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Wheel tackle

Abstract

Wheel tackle apparatus made of wheels with bearings and plywood angles with shackles impaled on a bolt and locked with nuts to a threaded bracket riveted to a metal angle. It provides an adjustable platform to accommodate variable object sizes. It has eyelets and threaded metal shackles which can be used to tie the object. The shackles serve as a barrier to prevent sliding, shifting, or detachment of the object. It can be disassembled for compact storage. It reliably secures an object for transportation onto the plywood and metal angle platform and enables rolling the object instead of hand carrying it.

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Background/Summary

RELATED APPLICATIONS [0001] The present application is a continuation of U.S. patent application Ser. No. 18/178,502, filed on Mar. 4, 2023 and entitled as “Trapezoidal nut”.

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0002] The present invention relates to a wheel tackle made of wheels with bearings and plywood angles with shackles impaled on a bolt and locked with nuts to a threaded bracket riveted to a metal angle.

2. Description of the Related Art

[0003] US 0133615 A for a Dumping-Cart and U.S. Pat. No. 6,966,574 B1 for a Multi-functional convertible transport cart have the ability to carry a cargo-load. However, they are too bulky, too heavy and are not designed to be disassembled into a smaller size for compact storage.

SUMMARY OF THE INVENTION

[0004] The purpose of the invention is to transport an object easily by rolling it on the wheel tackle apparatus. An object is placed onto the plywood and metal angle platform and secured with a rope or any flexible element to prevent it from sliding, shifting, and falling off from the wheel tackle during transportation.

[0005] The goal of the invention is to secure the object during transport and provide an adjustable platform to accommodate variable object sizes. This goal is achieved by the fact that the wheel tackle is designed with several eyelets which can be used to tie an object to and to hold it in a fixed and static position on the wheel tackle. Additionally, the threaded metal shackles can also be used to tie the object to them and serve as a barrier to protect the tied object from sliding off the wheel tackle during movement. Bolts and rectangular and bracket nuts allow the distance between the threaded metal shackles to be changed, so that the wheel tackle dimension can be adjusted to any object size. The wheel tackle apparatus is designed to be disassembled for compact storage when not in use.

[0006] The work result of this invention is that the wheel tackle apparatus reliably secures an object of different sizes, without unwanted sliding, shifting, or detachment onto the plywood and metal angle platform, and rolls the object instead of hand carrying it.

Description

BRIEF DESCRIPTION OF FIGURES

[0007] FIG. **1** is a wheel tackle in full assembly.

[0008] FIG. **2** is a plywood angle with a metal shackle, washers, trapezoidal and locking nuts assembly.

[0009] FIG. **3** is a plywood angle with wheel, nuts, bearings and bolt assembly.

[0010] FIG. **4** is a central part presented from different point of view compare to FIG. **1**.

DETAILED DESCRIPTION OF THE INVENTION

[0011] Referring to FIG. **1** is a perspective view of the wheel tackle **1** according to the invention. The wheel tackle **1** is comprised of several parts: central **2** and two sides **3**. Side part **3** is comprised of plywood angle **4** with holes which are equipped with threaded metallic shackle **9** tightened with trapezoidal nut **7** and shackle locking nut **8** on one end and shackle washer **18** and shackle locking nut **8** on the other end to form a strong bond with plywood angle **4**. Side part **3** also includes the wheel **12**, bearings **17**, bearing locking nuts **20**, plywood angle' washers **21**, and rectangular locking nut **6**. Bearings **17** is put on bolt **19** and fixed by the bearing locking nuts **20** and is placed inside of the wheel **12**. Plywood angle **4** with a hole is put on bolt **19** and fixed with plywood angle' washers **21** and rectangular locking nut **6**. Metal angle **5** and trapezoidal nut **7** have eyelets **11**. Side parts **3** elements are identical and interchangeable between each other.

[0012] Referring to FIG. **2** is a perspective view of a plywood angle **4** assembly where in the round circle shows how the threaded segment of the threaded metal shackle **9**, trapezoidal nut **7**, shackle washer **18**, and locking nuts **8** are positioned on the plywood surface and inside of the plywood

angle **4** hole.
[0013] Referring to FIG. **3** is a perspective view of a side part **3** assembly where in the round circle shows how the bearings **17** and bearing locking nuts **20** are positioned inside of the wheel **12**; and how plywood angle' washers **21** and rectangular locking nuts **6** are positioned on the plywood surface and inside of the plywood angle **4** hole.
[0014] Referring to FIG. **4** is central part **2** presented from a different point of view compared to FIG. **1**. It is comprised of the threaded bracket **13**, which is made from metal sheet bended and formed to accommodate bracket nuts **16** which is welded into it. Metal plank **14** is welded to bracket nuts **16**. Metal angle **5** is riveted to a bracket with rivets **10** and washers **15** respectively. Bracket nut **16** has a threaded hole for bolt **19**.
[0015] The proposed wheel tackle **1**, after being adjusted to the object size by threaded bolts **19**, bracket nuts **16**, and rectangular locking nuts **6**, is tied to the object by eyelets **11** and a rope or any flexible element to make ready for use (rolling).
[0016] A significant difference in the design of the wheel tackle **1** is that it can be disassembled by unscrewing the rectangular locking nuts **6** and occupy less volume than any other known wheeled carts. Wheel tackle **1** threaded elements can be extended with similar threaded custom elements. Shackle and angles size can be modified or replaced according to the customer needs as well.
[0017] This invention has been described as having a preferred design, but it can be further modified within the scope of technical abilities in the following way: eyelet **11** diameter in metal angle **5** and trapezoidal nut **7** can be any size, they can be accompanied by cutting a thread in it with any type, size, and pitch; bolt **19** and wheel **12** diameter can be any size. That is what and how this invention intended to cover any variations, uses, or adaptations of the invention using its general principles.

Claims

1. A wheel tackle **1** is comprised from several parts: central **2** and two sides **3**. Central part **2** is comprised of the threaded bracket **13**, which is made from metal sheet bended and formed to accommodate bracket nuts **16** which is welded into it. Metal plank **14** is welded to bracket nuts **16**. Metal angle **5** is riveted to a bracket with rivets **10** and washers **15** respectively. Bracket nut **16** has a threaded hole for bolt **19**. Side part **3** is comprised of plywood angle **4** with holes which are equipped with threaded metallic shackle **9** tightened with trapezoidal nut **7** and shackle locking nut **8** on one end and shackle washer **18** and shackle locking nut **8** on the other end to form a strong bond with plywood angle **4**. Side part **3** also includes the wheel **12**, bearings **17**, bearing locking nuts **20**, plywood angle' washers **21**, and rectangular locking nut **6**. Bearings **17** is put on bolt **19** and fixed by the bearing locking nuts **20** and is placed inside of the wheel **12**. Plywood angle **4** with a hole is put on bolt **19** and fixed with plywood angle' washers **21** and rectangular locking nut **6**. Metal angle **5** and trapezoidal nut **7** have eyelets **11**.
2. The wheel tackle of claim 1, wherein the distance between two sides of the part **3** can be changed with a help of the bolts **19**, bracket nuts **16**, and rectangular locking nuts **6** to accommodate the attachable object dimension.
3. The wheel tackle of claim 1, wherein the eyelets **11** of the parts **2** and **3** can be used to tie the object to them.
4. The wheel tackle of claim 1, wherein the threaded metal shackles **9** can be used as a barrier to prevent the object from sliding, shifting, falling and as a place to tie the object to.
5. The wheel tackle of claim 1, wherein side parts **3** elements are identical and interchangeable between each other.