No. 744,977. PATENTED NOV. 24, 1903.

H. M. NOURSE.

SIGNAL OR OTHER STAFF.

APPLICATION FILED JULY 5, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

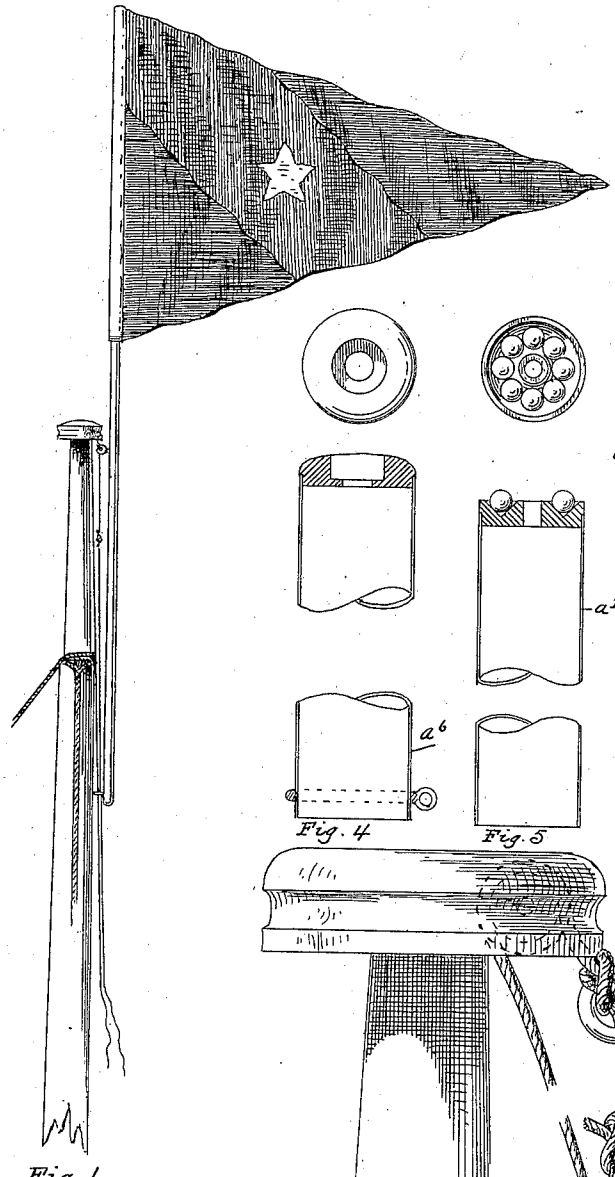


Fig. 1

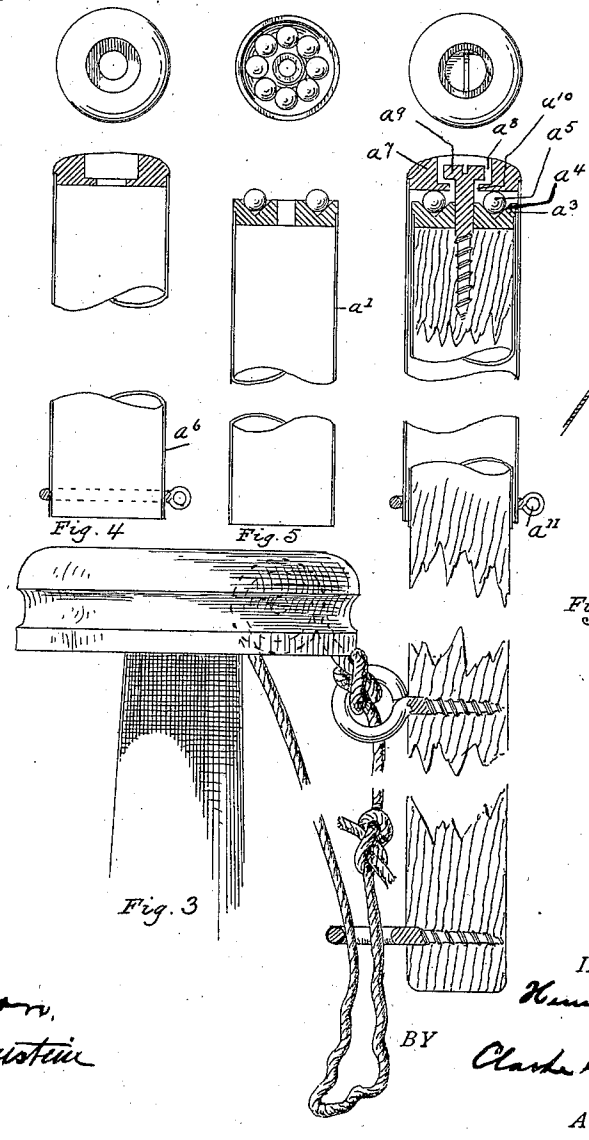


Fig. 4 Fig. 5

Fig. 3

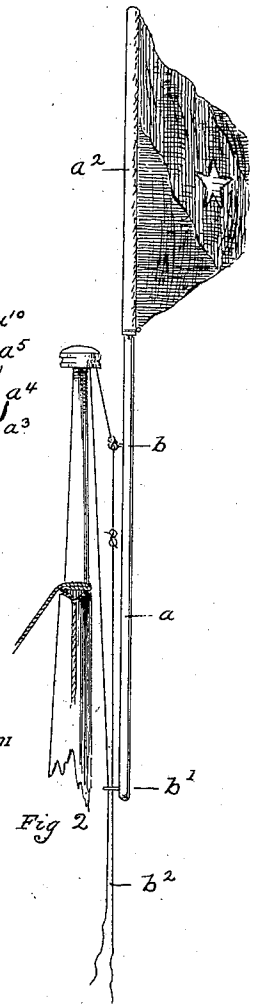


Fig 2

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NO MODEL. 2 SHEETS—SHEET 2.



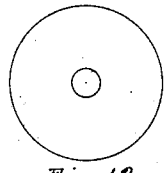


Fig. 12

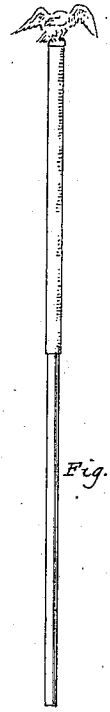


Fig. 15

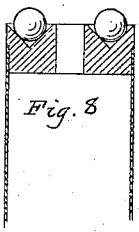


