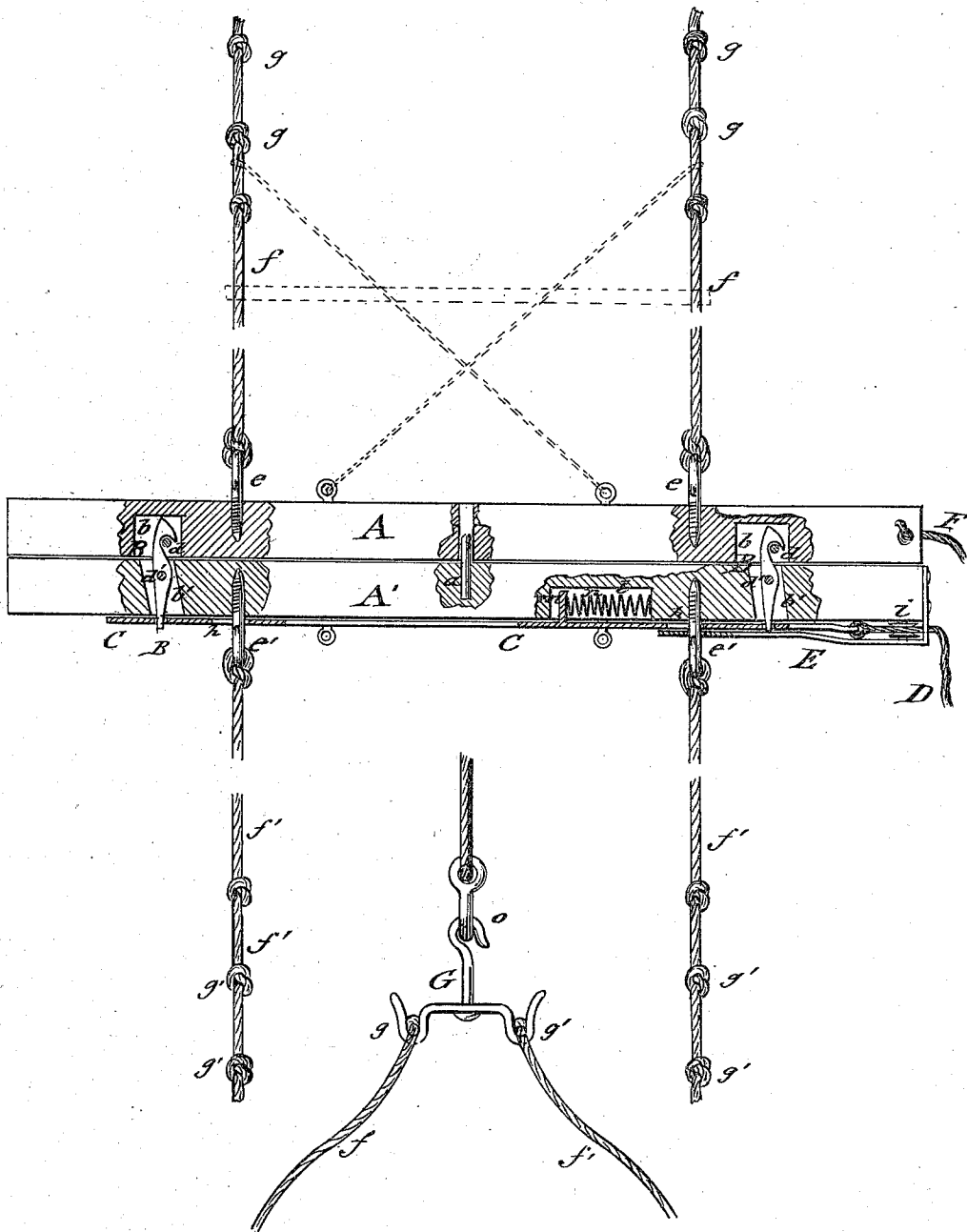


G. W. LONG.

Slings for Loading and Unloading Hay, &c.

No. 142,638.

