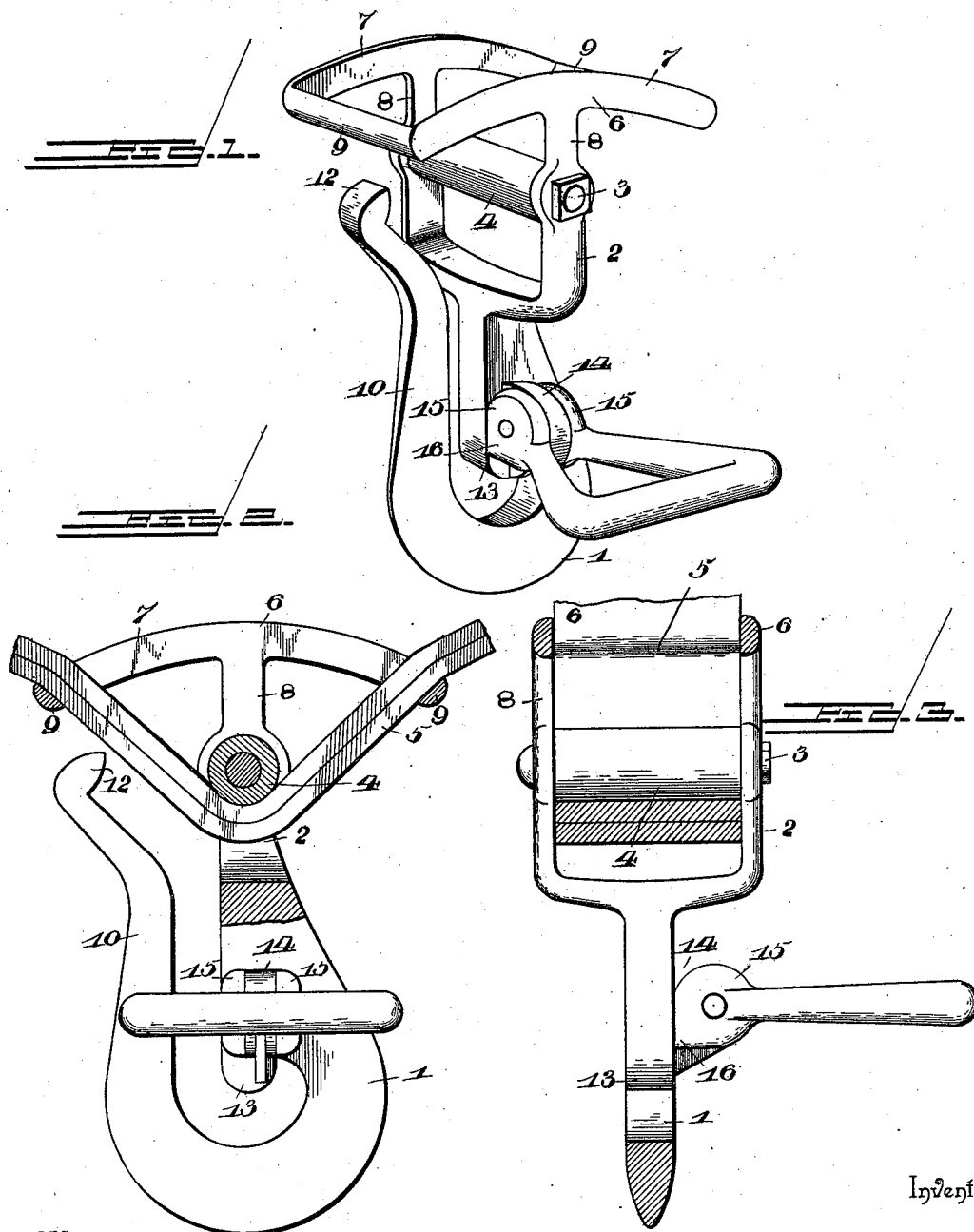


(No Model.)

G. E. BOUGHTON.  
BREAST STRAP ROLL.

No. 574,777.

Patented Jan. 5, 1897.



Witnesses

W. L. Doyle  
J. H. Riley

By his Attorneys,

George E. Boughton,

C. A. Snow & Co.

# UNITED STATES PATENT OFFICE.

GEORGE EDWIN BOUGHTON, OF ALMA, MICHIGAN.

## BREAST-STRAP ROLL.

SPECIFICATION forming part of Letters Patent No. 574,777, dated January 5, 1897.

Application filed September 25, 1895. Serial No. 563,638. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE EDWIN BOUGHTON, a citizen of the United States, residing at Alma, in the county of Gratiot and State of Michigan, have invented a new and useful Neck-Yoke Coupling for Harness, of which the following is a specification.

The invention relates to improvements in neck-yoke coupling for harness.

Heretofore neck-yoke couplings have been provided and have consisted of a hook to be connected with the neck-yoke, an eye or loop to be connected with the holdback-strap, and a roller at the top of the hook to receive the breast-strap; but the roller has been free to move on the breast-strap, and the pole is thus left free to swing or sway and often strikes the draft-animals, much to their injury or annoyance.

The object of the present invention is to improve the construction of neck-yoke couplings and to provide a simple, inexpensive, and efficient one capable of obviating the above objection and adapted to be readily connected to and detached from a neck-yoke without liability of becoming accidentally separated.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a neck-yoke coupling constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same and a portion of a neck-yoke strap. Fig. 3 is a longitudinal sectional view taken at right angles to Fig. 2.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a hook having a rounded bottom portion to receive a ring or link of a neck-yoke, and a yoke 2 is formed integral with the shank of the hook and extends vertically from the top thereof and is provided at its sides with bearings receiving a bolt or spindle 3, on which is arranged a roller 4. The bearings consist of eyes or openings, and the roller is a cylindrical sleeve arranged be-

tween the sides of the yoke, but any other form of roller may be employed.

