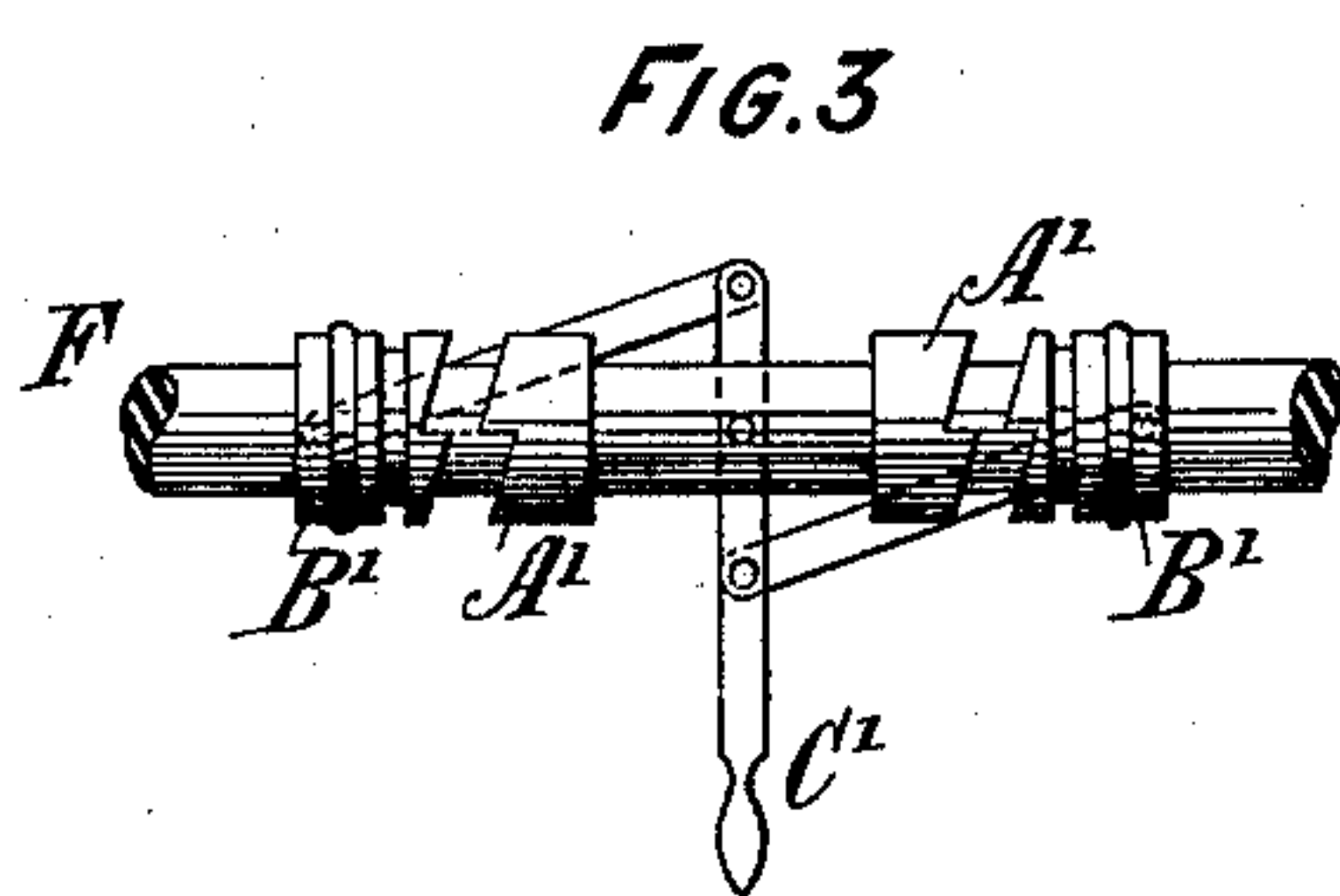
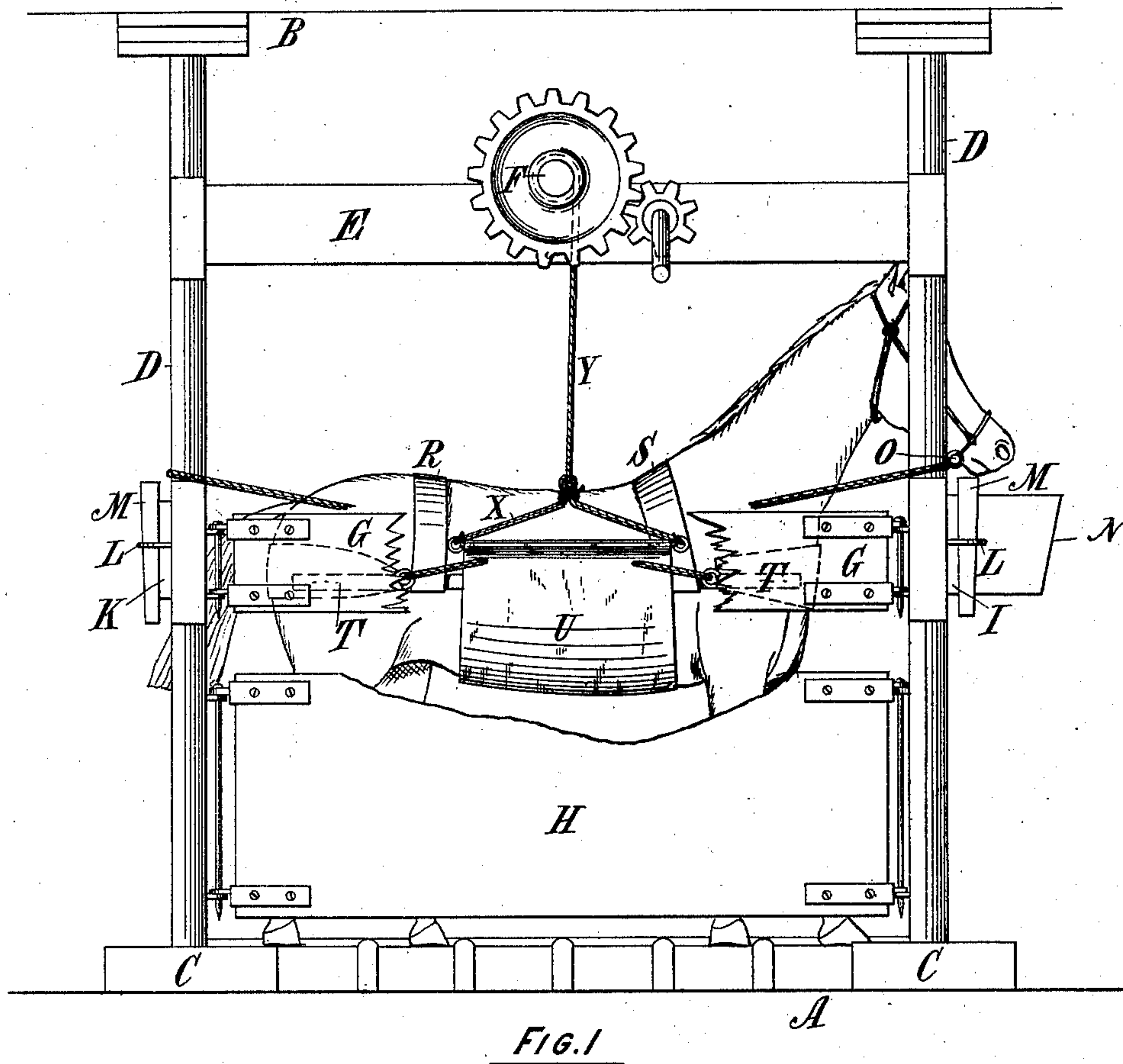


J. ARLESS.  
Horse-Stalls on Shipboard.

No. 216,129.

Patented June 3, 1879.



Witnesses:  
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Arthur Nelson

Inventor:  
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Per Atty.  
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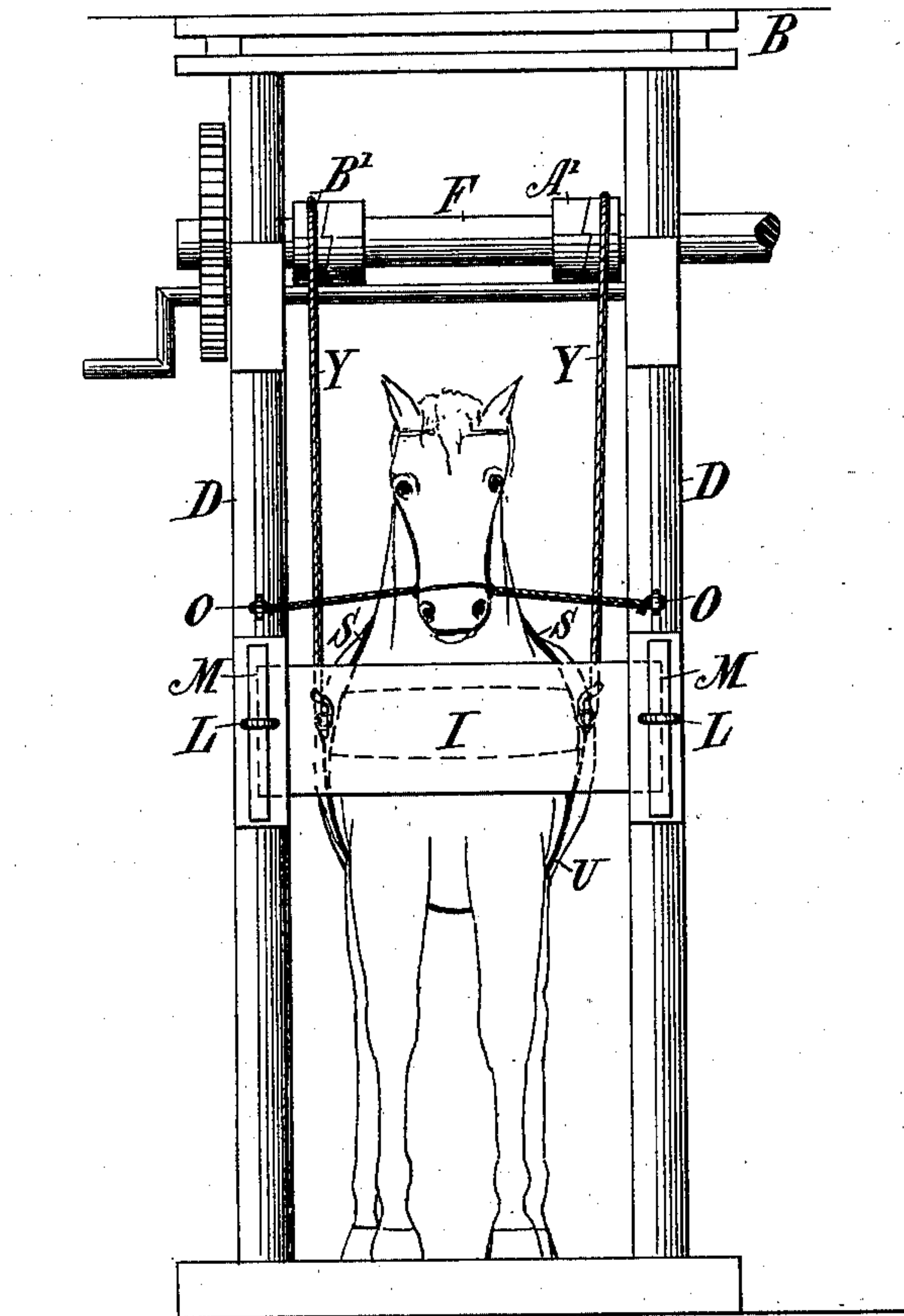


FIG. 2

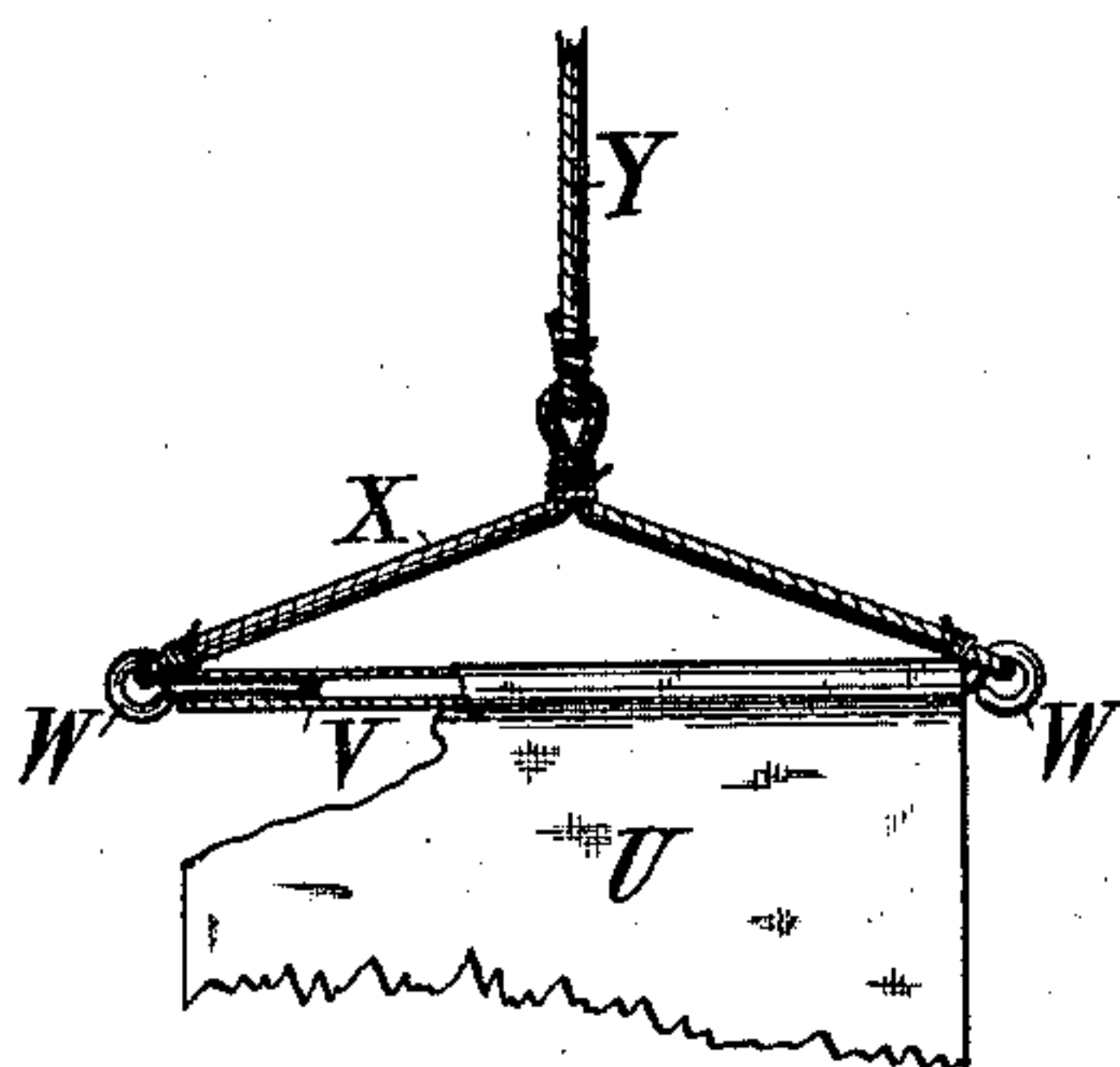


FIG. 4

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# UNITED STATES PATENT OFFICE.

JAMES ARLESS, OF MONTREAL, QUEBEC, CANADA.

## IMPROVEMENT IN HORSE-STALLS ON SHIPBOARD.

Specification forming part of Letters Patent No. **216,129**, dated June 3, 1879; application filed November 9, 1878.

*To all whom it may concern:*

Be it known that I, JAMES ARLESS, of the city of Montreal, and District of Montreal, Province of Quebec, Canada, ship-joiner, have invented certain new and useful Improved Stalls and Apparatus for the Conveyance of Horses on Shipboard; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention, which is for the purpose of providing for horses carried on shipboard accommodation which will obviate to a great extent the suffering which they endure in transit, and enable them to be delivered at their destination in better condition than at present, may be briefly described as consisting of stalls framed together in such a manner as to be easily taken down and piled away, in which each horse is secured in such a way as to be incapable of doing himself injury, and supported independently of any others which may be conveyed at the same time, this apparatus being also so arranged as to be adjustable to each horse separately.

For full comprehension, however, of my invention reference must be had to the annexed drawings, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a detail of shafting and clutch. Fig. 4 is a detail of sling-fastening.

Letter A is the lower, and B the upper, deck, between which the horse-stalls are usually situated. Upon the deck A, and running longitudinally with the ship, are secured wall-pieces or stringers C, in these being formed recesses to receive the feet of the posts D; or if it is desired to construct a separate or single stall the stringer C will be secured to a batten of about the proportionate length to the width of the stalls shown in Fig. 2. At the top of the posts D may be placed supplementary pieces, extending in the same manner as described for the stringers C. As the stringers C are placed longitudinally with the ship it follows that the horse, as shown, will be situated transversely to the length of the ship.

Between the posts D D are secured by joint-bolts, or in any other suitable way, frame-pieces E. Where a number of stalls are constructed, one after the other, they are arranged

at equal heights, so that they not only serve as distance-pieces to retain the posts at equal distances apart, but also as bearings for the shaft F, hereinafter more particularly described.

G and H are side pieces hinged at both ends, extending, as shown, between the posts D D, and provided to each side of the stall. I and K are cross-pieces, extending one in front and the other in the rear of the posts D D. These may be padded, and are usually secured by staples L and wedges M, and not only serve as distance-pieces in that direction, but to the front one is attached the feed-box N.

O are rings attached to the front posts, D, to which are secured the horses' head-stalls, thus keeping them steady.

I provide each horse with a harness consisting of two back-bands, R and S, and a Dutch collar and breeching, T, to this being secured suitable ropes (attached thereto by eyes or in any desired manner) on either side, both to the front and rear posts, so as to hold the horse firmly in place. I also provide for the support of the horse a sling, U, of canvas webbing, or other approved material, passing under the horse's belly, and having, in order to keep it from wrinkling up and chafing the horse's skin, a piece of tubing, V, run through each end, as shown in detail in Fig. 4, in the ends of which rest eyebolts W, to these being fastened the bridle-ropes X, of length sufficient to be pressed up in the middle to form loops, to which are fastened the lift-ropes Y, secured to the shaft F. By this arrangement any jamming of ropes is obviated by the free movement of the eyebolt in the tube, and the horse perfectly free while supported in its sling or belt.

On the shafts F are secured clutches A' and sliding clutches B', arranged to intermesh therewith, to the clutches B' being attached the lift-ropes Y. These clutches are operated by a lever, C', in the ordinary way, as shown in Fig. 3, so that by revolving the shaft F by a gearing, as shown in Fig. 1, when the clutches are engaged the sling U may be drawn up to take the weight of the horse, and even to lift him off his feet, if desired. The shaft F will be furthermore provided with a suitable clamp or pawl for holding it in any desired position it may be set in, and may extend over any de-



sired number of stalls, so as to raise the horses simultaneously, if desired; but by providing it with the loose clutches B' the shaft may be operated with regard to any desired number of horses to be raised, while those required to be left standing on their feet need not be interfered with.

In introducing horses into the stalls, when they are arranged side by side, I remove at one end of the pieces G and H the pins which secure them to the posts, thus enabling them to swing on their other end, after the fashion of doors, and give a clear space for the first horse to walk in from the side to the farthest stall, after which the side pieces of the first are closed, and so on till they are all filled in.

The belt is so arranged that, in removing horses from their stalls, by loosening the seizing or other fastening of the bridle to the lift-ropes the eyebolts can be drawn out and the belt let fall, and, the collar and breeching-ropes being undone, the horse is free.

In cases of necessity these stalls are easily convertible into berths for troops or steerage-passengers by simply turning the eyebolts in the posts and reversing the broad side boards.

What I claim is as follows—

1. The horse-stall as described, formed of posts D D, with side pieces G and H, hinged thereto, and front and rear pieces, all constructed and arranged substantially as herein set forth.

2. In combination with any number of horse-stalls, a continuous shaft running transversely and having secured thereon fixed clutches, two to each stall, and corresponding loose clutches movable in and out of gear therewith, and having secured thereto the ends of the lift-ropes of the horse's sling, all substantially as herein set forth.

3. The belt or sling U, having tubes run through each end, and suspended from shafts by means of lift and bridle ropes secured to eyebolts resting in the ends of each tube, all substantially as and for the purposes set forth.

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Witnesses:

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