

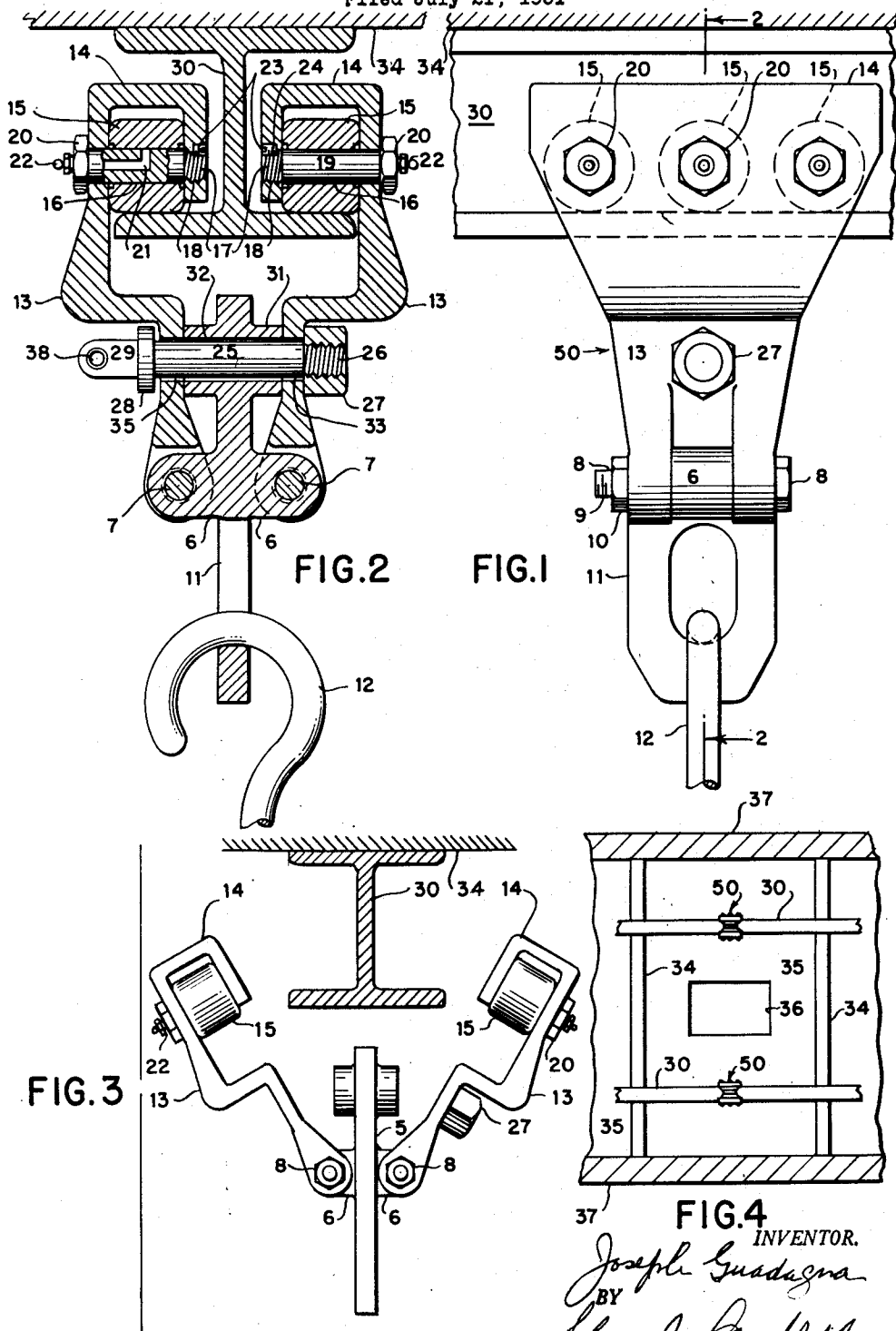
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REMOVABLE SNATCH ROLLER

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REMOVABLE SNATCH ROLLER

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My invention relates to a removable snatch roller and the combination and adaptation of parts of the same as will be more fully hereinafter set forth.

