Jan. 8, 1957 V. H. STOVER 2,776,767

DOZER AND LOADING ATTACHMENT FOR TRICYCLES

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Fig. 1

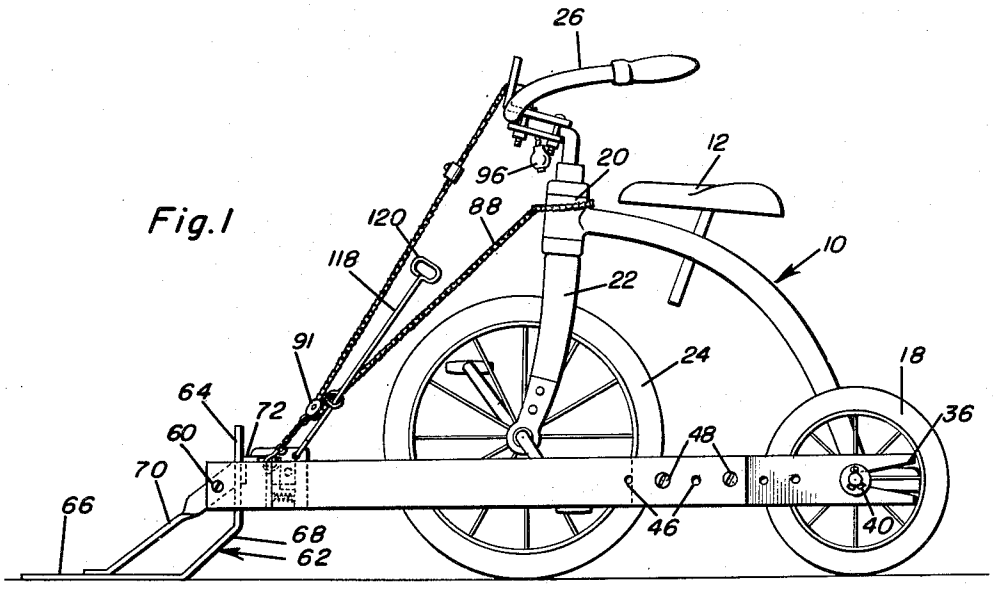
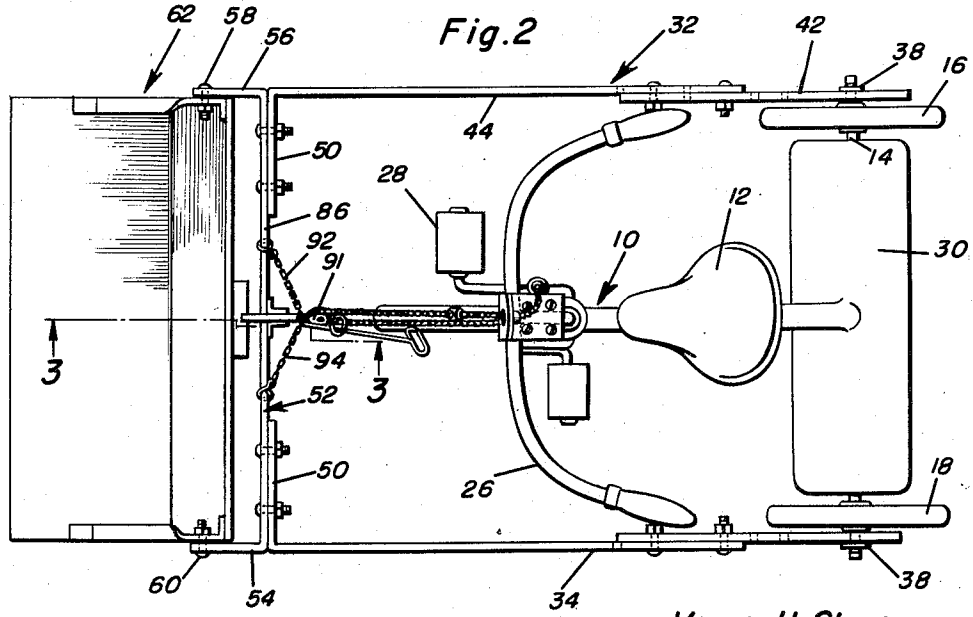