In the use of the device the roller is arranged on a breast-strap 5 and is adapted to move along the same to adjust the device; and in order to prevent the tongue or pole from being thrown suddenly and violently against the draft-animals a brake or friction frame is provided for engaging the breast-strap to retard the movement of the device on the latter. The brake or friction frame 6 is substantially rectangular in plan view and is composed of curved sides 7, formed integral with vertical arms or extensions 8 of the sides of the yoke, and end pieces 9, connecting the terminal to the sides and having inner flat faces disposed at an inclination and adapted to engage the breast-strap. The open frame 6, the yoke, and the hook, by being rigid with one another, form a lever with the roller as a fulcrum, and when the hook swings in one direction the frame will be carried in the opposite direction. When the roller is arranged centrally of the strap and the device is in its normal position, the friction on the sides of the breast-strap, which passes under the roller and within the frame, is uniform, but as soon as the device swings to one side or the other, incident to the motion or swaying of the tongue or pole, the friction on the side to which the device swings increases and resistance is offered to movement of the device, owing to the change in the angle formed by the sides of the breast-strap. In this manner any sudden movement of the tongue or pole is counteracted, and it is prevented from striking the draft-animals with any force. The arms or extensions of the sides of the yoke are connected with the sides of the frame centrally of them.

The hook is readily linked into a ring of a neck-yoke and may be quickly separated therefrom, and to avoid any accidental separation without employing a spring to close the mouth of the hook the latter has its outer side 10 extended and arranged parallel with the adjacent edge of the shank and forming a narrow vertical slot and diverging from the shank at the top thereof and terminates a short distance from the adjacent end of the frame 6. This extended outer side 10 is pro-

vided at its terminal with an inwardly-extending substantially triangular projection 12. The hook, by this construction, when in its normal position has its mouth or entrance  
 5 nearly closed by the breast-strap to prevent any accidental disengagement of the neck-yoke ring, as the space between the projection 12 and the breast-strap is considerably less than the thickness of a neck-yoke ring for  
 10 engaging the hook; but the neck-yoke ring may be readily uncoupled when desired by slightly twisting the device to one side.

The shank of the hook is provided with a depending projection 13, and has at its rear  
 15 side a rigid lug 14, which may be integral with the shank of the hook or be constructed separate therefrom and be suitably secured thereto, and a substantially triangular loop is pivoted to the lug 14 and is adapted to be  
 20 connected with the holdback-strap. This triangular loop or clevis is provided at opposite sides of the lug with perforated ears 15 to receive the pivot, and the ears are provided at their lower sides adjacent to the  
 25 shank of the hook with shoulders 16 for engaging the hook to hold the loop in substantially a horizontal position to prevent it from dropping too far downward. The loop is adapted to swing upward, and its point of at-  
 30 tachment is arranged in vertical alinement with the bottom of the hook and the roller, whereby when the device is subjected to the strains incident to its use it will receive the same equally and be prevented from turning  
 35 or twisting.

It will be seen that the device is exceedingly simple and inexpensive in construction, that it possesses great strength and durability, and that while it is capable of movement on  
 40 the breast-strap it prevents any sudden movement of the tongue and avoids injury and inconvenience to the draft-animals. It will also be apparent that the hook enables the device to be readily connected with and  
 45 detached from a neck-yoke, that it will prevent any accidental separation, and that a spring is dispensed with.

Changes in the form, proportion, and minor details of construction may be resorted to  
 50 without departing from the principle or sacrificing any advantages of the invention.

What I claim is—

1. A device of the class described comprising a substantially horizontal open frame, a  
 55 central depending yoke rigid with the frame, a hook rigid with the yoke and extending downward therefrom, and a roller journaled in the yoke and located centrally beneath the open frame, said device forming a lever with

the roller for a fulcrum, so that when the  
 60 hook is swung in one direction the frame will be carried in the opposite direction, and being adapted to receive a breast-strap on its roller and have the same pass upward therefrom and extend within the frame in position to be  
 65 engaged by the ends thereof, whereby when the roller moves on the breast-strap, the frame will automatically engage the latter, frictionally, at the side toward which the roller moves to check such movement, and  
 70 will simultaneously free the other side of the breast-strap to facilitate a return of the roller, substantially as described.

2. A device of the class described, comprising a yoke, a centrally-arranged roller jour-  
 75 naled on the yoke, an open angular frame supported above the roller and having its end portions located above and at opposite sides of the same in position to engage the outer  
 80 face of a breast-strap, and a hook rigid with the yoke and having its outer side arranged substantially parallel with the shank of the hook, extended above the same and terminating  
 85 adjacent to one end of the frame at a point between the end and the roller in close proximity to the breast-strap, the space between the upper terminal and the outer portion of the hook or breast-strap, when the  
 90 latter is in position, being much less than the thickness of a ring for engaging the hook, whereby the mouth of the hook is effectually  
 closed to prevent a ring from becoming accidentally disengaged from the hook, substantially as described.

3. A device of the class described comprising  
 95 a hook having inner and outer sides with an intervening opening or space and provided at its inner side with a depending projection 13, a lug extending rearward from the inner  
 100 side of the hook and located directly above the projection 13, a loop pivoted to the said lug to receive a holdback-strap, offset laterally from the opening or space between the sides of the hook to arrange it out of the way  
 105 of the neck-yoke ring and provided with shoulders arranged to engage the hook, whereby the loop is held normally at right angles to the hook and is prevented from swinging downward from such a position, but is permitted to swing upward, substantially  
 110 as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE EDWIN BOUGHTON.

Witnesses:

J. F. SCHWARTZ,

F. MONTIGEL.