G. M. TURNER.

ARTICLE CARRYING TRUCK.

APPLICATION FILED APR. 30, 1919.

1,356,672.

Patented Oct. 26, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

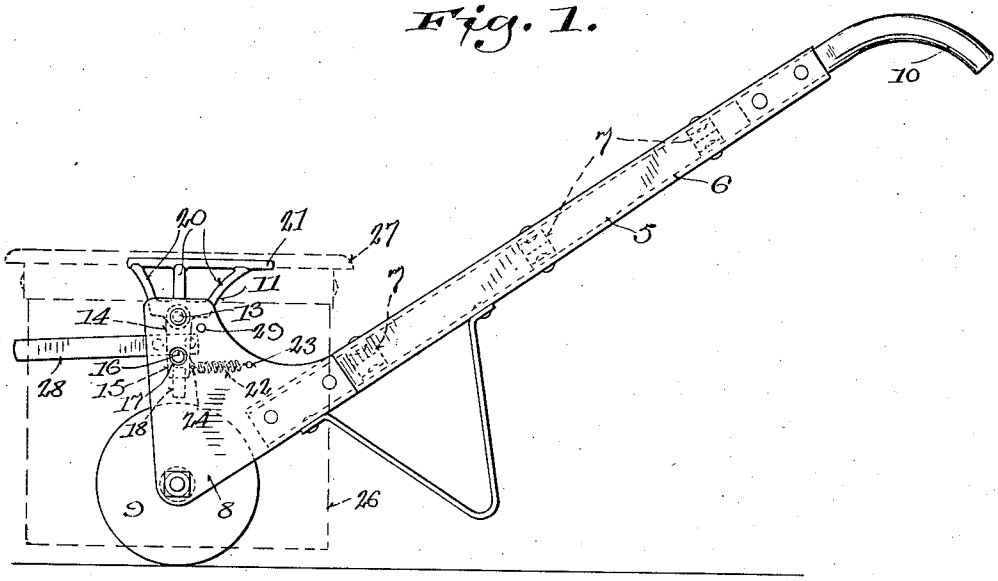
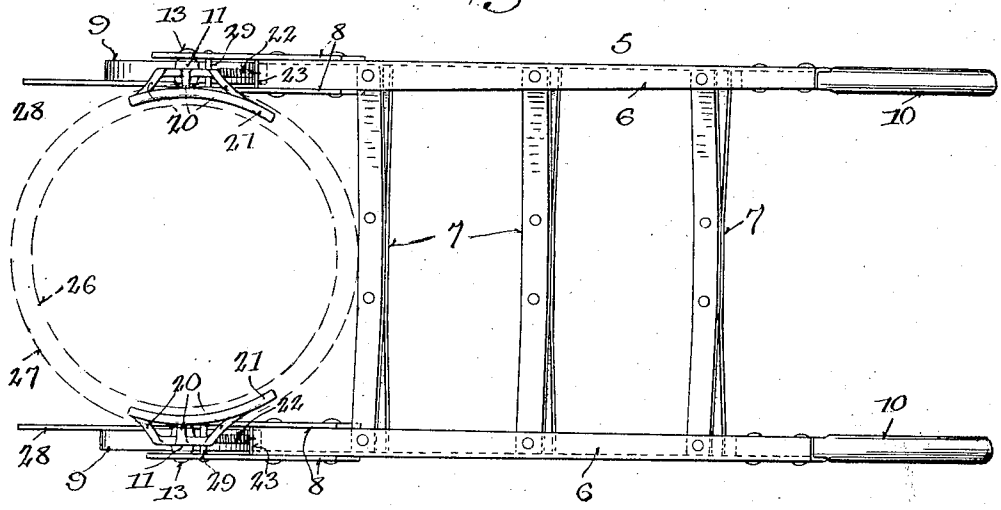