In loading a ship, the present practice is to handle the various items being loaded by a crane from the pier over and down the hatch into the hold where the crew in the hold gradually lower it onto greased skids or dunnage and rollers. The wire of a drag wire snatch block is then secured around the item being loaded which is secured at the other end to a hook fastened in the wall of the hold and the item is dragged to the nearest point where it is to be stored and jimmied and pushed back into its final position. During this long process of placing the item in its finally loaded position the whipper wire of the loading crane is kept in use in this operation and not released until the item is finally placed in its loaded position. This tie up of the main loading crane during the placing of each item in the hold also ties up the entire pier loading crew until the whipper wire is released thereby causing a tremendous loss of time for the entire loading crew amounting to ten minutes up to forty-five minutes on each item.

My removable snatch roller overcomes this serious difficulty and makes it possible to immediately release the whipper wire of the main loading crane as soon as the item being loaded is lowered into the hold onto four by four pieces of wood placed on the floor of the hold thereby freeing the wires so that the whipper wire can be immediately released and sent up for loading another item.

The main object of my invention as above indicated, is to lighten the burden of the loading or unloading crew of a ship and to save the loading and unloading time up to one-third less time than now required in loading and unloading a ship by the present means generally in use throughout the world.

Referring to the drawings—

Fig. 1 is a side elevation of my device mounted on an H rail which is broken at each end for convenience in illustration and having a hook of a regular raising and lowering three part chain with pulley blocks, said hook being broken away for convenience in illustration;

Fig. 2 is a vertical section on the line 2-2 of Fig. 1;

Fig. 3 is an end view of my device in the open position for mounting it on or removing it from the H rail;

Fig. 4 is a plan view from inside the hold of a ship looking up at the combing.

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In the drawings, 50 is my complete removable snatch roller and 5 is a frame preferably constructed of steel or a metal of equal strength having cross ears 6 integral therewith and projecting therefrom, centrally bored at 7 and adapted to receive pins 8 having heads 8' integral therewith at one end and being threaded at the other end at 9 over which threaded nuts 10 are adapted to be secured. The lower end of 5 terminates in an integral ring 11 into which fits a hook 12 of the usual raising and lowering three part chain equipped with the usual pulley blocks, only the broken hook 12 being shown for convenience in illustration.

Near the upper end of frame 5 a tubular member 31 is formed integrally therewith and having a central boring 32 in alignment with borings 33 in roller carriers 13.

A pair of roller carriers 13 are pivotally hinged to the ears 6 by means of pins 8 and threaded nuts 10. The upper ends of roller carriers 13 terminate in three sided roller housings 14 in each of which are mounted three steel rollers 15 which have brass lined bushings 16 of usual lubricating structure. The rollers 15 are mounted on steel pins 19 threaded at one end at 17 to engage internally threaded holes 18 in said roller housings 14 and said pins 19 have nuts 20 at their opposite ends integral therewith. Said pins 19 also have lubricating grooves 21 into the outer ends of which are threaded lubricating nipples 22 whereby lubricant can be fed directly through nipples 22 into bushings 16. A threaded lock pin 23 is adapted to thread into a half threading 24 in roller housing 14 and adjacent threading 17 of each of the pins 19 so as to lock them against accidental loosening and removal due to the almost constant rotation of the rollers 15 when my device is in use.

The pivoted roller carriers 13 are adapted to be secured together in closed position by means of a locking pin 25 which is threaded at one end 26 and adapted to engage an internally threaded nut 27 integral with one of the roller carriers 13 and the opposite end of said locking pin 25 terminates in a flange 28 and a flattened portion 29 having a hole 38 therein adapted to be used by the regular ball hook, always carried by the longshoreman, for removing and replacing said locking pin 25.