Fig. 2



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Fig. 3

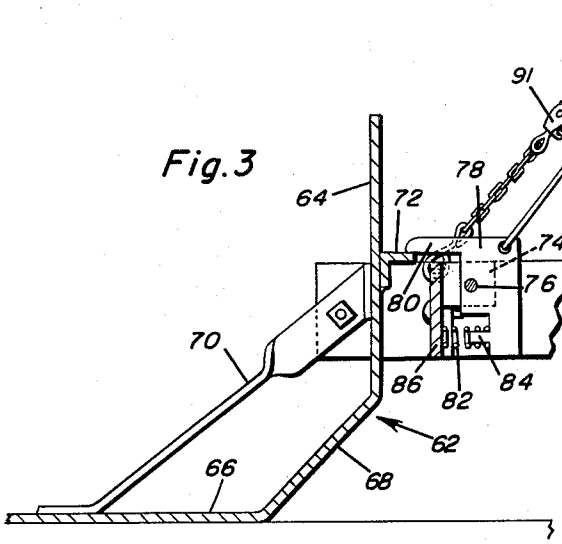


Fig. 4

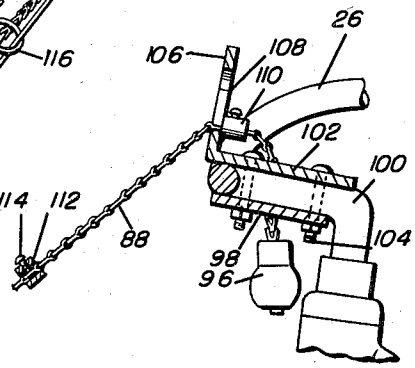


Fig. 5

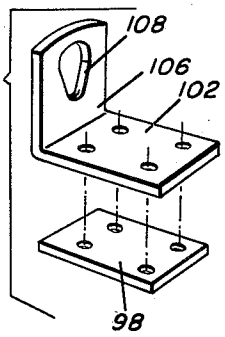


Fig. 6

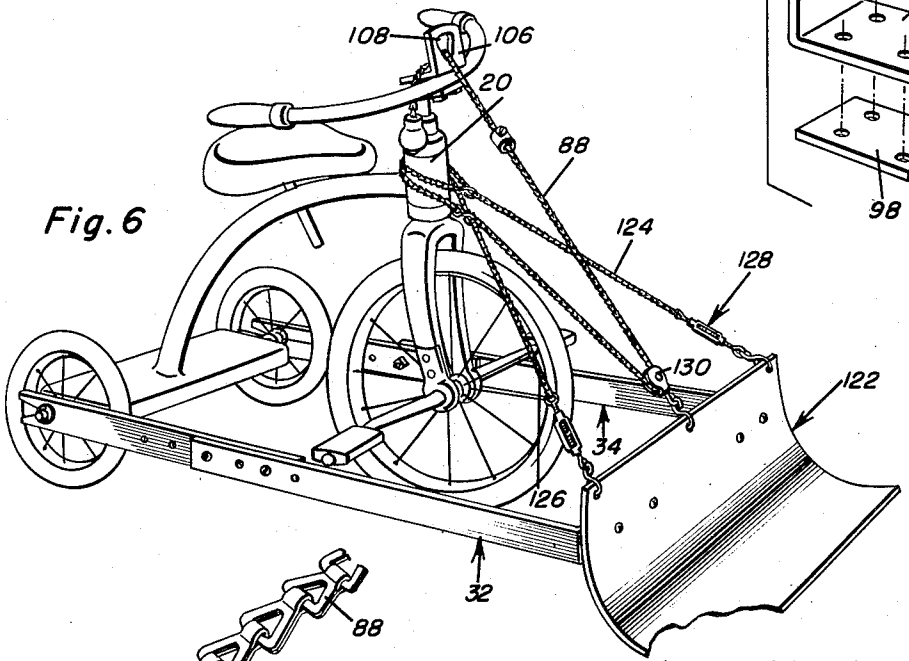
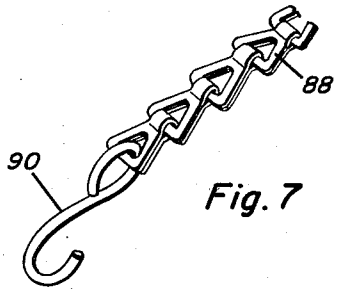


Fig. 7



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DOZER AND LOADING ATTACHMENT FOR TRICYCLES

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Application January 28, 1954, Serial No. 406,820

2 Claims. (Cl. 214—140)

This invention relates generally to children's toys and pertains more particularly to a device for attachment to a child's tricycle or the like.