Fig. 8

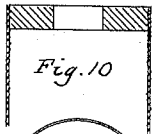


Fig. 10

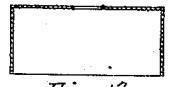


Fig. 13

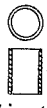


Fig. 14

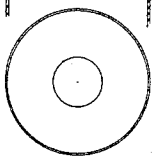


Fig. 11

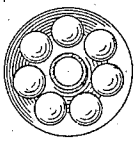


Fig. 9

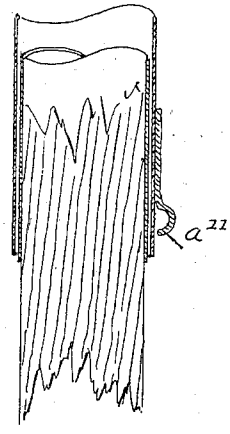


Fig. 6

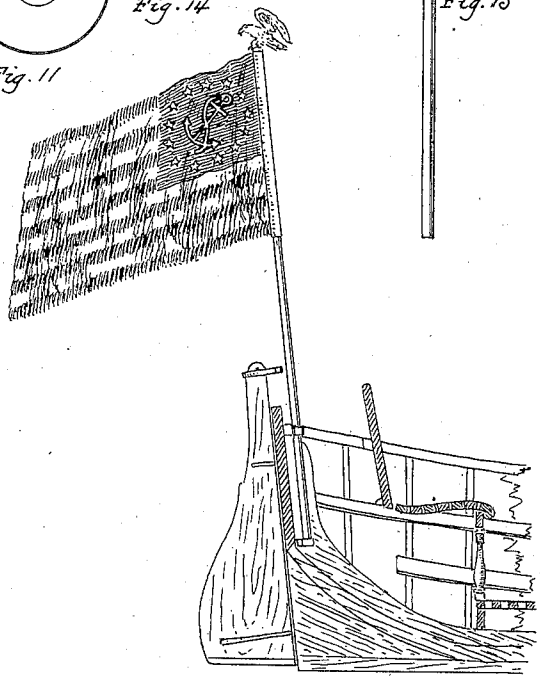


Fig. 7

WITNESSES:

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ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 744,977. Patented November 24, 1903.

