Aug. 21, 1956 L. T. DAIGLE 2,759,592

WHEEL MOUNTING FOR CONVEYOR

Filed Feb. 24, 1953

Fig. 1

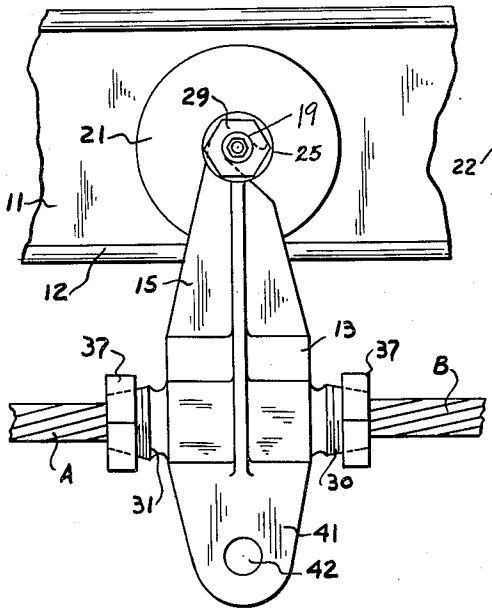
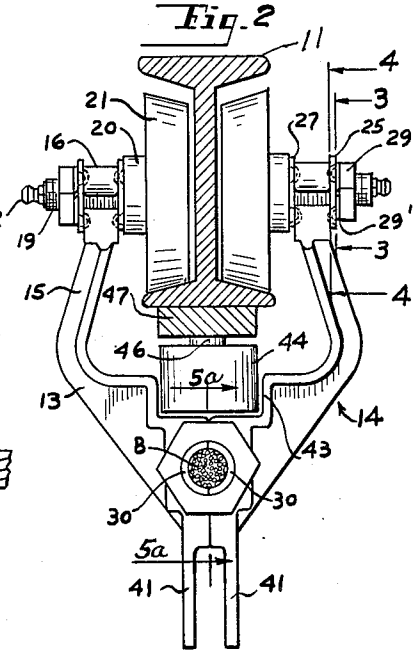


Fig. 2



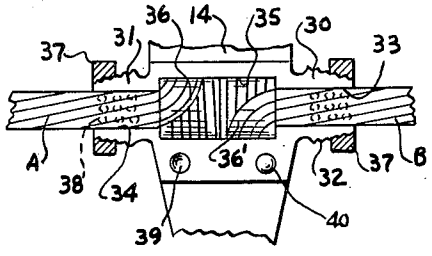


Fig. 5a

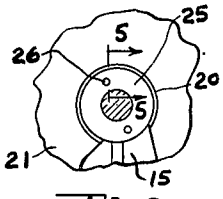


Fig. 3

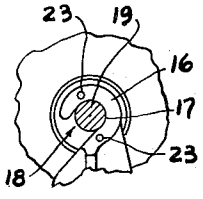


Fig. 4

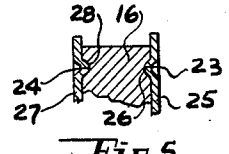


Fig. 5

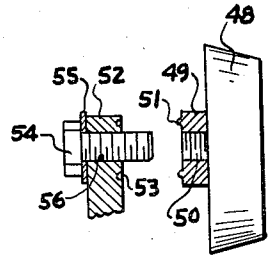


Fig. 6

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United States Patent Office 2,759,592 Patented Aug. 21, 1956

2,759,592

WHEEL MOUNTING FOR CONVEYOR

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Application February 24, 1953, Serial No. 338,251

2 Claims. (Cl. 198—177)

This invention relates to conveyors and more particularly to a novel conveyor construction including trolley wheels adapted to movably support the conveyor along the flange of a supporting I beam.

Heretofore in conveyor constructions of this type, if a wheel becomes damaged and must be replaced, it has been necessary to stop the conveyor and disconnect the same from the cable in order that the wheel could be replaced.

It is the object of the present invention to provide a novel supporting wheel mounting for the conveyor mechanism, whereby a wheel may be replaced without disconnecting the entire conveyor mechanism of that particular wheel.

It is the further object of this invention to provide a simplified wheel mounting whereby the wheel may be quickly disengaged from the conveyor mechanism and replaced.

These and other objects will be seen from the following specification and claims in conjunction with the appended drawing, in which:

Fig. 1 is a side elevational view of the present conveyor mechanism.

