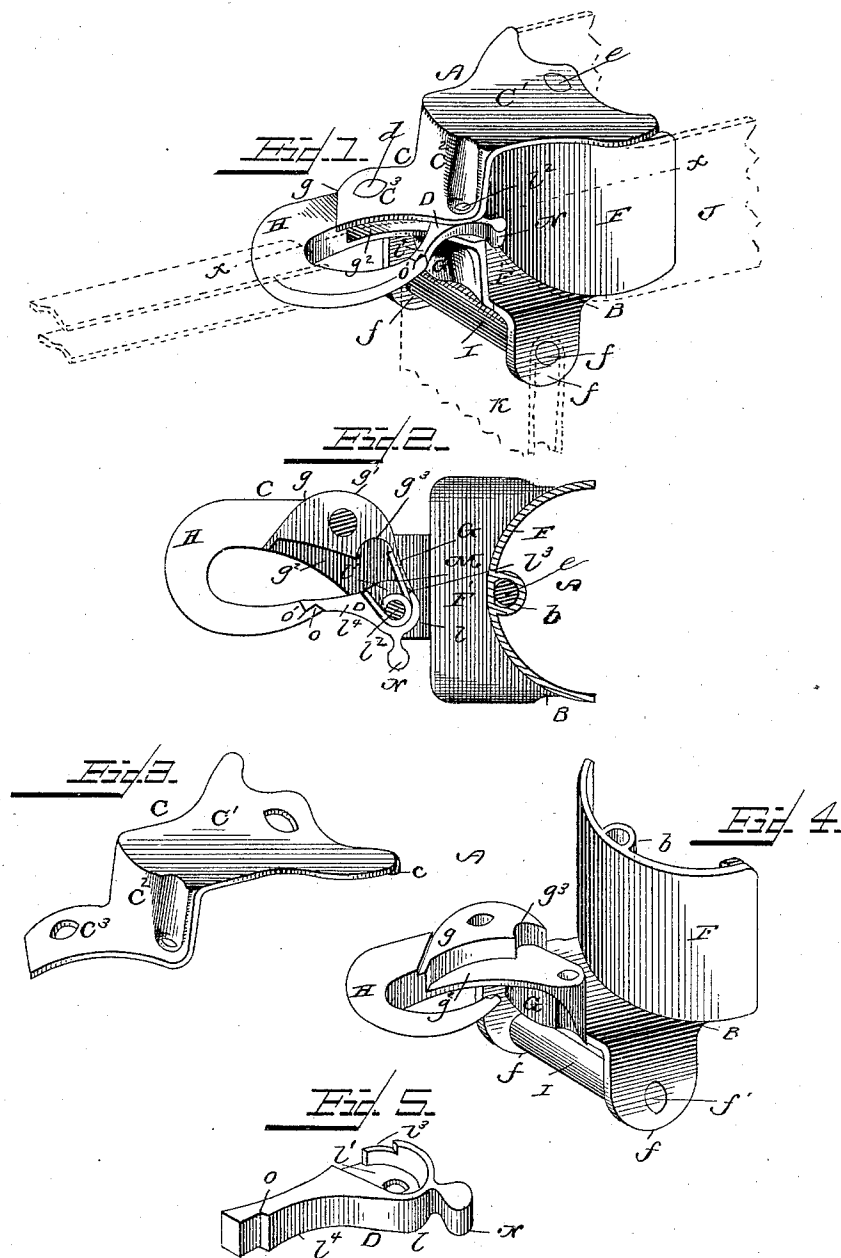


(No Model.)

J. R. DALTON.
NECK YOKE ADJUSTER.

No. 331,377.

Patented Dec. 1, 1885.



WITNESSES
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JOHN ROBERT DALTON, OF BURKHARDT, WISCONSIN.

NECK-YOKE ADJUSTER.

SPECIFICATION forming part of Letters Patent No. 331,377, dated December 1, 1885.