A primary object of this invention is to enhance the usefulness and the pleasure derived from use of a child's velocipede or similar vehicle by providing therefor an attachment simulating a snow plow, bulldozer, loader or the like.

Another object of this invention is to provide an attachment for tricycles in conformity with the foregoing objects in which provision is made for manipulating the attachment in simulating actual attachments of the class described.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of a velocipede with a loader attachment secured thereto;

Figure 2 is a plan view of the assembly shown in Figure 1;

Figure 3 is a vertical section taken substantially along the plane of section line 3—3 of Figure 2 showing details of the loader assembly on an enlarged scale;

Figure 4 is an enlarged vertical section taken through the handle bar portion of the velocipede showing the manner of maintaining the loader in selected position;

Figure 5 is a perspective view of the bracket assembly shown in Figure 4;

Figure 6 is a perspective view showing a snow plow blade attachment in use on an associated velocipede; and

Figure 7 is a perspective view of a portion of one of the flexible chains showing the same on an enlarged scale.

Referring now more particularly to Figures 1 and 2, reference numeral 10 indicates generally the frame of a velocipede which has a seat member 12 mounted thereon and which is provided at its rearward end with the transverse axle 14 having the wheels 16 and 18. The fork housing indicated by the reference character 20 is carried by the forward portion of the frame, and rotatably receives therein the fork assembly 22 to which is journaled the dirigible wheel 24 in a manner well understood and the upper end of the fork assembly is connected to the handle bar device 26, all of the above described mechanism being conventional and well understood, as are the pedal mechanisms 28. The rearward portion of the frame above the axle 14 may be provided with a platform member 30, as desired, it being understood that the particular form of velocipede to which the hereinafter described attachment is secured is immaterial as regards the principle of the hereinafter described invention.

A pair of strap-like elongated frame members indicated generally by the reference characters 32 and 34 are provided at their rearward ends with the substantially V-

shaped notches 36 for reception on the opposite ends of the axle 14 and are interposed between the hubs of the wheel members 16 and 18 and the thrust washers 38, the washers being retained on the axle as by the cotter pins 40 or the like. The frame members consist of the rearward strap sections 42 and the forward strap sections 44 provided at corresponding ends with a series of longitudinally spaced apertures 46 for reception of the fastening elements 48 so that the frame members are extensible, as will be apparent. The forward ends of the sections 44 are laterally inturned, as indicated by the reference character 50 to present bracket portions for attachment to the generally U-shaped yoke member 52 whose opposed leg portions 54 and 56 carry the pivot bolt members 58 and 60 pivotally securing the yoke member to a material engaging member or scoop indicated generally by the reference character 62. This portion consists of an upper vertical plate portion 64 and a lower horizontal plate portion 66 interconnected by the intermediate portion 68 and suitably braced between the portions 64 and 66 as by the members 70, these members receiving the previously described pivot bolts 58 and 60.

A bracket 72 is secured on the rearward surface of the portion 64 of the material engaging member and, as seen most clearly in Figure 3, spaced bracket ears 74 are suitably secured to a rear portion of the yoke member 52 and pivotally carry, through pin 76, the latching member 78 which includes the finger portion 80 normally overlying the upper portion of the bracket 72 and preventing pivotal motion of the blade 62 in the manner shown. The latching member is normally spring urged by means of the coil spring 82 disposed concentrically of an ear portion 84 thereof and extending therebeyond into engagement with the bight portion 86 of the yoke assembly for normally urging the latching member in the manner defined.