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

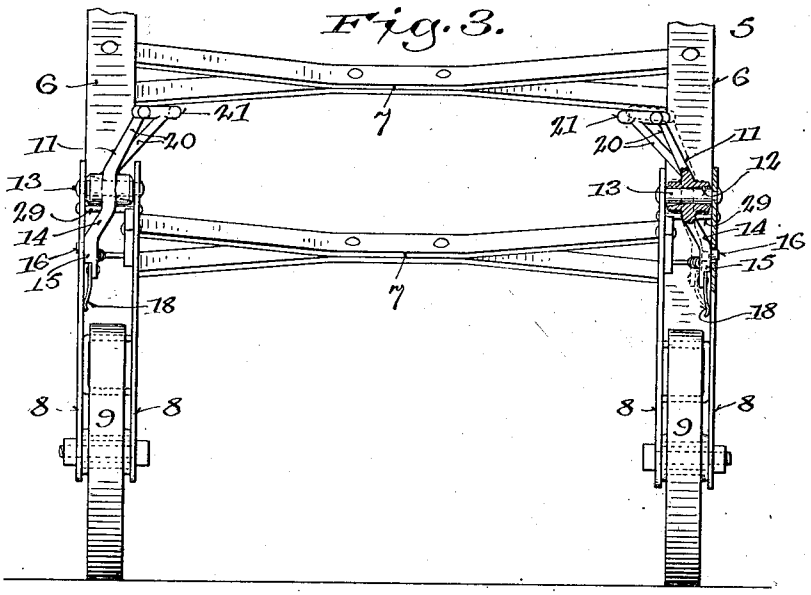


Fig. 4.

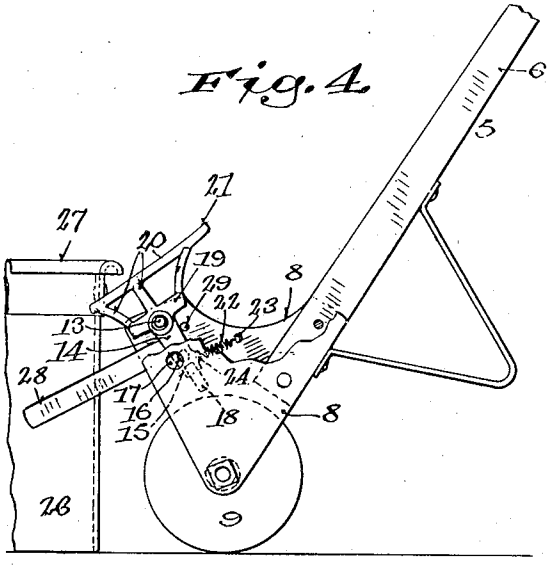


Fig. 5.

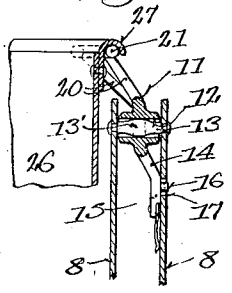


Fig. 7.

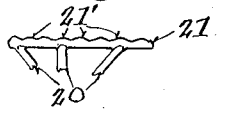
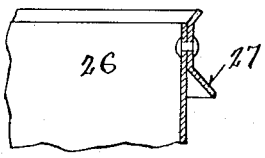


Fig. 6.



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UNITED STATES PATENT OFFICE.

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ARTICLE-CARRYING TRUCK.

1,356,672. Specification of Letters Patent. Patented Oct. 26, 1920.

Application filed April 30, 1919. Serial No. 293,725.

To all whom it may concern:

Be it known that I, GILES M. TURNER, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Article-Carrying Trucks, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The present invention relates to certain new and useful improvements in article carrying trucks, and has for its primary object to provide means for transporting barrels, tote boxes or the like from place to place, said means being readily engageable with or detachable from the carrier with which it is adapted for use.

Another object of this invention is to provide a carrier for articles in which the article will be carried in a substantially upright position, and in which the hands do not touch the article in engaging it with or disengaging it from the carrier.

