapted to be disposed within the aperture of the loop with its curved wall-portions circumscribing one of the sides thereof, its groove engaging the opposite side of said loop.

2. A safety guard for trace-cockeyes, comprising, in combination with the loop of the cockeye, a filler-member having attenuated, curved wall-portions formed upon one of its sides with upset, adjacent terminals forming a holding-piece, its opposite side having a groove formed therein, said member adapted to be disposed within the aperture with its groove engaging one of the sides of said loop, the curved wall-portions of said member circumscribing and disposing said holding-piece outwardly of the opposite side of said loop.

3. A safety guard for trace-cockeyes, comprising, in combination with the endless ring of the cockeye, a barrier-plate having one of its sides pivotally mounted upon one part of the ring, its opposite side being provided with oppositely-disposed projections adapted to engage the opposite part of said ring.

4. A safety guard for trace cockeyes, comprising, in combination with the endless loop of the cockeye; a barrier-plate formed with a terminal slot with adjacent, oppositely-disposed projections, its opposite terminal having an aperture formed therein, said barrier-plate adapted to be disposed with the wall of its aperture circumscribing one portion of the body of said endless loop, the wall of the terminal slot bearing upon another portion of the body of the loop.

In testimony whereof I have affixed my signature in presence of two witnesses.

CHARLES H. NOYES.

Witnesses:
HIRAM A. STURGES,
F. R. GOSNEY.