A flexible chain 88 is looped about the fork housing 20, the hook 90 at its free end being utilized for this purpose. A pulley member 91 is secured to the bight portion 86 of the yoke assembly 52 by means of the short lengths of chain 92 and 94 secured at spaced points thereon and the flexible chain 88 is entrained around the pulley member with its opposite end directed over the handle bar 26 to terminate in a hand knob 96 in the manner shown.

As seen most clearly in Figures 4 and 5, a bracket plate 98 is disposed below the handle bar gooseneck 100 and the upper bracket plate 102 is placed thereabove with the two bracket portions interconnected by the fastening elements 104 for rigidly securing the bracket assembly to the handle bar structure. The upper bracket plate 102 is provided with an upturned end portion 106 which has an irregularly shaped opening 108 therein with the upper portion of the opening being of larger diameter than the lower portion thereof. Stop collars 110 and 112 are secured at selected points along the lengths of the chain 88, their points of attachment being selective as provided for by the set screw members 114. The uppermost collar 110 is positioned so that when in the position shown in Figure 4, the blade assembly 62 is just in engagement with the ground surface and when the collar 112 is engaged through the bracket ear 106, the brace assembly will be suitably raised above the surface of the ground, it being understood that the collars are of such diameters that they will pass through the uppermost portion of the opening 108 but will not pass through the lowermost portion thereof. In this manner, a child sitting upon the seat assembly 12 can pull upon the handle knob 96 to raise or lower the blade assembly as desired, the frame members 32 and 34 pivoting about the axle 14. A guide ring 116 is carried by the pulley 91 and the operating rod 118 extends therethrough for connection

with the latching plate **78**, the upper end of the rod **118** being provided with the hand grip portion **120**. When the blade is in the raised position, a push on the actuating rod **118** will pivot the latching plate **78** clockwise about pin **76** to release its engagement with the bracket **72** to permit the blade assembly to pivot about pivot bolts **58** and **60** to an unloading or dumping position, as will be readily apparent.

Referring now more particularly to Figure 6 wherein a modified form of material engaging member or blade is shown, it will be noted that the frame members **32** and **34** are mounted as previously described, and that their portions **50** are connected directly to the arcuated blade member **122**, which blade member simulated a snow plow or dozer blade. The chain elements **124** and **126** are looped about the fork housing **20** for connection at opposite upper corners of the blade **122** for supporting the blade in light engagement with the ground surface, the turnbuckle assemblies **128** being interposed in the chains **124** and **126** to adjust the over-all length thereof. The pulley **130** is suitably secured centrally along the upper edge of the blade member, and the previously described lifting chain member **88** is entrained thereabout. In this form of the attachment, it will be appreciated that although there is no provision for an unloading motion of the blade assembly, the same can be manipulated in much the same manner as ordinary snow plows, that is, the blade may be moved in an arcuate vertical direction for piling material being moved, in this respect, the attachment also simulating a bulldozer assembly.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. An attachment for tricycles having a pair of rear spaced, axle supporting wheels and a dirigible front wheel connected to handle bar mechanism, said attachment comprising a pair of elongated frame members pivotally receivable at their respective rearward ends on said axle of the rear wheels and extending forwardly thereof beyond said dirigible wheel, a material engaging member carried at the forward ends of said frame members, and means accessible to an operator of the tricycle for raising and lowering said material engaging member, said means comprising a pulley operatively connected to said frame members, a flexible element secured at one end to the tricycle extending therefrom around said pulley to a point of selective attachment to said handle bar mechanism.

2. An attachment for tricycles having a pair of spaced, rear axle supporting wheels and a dirigible front wheel connected to handle bar mechanism, comprising a pair of elongated frame members pivotally receivable at their respective rear ends on the rear axle of said tricycle and extending forwardly thereof beyond said dirigible wheel, a material engaging member carried at the forward ends of said frame members, and means accessible to an operator of the tricycle for raising and lowering said material engaging member, said means comprising a pulley operatively connected to said frame member, a flexible element secured at one end to the tricycle extending therefrom around said pulley to a point of selective attachment to said handle bar mechanism, said material receiving member including a yoke member secured to said frame members and a material receiving portion pivotally carried thereby, said material receiving portion being pivotable between a loading and an unloading position, and means for selectively latching the material receiving portion in the loading position.

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