A further object of my invention is to provide an article carrier in which the supporting trunnions are not secured to the article as is common in the devices of this character now in general use, but in which the trunnions are carried by the carrier truck, as is herein described.

A further object of this invention is to provide a carrier in which the article supports thereof have two ranges of movement, and a locking device for securing the article supports against movement in one direction when an article is sustained thereon.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangements of parts substantially as hereinafter described, and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claims.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a side view of my invention;

Fig. 2 is a top plan view thereof;

Fig. 3 is a view looking toward the end of the supporting portion of my truck, one article support being broken away and in section, more clearly illustrating the details of construction thereof;

Fig. 4 is a side view of my invention showing the same about to be engaged with an article, the supporting brackets of the truck being partly broken away and in section for the purpose of illustration;

Fig. 5 is a view, part in section and part in elevation showing a slightly modified form of article support and trunnion therefor;

Fig. 6 is a sectional view of a portion of a modified construction of barrel or tote box which may be used in connection with my invention; and

Fig. 7 is a plan view of the upper portion of a slightly modified form of article support especially adapted for use in connection with barrels or tote boxes having corrugated walls.

Referring now more particularly to the drawings, 5 designates a hand truck formed by a pair of substantially parallel beam or frame members 6 intermediately braced and held in spaced relation by a series of transverse braces 7, said beams 6 having secured to their lower end a pair of substantially triangular shaped plates 8 forming supporting brackets and having journaled therebetween a supporting wheel 9. The beams 6 have secured to their other ends suitable handles 10 for convenience in moving the carrier truck from place to place.

Pivotally mounted between each pair of plates 8 is an article support 11, the bore 12 of the article support being flared outwardly toward each end from its center whereby the support will be substantially universally pivoted on its supporting trunnion 13 secured between the plates 8. The support 11 has centrally depending therefrom an arm 14 curved downwardly and outwardly into engagement with the outermost plate 8, as at 15, said arm having formed thereon a stud 16 adapted to register with an aperture 17 in the outermost plate 8, when the carrier is in the position depicted in Fig. 1 and the support substantially parallel with the center of gravity. The lug 16 is normally held from engagement with aperture 17 by means of a flat spring 18 secured to the lowermost end of

arm 14 and impinging against the adjacent plate 8 to urge said arm inwardly therefrom.

The upper portion of support 11 is provided with a transverse shoulder 19 from which project a series of supporting arms 20 having their ends remote from shoulder 19 connected by an article engaging bar or rod 21, the bar 21 being shaped to conform to the shape of the article with which it is adapted for engagement, in the present instance said bar being curved to adapt the same for use in connection with cylindrical articles such as barrels or the like. As best shown in Figs. 1 and 4, a retractile spring 22 has one end thereof secured between plates 8 as at 23 and its other end secured to end 15 of arm 14 as at 24 whereby the toe or outer end 25 of the article support is normally held down for convenience in engaging the support with the article to be carried.

In the present instance my invention has been illustrated as used in connection with a cylindrical container 26 having secured to its upper end an annular flange 27 which is outwardly and downwardly curved, the bar 21 of the support being adapted to engage in the groove of said flange 27, as best shown in Figs. 1, 4 and 5. In operation, to engage my carrier with the article 26, the handles 10 of the carrier are raised, and the carrier moved into engagement with the article, laterally projecting arms 28 carried by each pair of plates 8 assisting in guiding the carrier to the article, and when the lowermost brace member 7 abuts the article 26, the supports 11 will be substantially in line with the center of gravity of the article.

With the carrier in this position, the handles 10 are depressed, the handles 10 and beams 6 serving as levers, and the wheels 9 as fulcrums, the article thus being raised from the ground and supported on the carrier. When the bars 21 engage the flange of the article, the supports 11 are rocked on their trunnions, as best shown by dotted lines in Fig. 3, and the spring 18 is overcome, allowing lug 16 to engage the aperture 17 when they register, thus substantially rigidly suspending the article between the supports to prevent the accidental tilting thereof.

