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R. L. TOFFOLON
FORK TRUCK LIFTING ATTACHMENT

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2 Sheets-Sheet 1

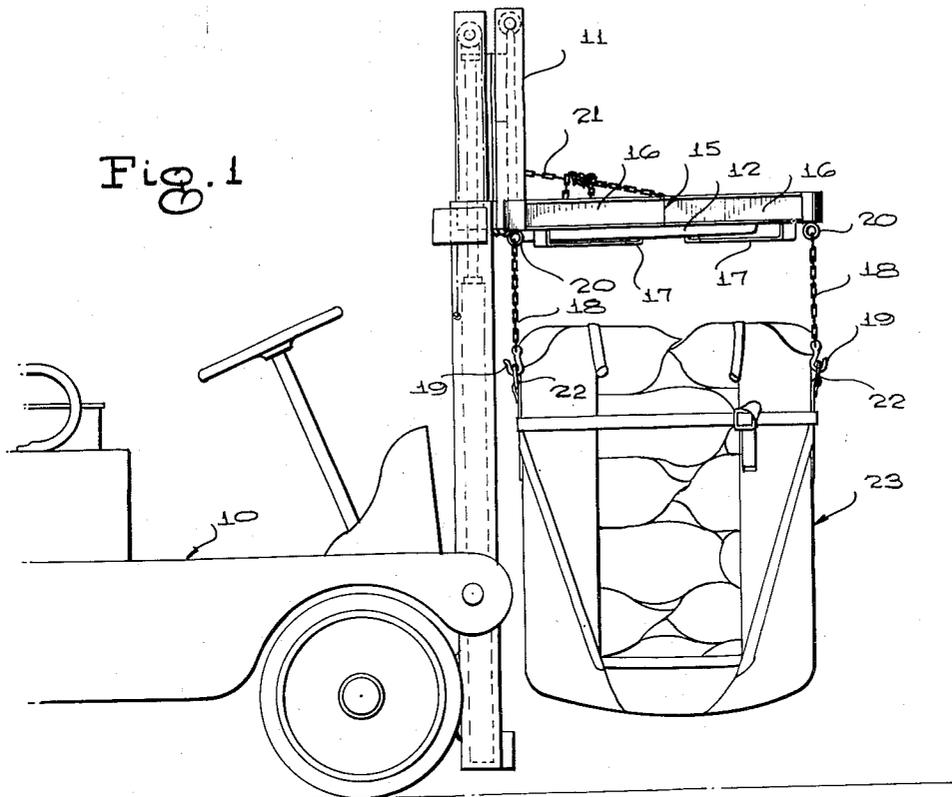
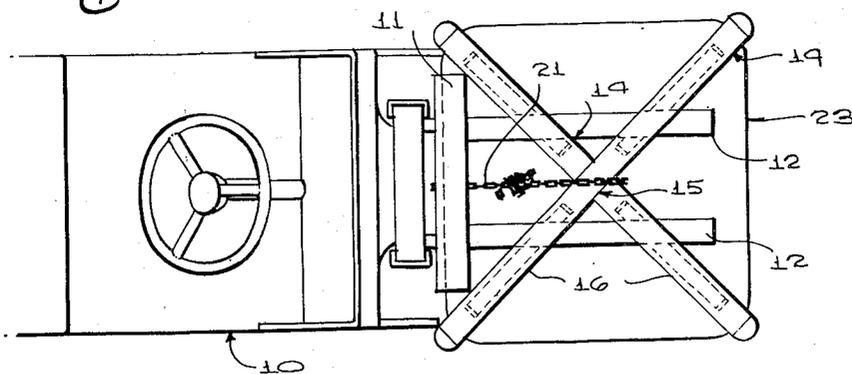


