No. 669,406. Patented Mar. 5, 1901.

W. WISHART.

BRAKE ACTUATING MECHANISM.

(Application filed Dec. 29, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

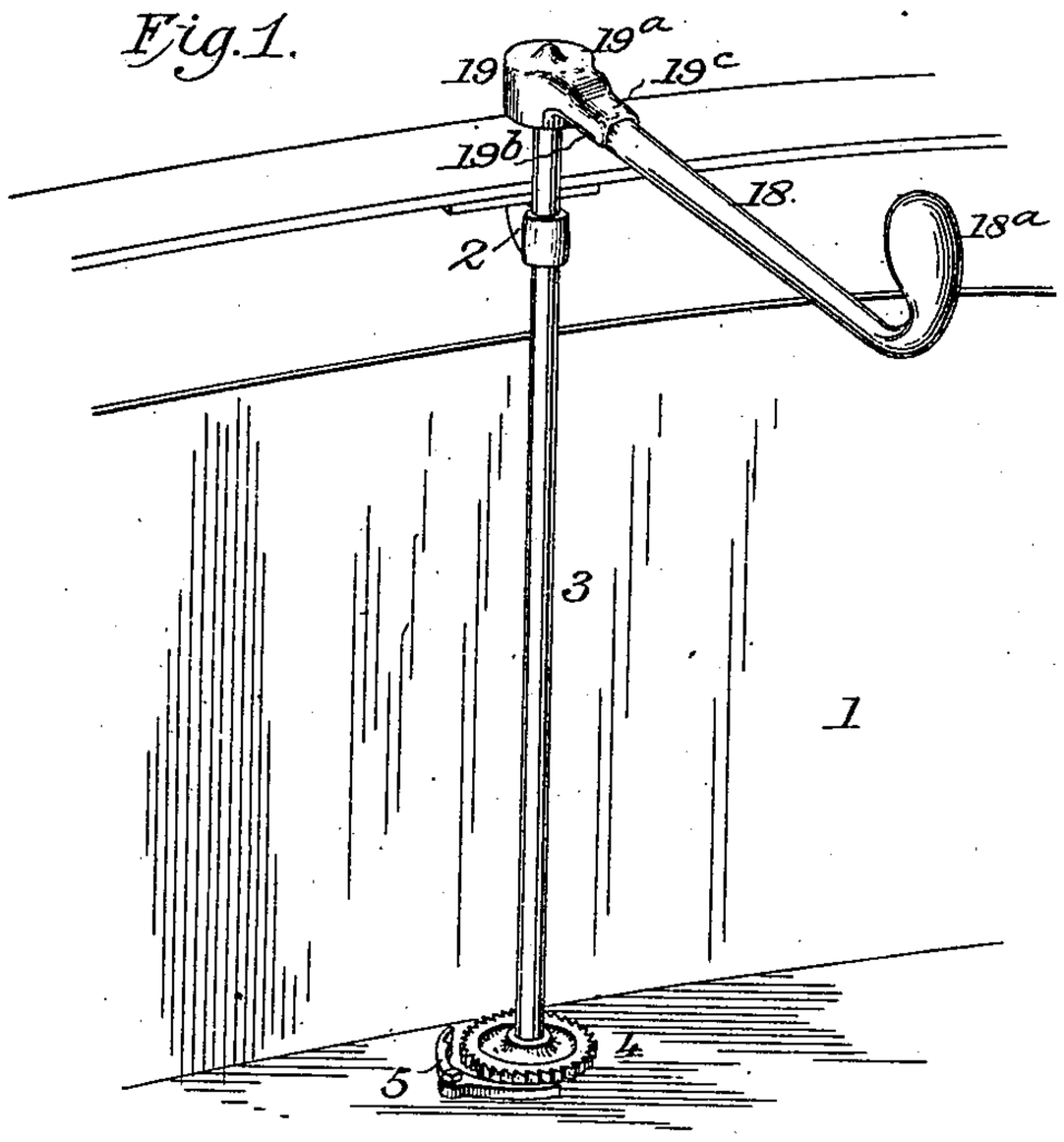


Fig. 2.