Patented September 9, 1873.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE W. LONG, OF DELAWARE CENTRE, IOWA.

IMPROVEMENT IN SLINGS FOR LOADING AND UNLOADING HAY, &c.

Specification forming part of Letters Patent No. 142,638, dated September 9, 1873; application filed June 21, 1873.

To all whom it may concern:

Be it known that I, GEORGE W. LONG, of Delaware Centre, in the county of Delaware and State of Iowa, have invented a new and Improved Apparatus for Loading and Unloading Hay, &c., of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view, partly in section, of my improved apparatus for loading and unloading hay, &c.; and Fig. 2, a side view of the double hook to which the ropes are hitched.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide efficient means for the rapid unloading of hay, corn-fodder, sugar-cane, manure, and other farm products, by which the whole load is packed and hoisted up directly from the wagon and conveyed and stored at the place of destination. My invention consists of two strong pieces of wood, which may be connected and disconnected by means of lever-hooks and string attachment, to which the load is attached by knotted ropes, in connection with a double hook for hoisting. After conveying and hoisting the load to the point desired, it is detached by disconnections of the main pieces.

In the drawing, A A' represent the main connecting-pieces of the apparatus, of wood, and suitable dimensions. Piece A is provided with a central perforation for guide-pin *a* of piece A', and two longitudinal side recesses, *b*, with cross-pins *d*. Eyes or staples *e* have strong ropes *f* applied to them, which are provided with knots *g*, at suitable distances. Piece A' has pivoted into corresponding recesses *b'*, at *d'*, the lever-hooks B, which lock with their hook ends over the cross pins *d* of piece A, connecting together with pin *a* the pieces A A'. The lever ends of hooks B project beyond piece A', and pass through perforations of the sliding bar C, which is furthermore provided with slots *h* for the eyes or staples *e'*, having similar knotted ropes, *f'*, as piece A. At the end of sliding bar C is attached the trip-rope D, which passes over a small pulley, *i*, near end of piece A', and through a hole of band or bar E, to which the pulley-shaft is secured, and which also protects rope D, so as to produce the ready action of the same on sliding bar C and the ends of hooks B. The lever ends of hooks B are, by the pulling of the trip-rope D, carried

forward, so that the hook ends release the pins B from pins *d* and disconnect pieces A A'. A spiral spring, *l*, applied to a lug, *m*, of sliding bar C in recess *n* of piece A', acts in opposite direction to that of trip-rope D, securing the closing of hooks C to piece A till the strain on rope D overcomes the resistance of the spring *l*. To the end of piece A is attached the guide-rope F, by which the sling is controlled and drawn back to the wagon after the same is unloaded.

For loading and unloading manure, chaff, and other short articles, intermediate ropes, which pass crosswise from the pieces A A' to the ropes *f f'*, together with light slats connected parallel to the pieces A A', are used, as indicated by dotted lines in Fig. 1.

For using the apparatus or sling, one or more of them, as desired, are placed on the rack, with pieces A A' on and in the longitudinal direction of the same. The ropes *f f'* are hung sidewise over the rack. The load is then placed on and divided equally over the slings, if more than one are used. The ropes *f f'* are then brought around the load, and the knots *g g'* hitched into double hook G, Fig. 2, from both sides, so that a firm and strong binding of the load is produced. The wagon is then driven to the place of unloading, and central hook *o* of double hook G placed into the ring of the hoisting-rope, lifting the load contained in the sling directly from the wagon by means of suitable pulleys and power, and guiding it by rope F. When, arrived above the place of storing, the trip-rope E is pulled, the pieces A A' separate and drop the load instantly to the place required. When one sling only for the full load is used, the whole may be unloaded at once by the use of a capstan, in which the lever throws out of gear and allows the sling to be drawn down without backing the horse.

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

The bar A, provided with recess *b* and cross-pins *d*, in combination with the bar A', pivoted hooks B, sliding bar C, spring *n*, trip-rope D, and ropes *f* and *f'*, as and for the purpose specified.

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Witnesses:

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