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L. P. BOLANDER
REVOLVING FLAGPOLE TRUCK

Filed Oct. 31, 1922

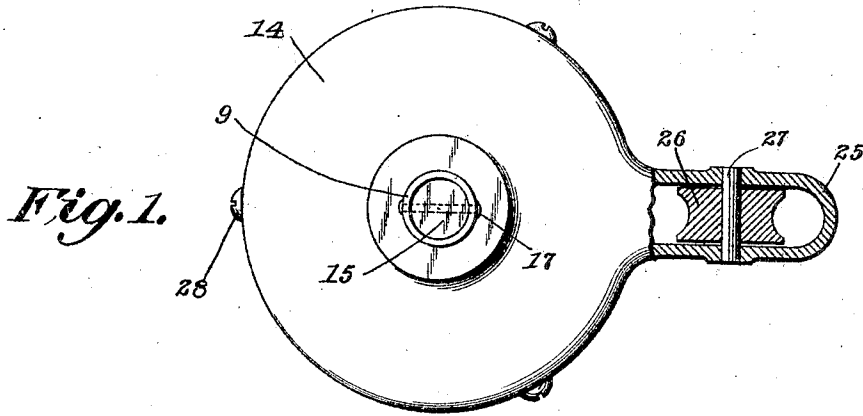


Fig. 3.

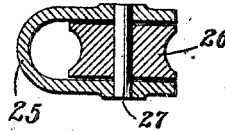
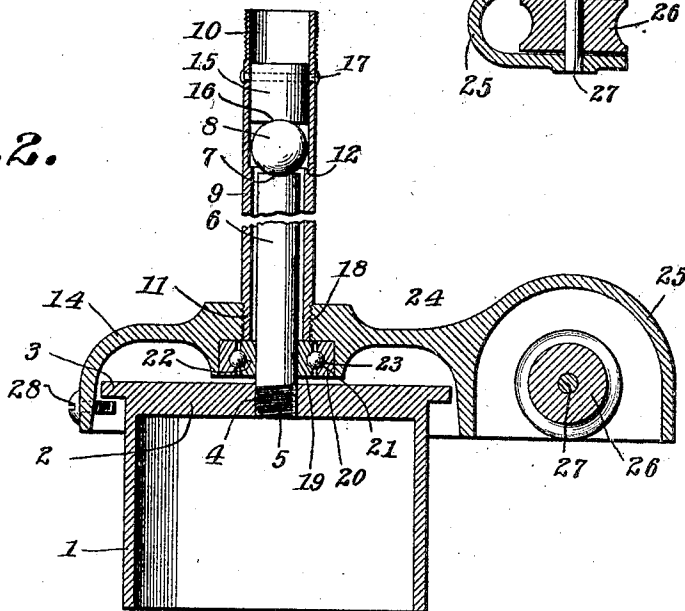


Fig. 2.



Inventor
Louis Ph. Bolander

By *[Signature]*

Attorney

UNITED STATES PATENT OFFICE.

LOUIS PH. BOLANDER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO L. PH. BOLANDER & SON, OF SAN FRANCISCO, CALIFORNIA, A FIRM COMPOSED OF SAID L. PH. BOLANDER AND ALVIN E. BOLANDER.

REVOLVING FLAGPOLE TRUCK.

Application filed October 31, 1922. Serial No. 598,174.

To all whom it may concern:

Be it known that I, LOUIS PH. BOLANDER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Revolving Flagpole Trucks, of which the following is a specification.

The invention relates to a revolving flag pole truck. The object of the present invention is to improve the construction of revolving flag pole trucks and to provide a simple practical and efficient flag pole truck of strong, durable and comparatively inexpensive construction equipped with a ball bearing adapted to reduce to a minimum the friction incident to the rotary movement of a flag pole truck.

A further object of the invention is to provide a revolving flag pole truck of this character in which the weight will be sustained by a single relatively large ball and in which provision will be made for enabling the rotary truck member to be lifted off the flag pole without liability of displacing the ball.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, in which like characters of reference designate corresponding parts in the several views:—

Figure 1 is a plan view of a revolving flag pole truck constructed in accordance with this invention, the arm and the sheave housing and the sheave being in section.

Figure 2 is a central vertical sectional view of the same, taken longitudinally of the arm and the sheave housing.

Figure 3 is a central transverse sectional view through the sheave housing, illustrating the manner of mounting the shaft.