In Fig. 5 a slightly modified form of trunnion is illustrated in which the trunnion 13 is intermediately enlarged or bulged as at 13′, and the bore 12 of the support 11 is of the same diameter throughout its length. This structure obtains the same result as the straight trunnion engaging the flared bore hereinbefore described.

In Fig. 6 I have illustrated a slightly modified form of container in which the flange 27 is downwardly and outwardly flared to provide the groove for engagement with the bar 21, and in Fig. 7 I have illustrated a slightly modified form of bar 21 which is provided with corrugated walls. When the support 11 is provided with the teeth 21′ the same will be capable of engaging articles without the flange 27, in that the same will bite into the walls of the article when the same is supported thereby, as will be obvious, and this type of supporting member is especially adapted for use with wooden barrels or boxes.

The swinging of support 11 is limited by means of a stop pin 29 adapted to engage shoulder 19 or arm 14, as best shown in Figs. 1 and 4. The spring 22 normally holds arm 14 against stop 29, and shoulder 19 engages against stop 29 when the article carried thereby is empty and of insufficient weight to overcome spring 18 to permit the engagement of the lug 16 with aperture 17, in which case said stop will prevent the excess locking of the article on its supports, as will be obvious.

From the foregoing description taken in connection with the accompanying drawing it will be readily seen that I provide a simple, efficient and durable carrier for transporting barrels, tote boxes or other articles from place to place, which, when not in use, may be stored with its handles substantially vertical to occupy a small amount of space, the plates 8 providing the means of support.

What I claim as my invention is:

1. A carrier comprising a wheeled frame, an article support pivoted to the frame and movable substantially longitudinally with respect thereto and adapted to receive the entire weight of an article to be transported, and means for automatically locking said support against movement when an article is positioned thereon.

2. A carrier comprising a movable frame, an article support pivotally carried by the frame, and means for automatically locking the support against movement on its pivot after an article has been placed on said support and the support moved on its pivot to a predetermined position.

3. A carrier comprising a movable frame, an article support pivotally carried by the frame and adapted to receive the entire weight of an article to be transported, and means for locking the support against movement after the article has been placed thereon and the support moved to a substantially vertical position when the frame is in its normal carrying position, said means being retained in such position by the weight of the article.

4. A carrier comprising a movable frame, an article support universally pivoted to the frame, said support being rotatable in one diection to pass beneath an article, and means for locking the support against movement in said direction when the same

is rocked in a direction substantially transverse of the other direction by the weight of said article.

5. A carrier comprising a movable frame, an article support universally pivoted to the frame, said support being rotatable in one direction to pass beneath an article, an arm carried by the support, and coöperating means on said arm and frame for locking the support against movement in said direction when the same is rocked in a substantially transverse direction by the weight of said article.

6. A carrier comprising a movable frame, an article support universally pivoted to the frame, said support being rotatable in one direction to pass beneath an article, means for locking the support against movement in said direction, and means preventing cooperation with the first mentioned means until said support receives the weight of an article to be carried thereby.

7. A carrier comprising a movable frame, an article support pivoted to the frame, an arm carried by the support, means on the arm for locking engagement with the frame, and a spring for holding said arm away from the frame to prevent operation of said means.

8. A carrier comprising a movable frame, an article support pivoted to the frame and provided with a depending arm, means on said arm adapted to engage an aperture in said frame and holding the same against movement, and means urging said arm away from the frame until an article is engaged by said support.

9. A carrier comprising a movable frame, an article support universally pivoted to the frame, said support being rotatable in one direction to pass beneath an article, an arm integral with said support and depending downwardly therefrom, a locking lug formed on said arm and adapted to register with an aperture in said frame, and yielding means normally holding said locking lug out of engagement with said aperture, said support being rocked inwardly by the weight of said article to overcome said urging means and permit the locking of the support against movement in said direction.

In testimony whereof I affix my signature.

GILES M. TURNER.