Fig. 2 is a right end elevational view thereof with the I beam shown in cross section.

Fig. 3 is a section taken on line 3—3 of Fig. 2.

Fig. 4 is a section taken on line 4—4 of Fig. 2.

Fig. 5 is a section taken on line 5—5 of Fig. 3; and

Fig. 5*a* is a fragmentary section taken on line *5a*—*5a* of Fig. 2.

Fig. 6 is a fragmentary elevational view illustrating a variation in the present wheel mounting for a conveyor.

It will be understood that the above drawing illustrates merely a preferred embodiment of the invention, and that other embodiments are contemplated within the scope of the claims hereafter set forth.

The present invention pertains to a conveyor mechanism adapted to be movably suspended from I beam **11** having supporting tapered flanges **12**. The conveyor body includes a pair of straight opposed brackets **13** and **14** whose upper portions include the upwardly and inwardly inclined arms **15** terminating in the wheel mounting heads **16**, as shown in Fig. 2. Head **16** includes a transverse bore **17** adapted to receive wheel mounting stud shaft **19**, which is threaded throughout its length.

The bore **17** terminates in the outwardly and downwardly extending slot **18** whereby the shaft **19** may be downwardly withdrawn from head **16** upon a loosening of the nut **29** in the manner hereafter described.

Support **20** upon which the wheel **21** is mounted and journaled is adapted to threadedly receive and have secured thereto shaft **19**, said shaft being hollow and having a suitable apertured grease fitting **22** upon its outer end.

The heads **16** have formed therein upon their opposite upright side surfaces a pair of diametrically opposed circular recesses **23** on one side and **24** on its opposite side as designated in Figs. 4 and 5.

Washers **25** and **27** are loosely positioned in spaced relation upon the shaft **19**, and these washers have formed outwardly projecting diametrically opposed dimples **26** and **28** or upsets, which are to be cooperatively received within the correspondingly opposed recesses **23** and **24** in the opposite side walls of head **16**.

Preferably, a lock washer **29'** is also positioned loosely upon the shaft **19** upon the outside of washer **25**, and with the washers **25** and **27** properly positioned, the nut **29** is tightened to thereby complete the mounting for the wheels **21** which are supportably positioned upon the opposed flanges **12** of I beam **11**. The washers **25** and **27** provide additional support for the stud shaft **19** counteracting the effect of the angular shaft receiving slot **18** which registers with the bore **17**.

Inasmuch as the thrust is downward, it is apparent that there is sufficient supporting engagement of the shaft **19** by the head **16**.

Each of the brackets **13** and **14** have formed intermediate their ends the oppositely directed laterally extending half circular lugs **30** and **31** respectively having a tapered thread **32** upon their exterior surface, and with said half circular lugs having central half circular channels **33** and **34** adapted to cooperatively receive a pair of axially registering cable elements A and B to be spliced together by the present conveyor mechanism.

The registering ends of said cable elements have cylindrical formations **36'** and **36** thereon which may be an integral part of said cable elements, or may be suitably secured thereon. Said cylindrical elements **36'** and **36** are adapted to be cooperatively received within the half cylindrical recess **35** formed within each of the bracket elements **13** and **14**, which when assembled together as in Fig. 2, provide a cylindrical recess to cooperatively and retainingly receive the cable ends **36'** and **36**.

It is contemplated that the semi-cylindrical recesses **35** are of a greater diameter than the half circular recesses **33** and **34** thereby defining the retaining shoulders to secure the cable ends **36'** and **36** within the assembled brackets **13** and **14**.

When so assembled, said bracket elements are secured together by the tapered nuts **37** which threadedly engage the tapered lugs formed by the opposed registering half circular latter extensions **30** and **31** of said brackets.

Upon the interior of each of the half circular lug elements **30** and **31** are formed a plurality of dimples **38** or other abrasions adapted for increased frictional cooperation with cable elements A and B.

It will be noted also that each of the brackets **13** and **14** have formed therein below the half cylindrical recesses **35** a circular dimple **39** and a laterally spaced circular projection **40** adapted for cooperation with a similarly formed recess and spaced dimple in the other bracket element, facilitating assembly thereof.

The bracket elements **13** and **14** terminate at their lower ends in the depending load supporting hangers **41** arranged in spaced relation, and which are transversely apertured at **42** to facilitate securing of a load thereto.