Fig. 2



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Fig. 3

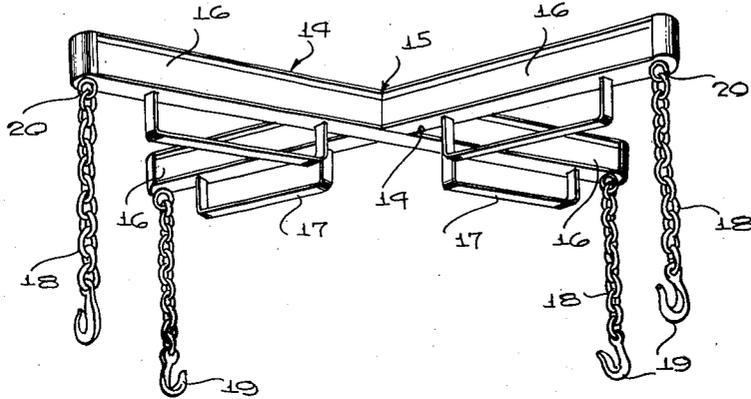


Fig. 4

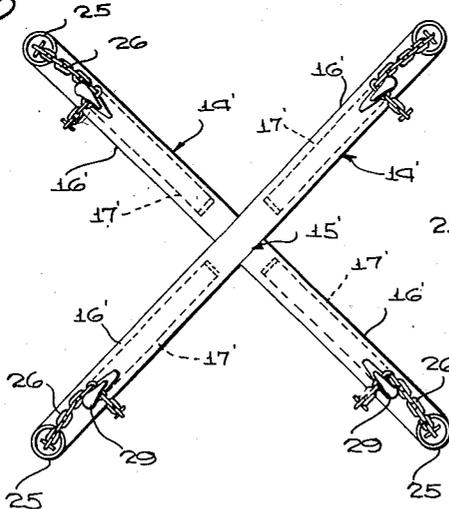


Fig. 5

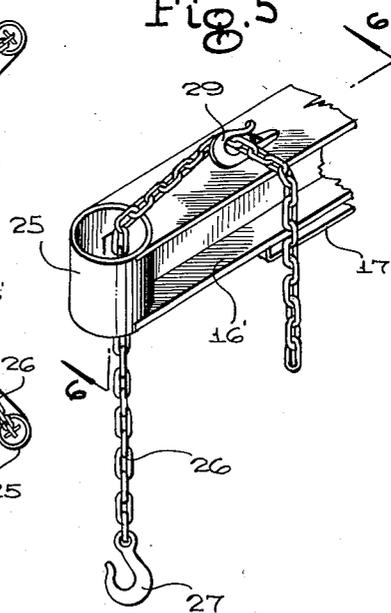
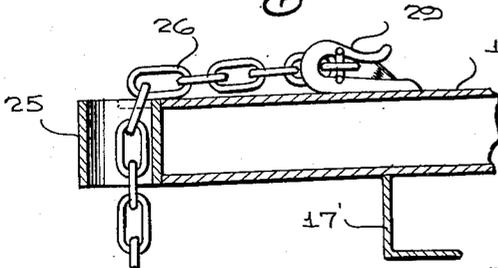


Fig. 6



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FORK TRUCK LIFTING ATTACHMENT

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5 Claims. (Cl. 214—620)

This invention relates to a lifting attachment for a fork lifting truck, and more particularly to such type of attachment for use in handling a cargo carrying unit.

An object of the present invention is to provide a lifting attachment which is capable of ready placement upon a cargo carrying unit, and which when so placed is capable of receiving with facility the lifting forks of a truck lift.

Another object of the present invention is to provide a lifting attachment which is adapted to receive the lifting forks of a truck lift from any direction.

A further object of the present invention is to provide a lifting attachment which is highly efficient in action, and commercially practical.

Other objects and advantages of the present invention will become apparent from the following description taken in conjunction with the accompanying drawings, wherein:

Figure 1 is a side elevational view of the front of a fork lift truck equipped with the fork lifting attachment of the present invention and supporting a cargo carrying unit.

Figure 2 is a top plan view of the assembly of Figure 1.

Figure 3 is a perspective view of the fork truck lifting attachment according to the present invention.