Application filed September 23, 1885. Serial No. 177,964. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. DALTON, a citizen of the United States, residing at Burkhardt, in the county of St. Croix and State of Wisconsin, have invented a new and useful Improvement in Neck-Yoke Adjusters, of which the following is a specification, reference being had to the accompanying drawings.

My invention has relation to improvements in neck-yoke adjusters; and the novelty consists in the peculiar construction, combination, arrangement, and adaptation of the various parts for service, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

The invention is especially designed as an improvement upon a device of like character patented to me on the 25th day of June, 1878, No. 205,249; and it has especially for its object the provision of means whereby the device can be more readily connected to the neck-yoke and be retained in proper position thereon.

The invention has further for its object to provide improved means for the connection of the breast and holdback straps, and minor details of construction which shall secure simplicity, strength, and durability of construction, thorough effectiveness of operation, cheapness and rapidity in the manufacture, and ease in the adjustability of parts.

I have shown an embodiment of my invention in the accompanying drawings, in which Figure 1 is a perspective view of my improved neck-yoke adjuster. Fig. 2 is a longitudinal vertical section on the line *x x* of Fig. 1. Figs. 3 and 4 are detail views of two parts of the device, each of which is cast in one piece. Fig. 5 is a detail view of the tongue of the snap-hook, which connects with a ring on the neck-yoke.

Like letters of reference in the several figures of the annexed drawings denote corresponding parts.

Referring by letter to the drawings, A designates my improved neck-yoke adjuster, which is made or cast in three pieces, B, C, and D, and connected together by bolts or rivets, and arranged with relation to each other in the manner which I will now proceed to describe.

The casting B consists of a breast-strap-holding portion, F, which is preferably curved or rounded or made semicircular, and provided on its outer vertical face with a seat, *b*, for the reception of the screw bolt or rivet that connects one of the end walls or piece, C, therewith. At one edge, on the rear side of the breast-strap piece F, is formed one of the end walls, F', having a curved or inclined rear wall, G, which connects with a curved hook, H, arranged in rear of the curved breast-strap holdback piece P, and at the middle thereof transversely across the plane of the same, all of said parts being cast in one piece, as described.

The breast-strap piece F is made curved, as described, to permit the said strap to move or slide freely back and forth therein, and the upper and lower end walls thereof prevent the strap from being displaced laterally. The lower wall, F', of the breast-strap-retaining portion F is provided at each end with downwardly-projecting perforated ears or lugs *f*, through which passes a shaft or bolt, *f'*, to connect said lugs together and provide a support for a friction-roller, I, mounted on the shaft *f'* and free to rotate thereon. The holdback-strap passes over said friction-roller, and is retained in place by the lugs *f*; said breast and holdback straps being indicated by dotted lines, and lettered J K, respectively. The rear wall, G, is arranged in a vertical position, or nearly so, and connects with the lower end wall, F', and the shank of the hook H. The upper face of the hook-shank is cut away, as at *g*, to provide a bearing for the tongue of the casting C, and with a rearward extension or lug, *g'*, having an aperture, through which passes a rivet to connect said tongue of the casting C and the hook H together. The inner vertical face of the hook-shank is cut away to provide a ledge, *g*², and is recessed, as at *g*³, to receive the enlarged lug or head of a tongue to the hook H, (shown more fully in Fig. 5 at D.) The lower ledge, *g*², is perforated near its outer inner or front end, and the tongue of the casting C is also perforated, and through these perforations passes the pivot-pin of the tongue or snap to the hook H, said snap or tongue being lettered D and fitted in the ledge *g*² of the shank of the hook and the tongue to the casting C.