As shown in Fig. 2, the interior portions of the brackets **13** and **14** have the upright guide walls **43** formed therein adapted for cooperation with the rollers **44** which are arranged upon a vertical axis and depend from the shafts **46** secured to the mounting plate **47** upon the undersurface of I beam **11**.

This formation **43** within the brackets **13** and **14** is particularly useful in acting as a guide for the conveyor when travelling around curves or wherever there is a change in direction of the supporting beam. The rollers **43** would be arranged at longitudinally spaced intervals only at the curved portions of said beam or at turns therein.

In Fig. 6 there is shown a slight variation in the mount-

ing structure for the conveyor supporting wheel 48, which is journaled to the support 49 with internal thread 50.

The outer upright surface of wheel support 49 has a pair of diametrically opposed dimples 51 formed therein adapted to be cooperatively received within corresponding diametrically opposed circular recesses 53 in the inner side wall of the wheel supporting head 52 of a bracket element, which is fragmentarily shown.

This bracket element is the same as bracket element 13 above described, except that it has a continuous transverse aperture 56 through which extends the threaded shank of the securing bolt 54 with a suitable washer 55 interposed between the bolt head 54 and the body 52.

When the bolt 54 is threaded into wheel support 49, and the projections 51 register within recesses 53, the wheel 48 will be properly secured with respect to the bracket head 52.

In the event of a break down of the wheel or its support, the wheel may be removed merely by loosening the bolt 54 from the wheel support 49 and withdrawing of said bolt sufficiently to permit the manual removal of wheel 48 and its support 49.

While the circular recesses 23 and 24 are shown in Figs. 2, 3 and 4, and recess 53 in Fig. 6, adapted to cooperatively receive similarly formed dimples 26, 28 and 51 respectively, nevertheless it is contemplated as a part of the present invention that any other structure could be employed which will frictionally and immovably retain the washers 25 and 26 with respect to the head 16, and which would immovably retain the wheel mounting 49 with respect to the bracket head 52. For example, the corresponding surfaces could be abraided in such fashion that upon tightening of the nuts 29 or the bolts 54, the parts would be immovably secured with respect to each other.

The above specification has now set forth a very simplified mounting device for the supporting wheels of a conveyor mechanism, whereby said wheels may be interchanged and exchanged without disassembling the conveyor mechanism and without the heretofore costly delays where complete disassembly was required.

While the specification refers to a cable or cable elements, it is contemplated that the present invention is just as well adapted to a chain, rod, or other longitudinally movable means.

Having described my invention, reference should now be had to the claims which follow for determining the scope thereof.

I claim:

1. In a conveyor movable along a horizontal I-beam, a pair of opposed upright bracket elements upon opposite sides of said I-beam, adapted for connection to portions of a longitudinally moveable cable, separate inwardly directed transverse shafts at the upper ends of said bracket elements at opposite sides of the I-beam, a roller assembly journaled upon the inner end of each shaft and riding upon the flanges on opopsite sides of said I-beam, each of said bracket elements being transversely apertured at its upper end and with said aperture terminating on one side in an outwardly extending lateral slot permitting insertion of a roller mounting shaft into the transverse aperture of said bracket, spaced washers loosely mounted on each shaft bearing against opposite sides of the corresponding bracket element at opposite ends of its aperture and slot, cooperating means on the washer and bracket to prevent relative movements thereof, and a fastener secured upon said shaft operatively maintaining and securing said washers against said bracket element for securing said shaft and roller assembly thereon whereby, upon loosening said fastener, a single roller assembly may be removed from its bracket element without disengaging said bracket elements from said cable and without interfering with the other roller assembly.

2. In a conveyor movable along a horizontal I-beam, a pair of opposed upright bracket elements upon opposite sides of said I-beam, adapted for connection to portions of a longitudinally movable cable, separate inwardly directed transverse shafts at the upper ends of said bracket elements at opposite sides of the I-beam, a roller assembly journalled upon the inner end of each shaft and riding upon the flanges on opposite sides of said I-beam, each of said bracket elements being transversely apertured at its upper end and with said aperture terminating on one side in an outwardly extending lateral slot permitting insertion of a roller mounting shaft into the transverse aperture of said bracket, a washer mounted on each shaft bearing against the corresponding bracket element and held against relative movement, and a fastener secured upon said shaft operatively maintaining and securing said washer against said bracket element for securing said shaft and roller assembly thereon whereby, upon loosening said fastener, a single roller assembly may be removed from its bracket element without disengaging said bracket elements from said cable and without interfering with the other roller assembly.

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