Figure 4 is a top plan view of a modified form of the fork truck lifting attachment according to the present invention.

Figure 5 is an enlarged fragmentary view of an end portion of one of the legs illustrating the hoisting chain and its connection thereto.

Figure 6 is a sectional view taken along the line 6—6 of Figure 5.

Referring to Figures 1 and 2 of the drawings, the numeral 10 designates a conventional fork truck on the front end of which is mounted a lifting carriage 11 for vertical sliding movement, the carriage having spaced lifting forks 12, two in number, projecting horizontally therefrom. Since the lifting truck forms no part of the invention the foregoing broad description of same is believed to be amply sufficient for a proper understanding of the lifting attachment of the present invention for such truck.

The lifting attachment of the present invention, Figure 3, comprises a pair of beams 14, preferably I beams, arranged in intersecting crisscross relation and secured together at the crisscross region to thereby form an anchor 15 having a plurality of legs 16 diverging therefrom. A loop 17 is positioned below and extends longitudinally of each of the legs 16 intermediate the free end thereof and the anchor 15 and is dependingly supported from the adjacent leg. It is to be noted that the spaces within the loops 17 of adjacent legs 16 are in alignment with each other, thereby enabling the loops of adjacent legs to receive together one of the forks 12 of the lifting carriage 11. A lifting chain 18 is operatively connected to each of the legs 16 adjacent the free end thereof and has one end provided with means or hook 19 for attachment to a cargo carrying unit. As shown in Figure 3, each of the chains 18 has the other end or the end opposite the hook 19 fixedly carried by the free end of the adjacent leg 16 as by means of an eye 20 which is fixedly carried by the free end of the adjacent leg 16.

The thus described lifting attachment, Figures 1 and 2, is secured to the carriage 11 of the fork truck 10 by a flexible means or chain 21, the chain extending about the anchor 15 and the carriage 11 with its free ends suitably

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connected together. The hooks 19 of the lifting chains 18 engage complementary rings 22 on the top of the legs of a cargo carrying unit designated by the numeral 23.

The form of the lifting attachment of the present invention, Figures 4, 5 and 6, likewise comprises a pair of beams 14', preferably I beams, arranged in intersecting crisscross relation and secured together at the crisscross region to thereby form an anchor 15' having a plurality of legs 16' diverging therefrom. A loop 17' is positioned below and extends longitudinally of each of the legs 16' intermediate the free end thereof and the anchor 15' and is dependingly supported from the adjacent leg. Just like in the previously described form the spaces within the loops 17' of adjacent legs 16' are in alignment with each other, thereby enabling the loops of adjacent legs to receive together one of the forks 12 of the lifting carriage 11. In this form, each of the free ends of the legs 16' is provided with a vertically disposed sleeve 25. As shown in Figures 5 and 6, a lifting chain 26 is slidably carried by the sleeve 25, the intermediate portion of the chain extending slidably through the sleeve and adjustably secured to the adjacent leg 16' and having one end provided with means or hook 27 for attachment to a cargo carrying unit. The chain 26 is adjustably secured to the top of the adjacent leg 16' by extending it through a hook 29 carried by the top of such adjacent leg to the desired extent and then twisting the chain until the complementary link engages against the hook, as clearly shown in Figure 6.

In use of the lifting attachment of the present invention, the attachment is placed upon the top of a cargo carrying unit such as illustrated in Figure 1 and indicated by the numeral 23, and the hooks 19 of the lifting chains 18 are in turn engaged with the rings 22, whereupon the truck 10 is brought to a position such that it is adjacent to the unit 23. The carriage 11 is next elevated until the forks 12 are at an elevation so as to be received within the spaces of the loops 17 of the adjacent legs 16, and the truck then actuated to move it toward the unit 23 and cause the forks 12 to be received within such spaces. At this point, the beams 14 are attached to the carriage 11 by causing the chain 21 to extend about the carriage 11 and the anchor 15 and suitably securing the ends of the chain together, the carriage is then raised sufficiently to elevate the unit 23 from the floor, and the truck actuated to cause it to transport the unit to the desired location. When reaching such location, the travel of the truck is stopped, the carriage actuated to cause the unit 23 to be deposited upon the floor, and the lifting attachment then detached from the unit and the carriage.

It is to be noted that by virtue of the spaces of the loops of the adjacent legs being in alignment, the lifting truck may be moved toward the cargo carrying unit from any direction and cause the entry of the spaced lifting forks within the spaces of the loops of the adjacent legs.

Having fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A lifting attachment for a fork lifting truck comprising a pair of beams arranged in intersecting crisscross relation and secured together at the crisscross region to thereby form an anchor having a plurality of legs diverging therefrom, a loop positioned below and extending longitudinally of each of said legs intermediate the free end thereof and said anchor and dependingly supported from the adjacent leg, the spaces within the loops of adjacent legs being in alignment with each other to thereby enable the loops of the adjacent legs to receive together a fork of a fork lifting truck, and a lifting chain operatively connected to each of said legs adjacent the free end thereof and having one end provided with means for attachment to a cargo carrying unit.

2. A lifting attachment for a fork lifting truck comprising a pair of beams arranged in intersecting crisscross relation and secured together at the crisscross region to thereby form an anchor having a plurality of legs diverging therefrom, a loop positioned below and extending longitudinally of each of said legs intermediate the free end thereof and said anchor and dependingly supported from the adjacent leg, the spaces within the loops of adjacent legs being in alignment with each other to thereby

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enable the loops of the adjacent legs to receive together a fork of a fork lifting truck, and a lifting chain contiguous to each of said legs and having one end provided with means for attachment to a cargo carrying unit and having the other end fixedly carried by the free end of the adjacent leg.

3. A lifting attachment for a fork lifting truck comprising a pair of beams arranged in intersecting crisscross relation and secured together at the crisscross region to thereby form an anchor having a plurality of legs diverging therefrom, a loop positioned below and extending longitudinally of each of said legs intermediate the free end thereof and said anchor and dependingly supported from the adjacent leg, the spaces within the loops of adjacent legs being in alignment with each other to thereby enable the loops of adjacent legs to receive together a fork of a fork lifting truck, and a lifting chain contiguous to each of said legs and having one end provided with means for attachment to a cargo carrying unit and having the intermediate portion slidably carried by the free end of the adjacent leg and adjustably secured to the latter leg.

4. The combination with a truck, a lifting carriage mounted on said truck for vertical sliding movement, and spaced lifting forks projecting horizontally from said carriage, of a lifting attachment connectible to said carriage for movement with the latter, said attachment comprising a pair of beams arranged in intersecting crisscross relation and secured together at the crisscross region to thereby form an anchor having a plurality of legs diverging therefrom, a loop positioned below and extending longitudinally of each of said legs intermediate the free end thereof and said anchor and dependingly supported from the adjacent leg, the spaces within the loops of adjacent legs being in alignment with each other and together receiving one of the spaced lifting forks, a lifting chain operatively connected to each of said legs adjacent the free end thereof and having one end provided with means

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for attachment to a cargo carrying unit, and flexible means securing said anchor to said carriage.

5. The combination with a truck, a lifting carriage mounted on said truck for vertical sliding movement, and spaced lifting forks projecting horizontally from said carriage, of a lifting attachment connectible to said carriage for movement with the latter, said attachment comprising a pair of beams arranged in intersecting crisscross relation and secured together at the crisscross region to thereby form an anchor having a plurality of legs diverging therefrom, a loop positioned below and extending longitudinally of each of said legs intermediate the free end thereof and said anchor and dependingly supported from the adjacent leg, the spaces within the loops of adjacent legs being in alignment with each other and together receiving one of the spaced lifting forks, a lifting chain operatively connected to each of said legs adjacent the free end thereof and having one end provided with means for attachment to a cargo carrying unit, and a chain securing said anchor to said carriage.

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