UNITED STATES PATENT OFFICE.

HENRY M. NOURSE, OF BOSTON, MASSACHUSETTS.

SIGNAL OR OTHER STAFF.

SPECIFICATION forming part of Letters Patent No. 744,977, dated November 24, 1903.

Application filed July 5, 1902. Serial No. 114,379. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. NOURSE, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Signal or other Staffs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to means for attaching pennants, signals, flags, &c., to staffs and for supporting them thereto. Heretofore the means employed for this purpose have been objectionable in that the signal, pennant, or flag was so held by its staff as to readily foul it or become twisted or wrapped about it. By my invention this objection is overcome, as the staff is so formed as to turn with the pennant or flag as it is blown or whipped by the wind or moved by other agencies.

The invention further relates to means whereby the kind of staff known as the "signal-stick" may be hoisted in a vertical position rather than inclined or inverted, as now often happens with the kind of staff in use, and this portion of the improvement is secured by providing the staff with two eyes—one about midway its length, by which it is secured to the signal-halyard, and another at its lower end—both of which project laterally from the staff, and by passing the bight of the signal-halyard through the eye at the lower end, so that the halyard in addition to its function of hoisting and lowering the staff and signal shall also act as a stay or lizard on which the staff travels upward as it is hoisted and downward as it is lowered, thus preventing the staff and flag from assuming an inverted or horizontal position in its upward or downward course and also acting to hold the staff vertical when hoisted to the topmast-truck.

I will now describe the invention in conjunction with the drawings forming a part of of this specification, wherein—

Figure 1 is a view representing the upper portion of a topmast and the staff and signal raised to the topmast-head. Fig. 2 is a view representing the same parts, but with the staff and signal in the act of being hoisted, and this illustrates the vertical position of the staff while it is being hoisted. Fig. 3 is an enlarged view of the masthead and of portions of the staff in its raised position to show the reeving of the hoisting-line, and it also shows the construction of the staff. Figs. 4 and 5 are detail views further illustrating the construction of the staff. Figs. 6 and 7 are views representing the application of my invention to a boat-staff; and Figs. 8, 9, 10, 11, 12, 13, 14, and 15 are views in detail thereof, to which reference will hereinafter be made.

In the drawings, a represents the staff. It preferably is made of wood and has mounted upon its upper part a long sleeve a', of brass or any other suitable material, which is tightly secured to the staff. This sleeve is about the length of or slightly longer than the pocket a^2 of the pennant or flag. It has at its upper end a holder a^3, provided with a groove a^4 for holding a number of antifriction-balls a^5. Upon this fixed sleeve is mounted a movable metal sleeve a^6. This movable sleeve has at its upper end a cap a^7, provided with a cavity a^8 for receiving the head a^9 of a screw, and a hole a^{10}, through which the screw extends, and this screw passes through a hole in the ball-holder a^3 and screws into the wooden end of the staff within the first-named sleeve. This movable sleeve is slightly larger than the fixed sleeve; but it is supported over the fixed sleeve by the balls a^5, upon which the cap a^7 bears. The fit of the movable sleeve upon the fixed sleeve and on the screw is sufficiently loose to permit it to readily turn on both and in either direction. It has mounted at its lower end an eye a^{11}, to which the pennant or flag may be attached. It will be understood that the pennant or flag is secured to the staff by slipping its side pocket over the outer sleeve and drawing it downward thereon until the closed upper end of the pocket rests against the cap a^7. This brings its lower end into suitable fastening relation with the eye a^{11}. There is thus provided a structure which allows the entire flag to readily turn upon the staff as it is blown or otherwise moved and without being hindered by it in any way, and therefore cannot foul it.