The casting C comprises a flat portion, C', having a vertical arm, C², and a tongue, C³, all being cast or formed integral with each other. The flat portion C' has lugs or ears *c* at its front edge to take over the upper edges of the outer vertical face of the curved piece F, and constitutes an end wall, the upper one to the frame for inclosing the breast-strap, the vertical arm C² comprising a rear wall thereto and serving in connection with the tongue C³ to secure the casting C to the portion F and hook H, as before described, rivets or screw-bolts *d e* being employed to firmly secure the parts together, and arranged as shown and described.

The tongue or "snap" D of the hook H is provided with an enlarged head, *l*, having an open-ended slot or recessed portion, *l'*, and an aperture in one end thereof for the passage of a bolt or pin, *l''*, to pivotally connect said tongue in the hook H, as described. A coiled or spiral spring, M, is wound around the shaft or pin *l''*, and is seated in the recessed portion *l'* thereof, one arm of the spring bearing against the vertical wall of the head *l*, while the other arm projects through a cut-away portion or ledge, *l''*, and bears against the inner vertical face of the hook-shank, thus keeping the arm *l'* of said tongue normally in engagement with the lower curved arm of the hook H. The head of said tongue is provided with a projecting lug or finger-piece, N, arranged beyond the vertical faces of the hook-shank for convenient manipulation by hand without interference from the other parts, and the outer face of the arm *l'* of said tongue is notched or cut away, as at *o*, to fit in a correspondingly notched portion, *o'*, of the extreme forward end of the arm of the hook, whereby said arm *l'* is securely seated in the arm of the hook and prevented from play therein.

In use my improved device is connected to a ring on the neck-yoke, the hooked portion H thereof engaging said ring; but as the neck-yoke and ring are of the ordinary or any preferred construction I have not deemed it necessary to illustrate the same herein.

The operation of my improved device is similar to that of my former device covered by the hereinbefore-mentioned patent, and will be readily understood from the foregoing description, taken in connection with the drawings.

To release the tongue of the snap-hook to disconnect the device from the ring of the neck-yoke, the finger-piece N is forced inward, and thus operates the arm *l'* of said tongue, and against the tension of the spring, said tongue moving inwardly within the space in-

closed by the hook H. All the strain upon the hook H comes directly upon the outer curved end thereof and the tongue is free from said wear and strain, and it and the coiled spring are housed within said hook and free from liability of being struck and broken, while at the same time access thereto can be readily had to easily operate said tongue.

The improved device combines great strength with simplicity and durability of construction, thorough effectiveness and ease of operation, cheapness and rapidity in the manufacture thereof, reduces the wear and strain on the several straps and parts, and is readily detached, connected to, and adjustable upon a neck-yoke, all of which advantages are greatly desired in a device of this class.

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

1. As an article of manufacture, a neck-yoke adjuster comprising a curved support, F, having lateral studs *f*, a roller journaled therein, and a hook arranged in rear of and transversely across the support B, and provided with a spring-actuated tongue, substantially as described.

2. A neck-yoke adjuster comprising a breast-strap support, F, and a snap-hook, H, cast in one piece, a friction-roller journaled in bearings formed with the support F, a spring-actuated tongue to said snap-hook, and a casting, C, bolted to said support F and the snap-hook, substantially as described.

3. A neck-yoke adjuster comprising a curved breast-strap support, F, having a rear wall, lugs *f*, and a snap-hook, H, formed integral therewith, a casting, C, bolted to the support F and snap-hook on one of the side faces thereof, and a spring-actuated tongue pivoted to said casting C and the snap-hook shank, substantially as described.

4. As an article of manufacture, a neck-yoke adjuster comprising a curved support, F, having a rear wall, F' G, and lugs *f*, a roller journaled in said lugs, a hook formed with the walls F' G F, and having recessed portions in its vertical face, a casting, C, bolted to opposite side edges of the support F and hook-shank, a tongue pivoted between said casting C and hook, and a coiled spring seated in a recess therein, substantially as described.

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

JOHN ROBERT DALTON.

Witnesses:

WM. J. JOHNSON,
H. H. SMITH.