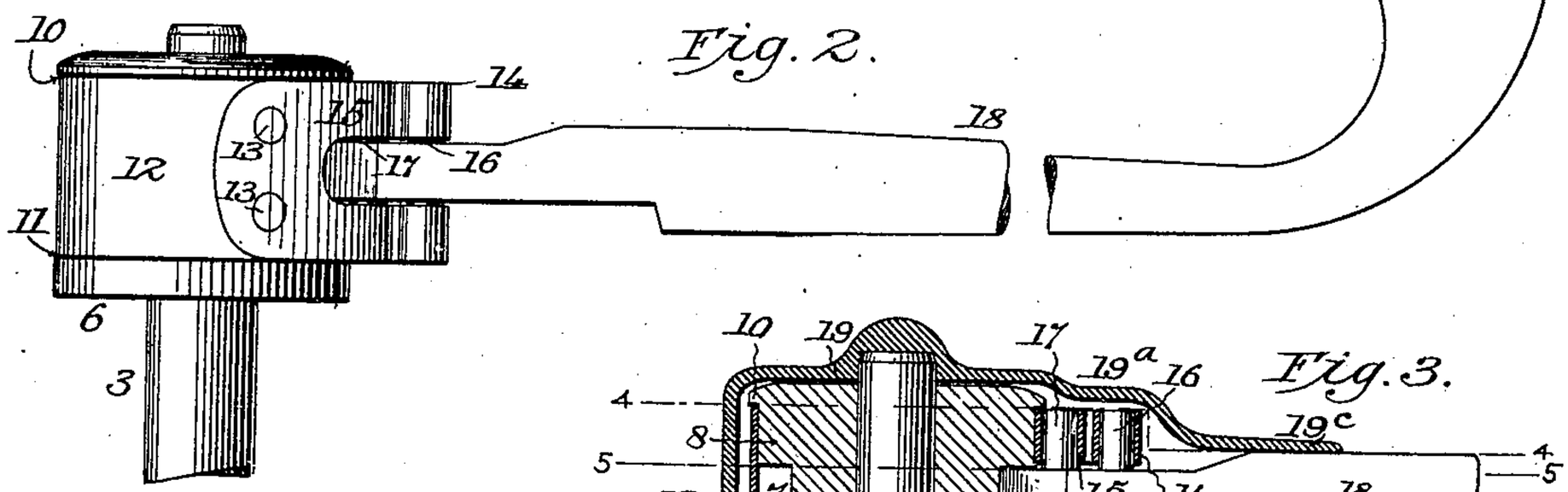
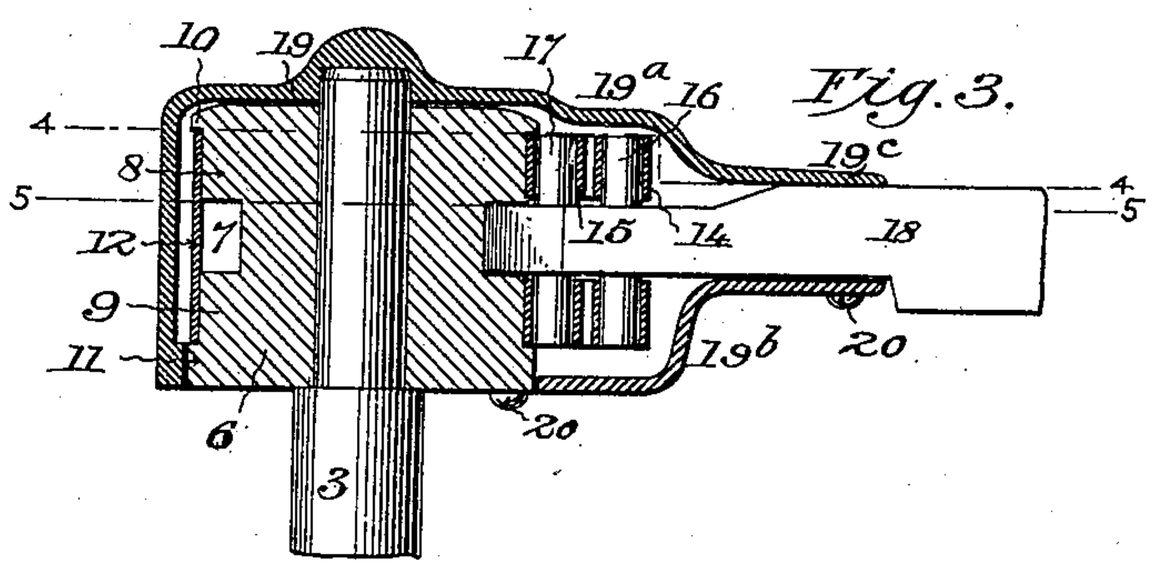


Fig. 3.



Witnesses
Sidney P. Hollingsworth
C. F. Howard

Inventor
William Wishart,
by Howson & