

July 26, 1932.

J. G. DE ANDIA YRARRAZAVAL

1,868,568

MOVABLE PLATFORM FOR CONVEYING GOODS CHIEFLY IN SHIP'S HOLDS

Filed Dec. 26, 1930

2 Sheets-Sheet 1

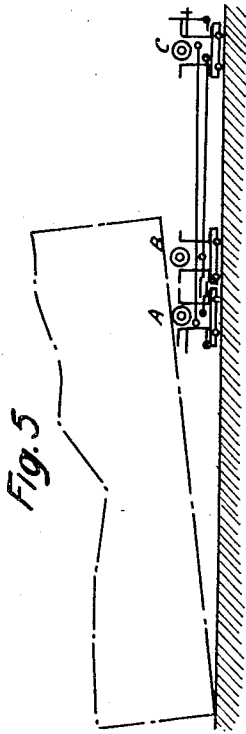


Fig. 5

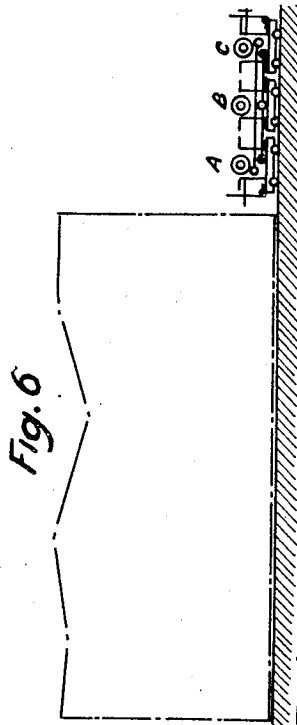


Fig. 6

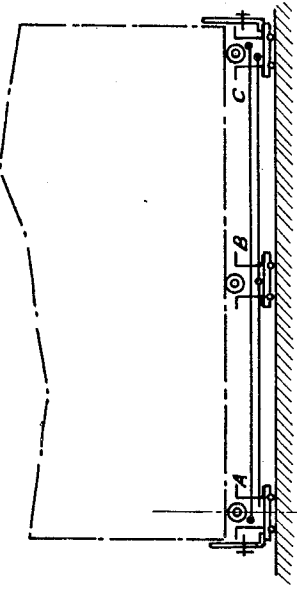


Fig. 3

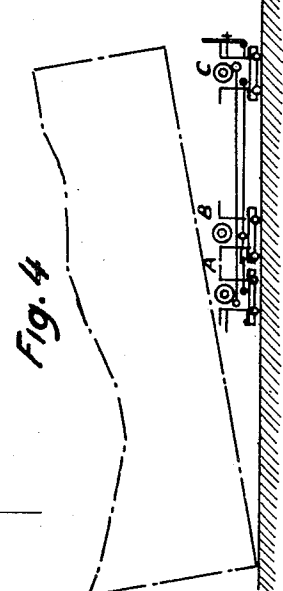
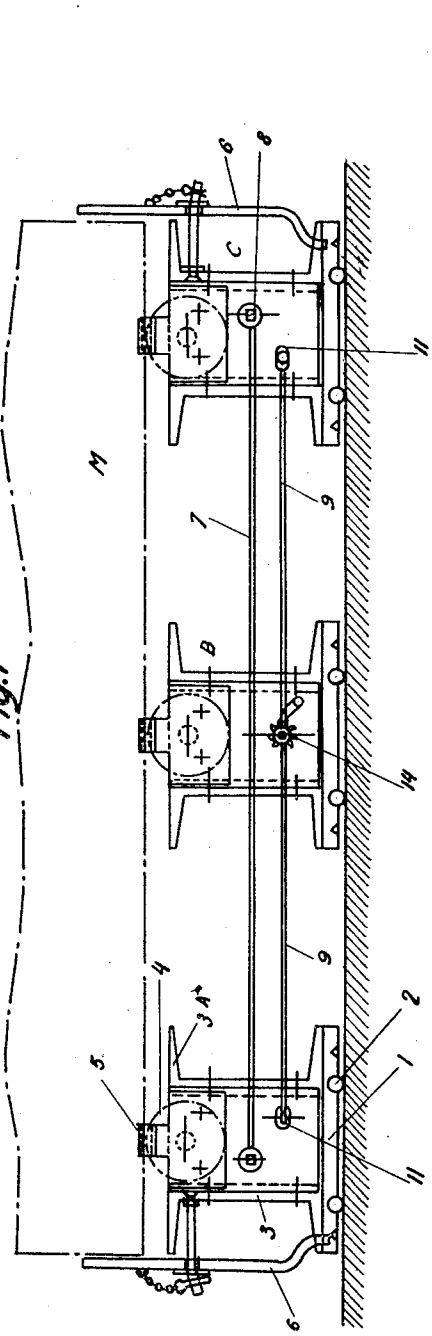


Fig. 4



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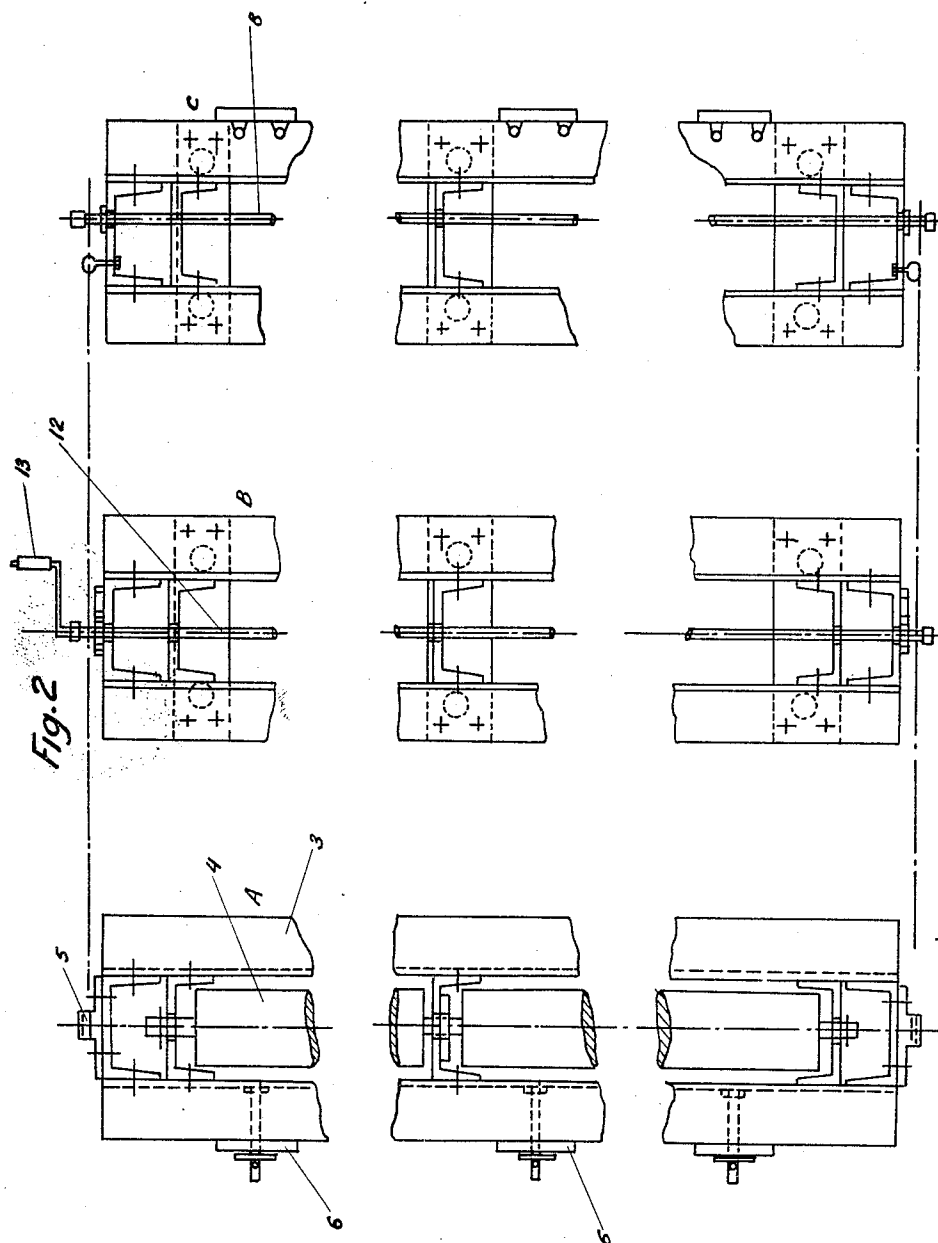
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MOVABLE PLATFORM FOR CONVEYING GOODS CHIEFLY IN SHIP'S HOLDS

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2 Sheets-Sheet 2



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MOVABLE PLATFORM FOR CONVEYING GOODS CHIEFLY IN SHIP'S HOLDS

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The handling of goods in small spaces such as ship's holds shows considerable difficulties. Once an article is introduced into a part of the hold determined by the position of the hatch, it is necessary to make it slide over the floor of the hold into its final position. This operation is generally provided by means of levers and of rollers. It has been proposed, it is true, to use rolling platforms, but the use of such platforms requires their removal after the article is laid in its final position. This can be done only by raising the article and by rolling the empty platform over the floor of the hold, which means a considerable space is necessary.

Now, according to my invention, I remove these drawbacks by using a platform which forms no longer a rigid unit, but is constituted by a plurality of independent beams interconnected solely by cables which are wound or unwound in order to move the beams nearer one another or more apart. The beams are mounted for easy displacement over the floor of the hold, for instance through the agency of casters. They carry also preferably throughout their length, rollers supporting the article to be handled, which is secured by means of suitable ropes to parts carried by the beams.

The outwardly disposed beams show, on their outside and throughout their length, removable abutments adapted to bear against the article to be handled.

Platforms of this type may be constituted by two beams only. However, a platform formed of three beams or more is of greater advantage owing to its greater ease of use and to the arrangements afforded for removing it after the article has been set in place.

I have described hereinbelow by way of example and shown in accompanying drawings a form of execution of my invention.

Figure 1 is a side-view thereof.

Figure 2 is a plan view.

Figures 3, 4, 5, 6 are end views illustrating the different steps used for clearing a three-beam platform.

The platform shown comprises three beams A, B, C. Each of these beams is con-

stituted by a plate 1 provided with casters 2 formed by balls allowing the beams to roll in all directions. To this plate, are secured U-irons 3 leaving between each other a space wherein are disposed one or more rollers 4 the periphery of which projects above the upper horizontal flanges of the U-irons 3. The case or other article M to be conveyed is laid on these rollers. The ends of the beams carry securing means 5 for hooking ropes or the like adapted for handling the case M and securing it to the platform. The two outer beams A and C carry on their outside removable stops 6 which rise in their operative position above the level of the platform and are adapted to bear against the sides of the case M.

The beams A and C are connected together at each end through a cable 7 which may be wound or unwound from each of the two beams through the agency of a shaft 8 (hidden by the roller on the left hand beam of the plan view). This shaft carries at its end a square projection to which a crank may be adapted.

The outer beams A and C are connected each with the intermediary beam B substantially parallel to them through cables 9 each secured through an eye 11 to the beams A or C and adapted to be simultaneously wound or unwound through the agency of a shaft 12 provided with a crank 13 and carried by the beam B, a ratchet and catch device 14 being adapted to hold the shaft in any desired position.

The operation of the platform is as follows:

Supposing it is first desired to secure the case M on the platform, the beams are first placed approximately on the floor. The case is then laid on them and the stops raised. After this, the crank 13 is actuated so as to wind the cable 9 whereby the stops 6 bear somewhat strongly against the sides of the case. This provides a rigid unit (Figures 1, 2, 3) constituted by the platform and the case which is moreover held on to the platform by means of ropes hooked over parts 5.

The platform is then slid to the place where the case is to be deposited. It is then re-

moved by the following series of operations for instance on the side of beam A.

The removable stop 6 is first removed or collapsed while that of the beam C is allowed to remain in place. The cable 7 is then wound round the shaft 8 of the beam C. This moves the beam A towards the beam B and pushes the latter towards C. When the beam A has moved beyond the centre of gravity of the case M, the latter tips over (Figure 4).

At this moment, the cable 7 is unwound again, whereby it is possible (Figure 5) to draw the beam C outwardly at a certain distance away from the beams A and B. The beam C is then held down in place and is used as a winch for drawing towards it (Figure 6) the beams A and B through the agency of the cable 7 away from the case M which rests then on the ground.

The device may be simplified by omitting the intermediary beam B. The two beams A and C would then be connected exclusively through the cables 7 and it would be necessary to provide on the shafts 8 of the beams A and C means for preventing the cables from unwinding after the cases have been secured to the beams.

What I claim is:—

1. A goods conveyor comprising a plurality of beams, means allowing their rolling in all directions over a floor, outer stops provided at different points of the length of the outer beams above the upper surface of said beams, windable flexible means adapted to bring the beams nearer to one another and allowing their spacing while remaining substantially parallel to each other.

2. A goods conveyor comprising a plurality of beams, means allowing their rolling in all directions over a floor, outer stops provided at different points of the length of the outer beams, means for setting said stops when desired in their operative position above the upper surface of said beams, cables connecting the outer ends of the outer beams and means carried by said outer beams for winding and unwinding the cables.

3. A goods conveyor comprising a plurality of beams, means allowing their rolling in all directions over a floor, outer stops provided at different points of the length of the outer beams above the upper surface of said beams, yielding means adapted to bring the beams nearer to one another and allowing their spacing while remaining substantially parallel to each other, cables connecting each two adjacent beams and means carried by one of said beams for winding and unwinding the corresponding cable.

4. A goods conveyor comprising a plurality of beams, casters on the underside of the beams, rollers on the upper sides of the beams, the axis of each roller being directed longitudinally of the beams, outer stops provided

at different points of the length of the outer beams above the upper surface of said beams, windable flexible means adapted to bring the beams nearer to one another and allowing their spacing while remaining substantially parallel to each other.

In testimony whereof I affix my signature.

JEAN GONZALEZ de ANDIA YRARRÁZVAL.

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