In the accompanying drawing, in which is illustrated the preferred embodiment of

the invention, the revolving flag pole truck comprises in its construction a fixed cap 1 constructed of suitable metal and adapted to be fitted on the upper end of a flag pole and consisting of a slightly tapered approximately cylindrical portion and a horizontal top portion 2, provided with a projecting horizontal peripheral flange 3 and having a central threaded opening 4 for the reception of the lower threaded end 5 of a vertical stem 6. The vertical stem 6 extends upwardly from the fixed cap 1 and is smooth above the lower threaded terminal portion 5 and is provided at its upper end with a concave seat 7 for the reception of a relatively large anti-friction supporting ball 8, which is arranged within a tubular member 9. The tubular member 9, which consists of a pipe, is exteriorly threaded at its upper and lower end portions 10 and 11 and it is counter-bored or reamed out interiorly from its upper end to a point adjacent the upper end of the stem to form an interior shoulder 12, which is located below the horizontal diameter of the ball 8 and which is adapted to form a stop or seat for the same to prevent the ball from dropping out of the tubular member 9 should the latter and the rotary truck member 14 be removed from the stem 6. The tubular member 9 has secured within its upper portion an approximately cylindrical plug 15 provided in its lower end face with a recess or concavity 16 forming a bearing at the top of the ball 8 and seated upon the same. The plug 15 is secured within the tubular member by a transverse opening 17 which is riveted at its ends to retain it in position but any other suitable means may, of course, be employed for securing the plug within the upper portion of the tubular member 9. By constructing the interior of the tubular member in this manner a strong and substantial bearing is provided for the revolving truck member 14 and the ball is prevented from becoming displaced when the tubular member 9 and the revolving truck member are removed from the stem 6.

The upper exterior end 10 of the tubular member 9 is adapted to receive a ball and the lower threaded end 11 of the said tubular member 9 is screwed into a threaded portion 18 of a central opening in the re-

volving truck member and the lower portion of the central opening of the revolving truck member is counter-bored to receive a ball bearing comprising inner and outer annular race members 19 and 20 and anti-friction balls 21, which are arranged in annular grooves or races 22 and 23 formed in the opposed faces of the race members 19 and 20. The ball bearing eliminates friction due to lateral strain on the revolving flag pole truck member and the weight to which the truck member is subjected is sustained by the large ball 8, which insures long life and freedom of movement to the flag pole truck.

The revolving truck member is provided at one side with a projecting arm or portion 24, which is formed into a sheave housing 25 closed at the top and side and end walls and open at the bottom and receiving a halyard sheave 26, which is mounted on a sheave pin 27. The sheave is grooved at its periphery and is adapted to receive a flag halyard in the usual manner. The revolving truck member is held against accidental upward movement or displacement by means of screws 28 which pierces the lower skirt portion of the revolving truck member and extends beneath the horizontal peripheral flange 3 of the fixed cap, as clearly illustrated in Figure 2 of the drawings.

What is claimed is:—

1. A revolving flag pole truck comprising a fixed flag pole cap provided at the top with a horizontally projecting peripheral flange, a central stem rising from the fixed cap, a revolving truck member having a central opening through which the stem passes, said truck member being fitted over the cap in spaced relation with the same and extending below the said peripheral flange, a removable fastening device piercing the lower portion of the truck member and extending beneath the said flange to prevent displacement of the truck member, a tubular member secured to the revolving truck mem-

ber and extending upwardly therefrom and receiving the said stem, and upper and lower bearings for the truck member and the tubular member detachably retained in place by the said fastening device.

2. A revolving flag pole truck comprising a centrally projecting stem, a revolving truck member having a central opening through which the stem passes, a tubular member secured in the upper portion of the opening of the truck member and receiving the stem and arranged in spaced relation with the same and provided at its upper portion with an interior plug, a relatively large ball arranged within the tubular member and interposed between the plug and the upper end of the stem, and ball bearings arranged within the lower portion of the central opening of the truck member and composed of inner and outer annular race members and interposed anti-friction balls.

3. A revolving flag pole truck comprising a centrally projecting stem provided in its upper end with a concavity forming a bearing seat, a revolving truck member having a central opening through which the stem passes, a tubular member connected with and rising from the revolving truck member and receiving the projecting stem and having its interior enlarged at the upper portion to form an interior seat or stop located adjacent the upper end of the stem, a relatively large ball arranged within the tubular member and fitted in the said bearing seat of the stem and having its center located above the said interior shoulder, and a plug secured within the upper portion of the tubular member and having a concavity in its lower end, forming a bearing seat and fitted on the said ball whereby the revolving truck member and the tubular member are supported by the ball.

In testimony whereof I have hereunto set my hand.

LOUIS PH. BOLANDER.