While I have represented the structure as

applied to a signal-stick or staff, I would say that it may also be used upon a staff which is held fixed or any other form of staff. Where it is used as a signal-stick, I prefer to rig the staff with the eyes *b b'*. These eyes project laterally from the staff, one at or near its lower end and the other in line with it at or near the middle of the staff. The signal-halyard is secured to the upper eye, and both lines of the halyard pass from the sheave in the topmast-truck through the lower eye, and the staff is raised and lowered upon the halyard and is in position at the topmast-truck sustained by both of them. This method of attaching the staff to the halyards insures that the staff and signal shall always be maintained in a vertical position at the masthead and during the hoisting and lowering as well, and this is a marked improvement upon the present method, which involves the attachment of the staff to the halyard at but one point and which does not act to hold the staff vertical while it is being raised or lowered, but permits it to assume a horizontal or even an inverted position while it is being hoisted or lowered, which is objectionable.

In Figs. 7 to 15, inclusive, the construction is illustrated as applied to a boat-staff. The staff is provided with the sleeves a' and a^6 and antifriction-bearings a^5, like those already described. The hole in the cap end of the sleeve and the cap itself are shown as covered by an independent cap *c*, which has an interior sleeve resting upon the ball-support *a* and surrounding the shank of the screw and an exterior sleeve, which projects downward upon the sleeve a^6 a limited distance. Against the top of this sleeve bears the fastening-screw and also any ornamental or other head *c'*. The purpose of this sleeve is to provide a protected joint. The sleeve a^6 of this staff has an upper eye c^2 as well as a lower eye a^{11}, by means of which the flag is mounted upon or attached to the sleeve, and this may be done by inserting the sleeve into a pocket in the flag and seizing the flag to the eyes, or the flag may be directly seized to the eyes without mounting the sleeve in a pocket.

Figs. 8 and 9 are detail views of the inner sleeve a' and a portion of the antifriction-bearing. Figs. 10 and 11 are detail views of the outer sleeve a^6 and a portion of the antifriction-bearing. Figs. 12, 13, and 14 are detail views of the weather-cap c^6, the inner sleeve being represented as independent of the remainder of the cap.

While I have represented the antifriction-bearing as secured by balls, I would say any other suitable antifriction-bearing so located at the upper end of the staff may be used. I would further say that whether balls or rolls are employed I prefer to make them of a metal or material which shall stand the weather and be non-corrosive.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A staff of the character specified, a revoluble tubular sleeve surrounding the staff and supported at the top thereof, and means adjustably mounted directly on the staff for preventing excessive longitudinal movement of the sleeve thereon while permitting free rotation of said sleeve.

2. A staff of the character specified having at its upper end an antifriction-bearing, a long revoluble tubular sleeve on which the pennant is to be mounted surrounding the staff and having a cap to rest upon the antifriction-bearing, and means for uniting the cap to the staff in a manner to permit it to turn, but to prevent it from having appreciable lengthwise movement thereon.

3. A staff of the character specified having mounted thereon a swiveling pennant or flag holder comprising a long sleeve on which the pennant is to be mounted and upon which is provided a cap, and having a single bearing only and that upon the upper end of the staff.

4. A staff of the character specified having mounted thereon a swiveling pennant or flag holder comprising a long revoluble sleeve on which the pennant is to be mounted and upon which is provided a cap, and having a single bearing only.

5. The combination of the staff, a metal sleeve rigidly secured to it, an antifriction-bearing at the upper end of the staff, a revoluble capped sleeve inclosing the metal sleeve, and bearing upon the antifriction-bearing, a fastener extending from the cap into the staff, and a pennant-fastening means at the lower end of the capped sleeve.

6. The pennant-staff having the eye *b* near the center of its length and the eye *b'* at its lower end, and a hoisting and lowering halyard attached to the first-named eye extending through a sheave in a topmast-truck or elsewhere and thence by both lines through the lower eye whereby the staff is held in a vertical position while it is being raised or lowered as well as while in position.

HENRY M. NOURSE.

Witnesses:
F. F. RAYMOND, 2d,
J. M. DOLAN.