My removable snatch roller 50 is adapted to be used on an H rail 30 which is welded to the cross beams 34 of a coaming 35 in the hold of a ship 37 on each side of a hatchway 36.

In using my removable snatch roller 50 it will be understood that the hold of a ship when it is

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to be used must be equipped with H rails 30 welded to the cross beams 34 of the coaming 35 or ceiling of the hold on each side of the hatchway 36 as shown in diagram in Fig. 4.

Pin 25 can then be removed by one of the long-shoremen using his regular bail hook which each carries, and placing it through hole 38 turn pin 25 so as to remove it thereby permitting roller carriers 13 to open at their upper ends thereby permitting them to be placed around H rail 30 and the pin 25 replaced by setting it up tightly by means of the bail hook used in hole 38.

It is therefore a very simple operation to place my device in operating position on the H rail and to remove it when finished.

The actual operation of my device permits the item being loaded or unloaded to be raised or lowered by the usual three chain and block and pulley device in general use, shown in the broken off hook 12 of said apparatus. The suspended item being loaded or unloaded is then merely pushed along suspended by my device 50 which rolls on rail 30 on rollers 15 which are lubricated so that they roll perfectly and easily.

In loading the items are lowered into the hold through the hatch 36 in the usual manner by means of a power operated crane on the pier or on the deck of the ship. With my device, as soon as the item is lowered into the hold it is lowered onto blocks so that the whipper wire from the loading crane can be immediately freed and released to go up for another load. My removable snatch roller combined with the usual three chain block and pulley lifting device picks up the load from the floor and by pushing it rolls it to the desired spot for storing for the trip.

In unloading the whipper wire of the dock or deck crane is not required until the item has been picked up and rolled suspended on the rail to the spot directly under the hatch 36 and then the whipper wire from the main crane is brought down and without any delay immediately the load is taken up and another load is being brought under the hatchway 36 by my device ready for the immediate use of the whipper wire and crane as soon as lowered into the hatchway 36.

So it is clear that my removable snatch roller is equally valuable in saving up to one-third of the time in loading or unloading as well as materially lightening the heavy work of the crew in placing and removing cargoes.

Many variations may be made in the structure

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of my device without departing from the spirit and intent of the same and all such variations are comprehended within the scope of the specification, drawings and claims as herein set forth.

I claim:

1. A removable snatch roller comprising in combination, a frame terminating at its lower end in hook hanging means, a pair of roller carriers pivotally connected at their lower ends to an intermediate portion of said frame, a three sided roller housing provided at the upper end of each carrier and supporting a plurality of roller means rotatably mounted on shafts therein said roller carriers being swingable from a position adjacent to said frame to a spaced position, and releasable means for securing the roller carriers in said first position wherein the releasable means include a locking pin extending through the roller carriers and an upper tubular portion of the frame.

2. A removable heavy duty snatch roller comprising in combination, a heavy frame terminating at its lower end in heavy hook hanging means, a pair of heavy duty roller carriers pivotally connected at their lower ends to an intermediate portion of said frame, a roller housing provided at the upper end of each carrier and rotatably supporting a plurality of heavy duty rollers thereon, said roller carriers being swingable from a position adjacent to said frame to a spaced position therefrom, and removable means for securing the roller carriers in said first position wherein the releasable means include a locking pin extending through the roller carriers and an upper tubular portion of the frame.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
911,221	Elkworth	Feb. 2, 1909
1,005,452	Moore	Oct. 10, 1911
1,024,100	Recker	Apr. 23, 1912
1,828,603	Holley	Oct. 20, 1931
2,047,133	Christianson et al.	July 7, 1936
2,439,986	Rennie	Apr. 20, 1948
2,584,610	Pearson	Feb. 5, 1952

FOREIGN PATENTS

Number	Country	Date
494,451	Germany	Mar. 22, 1930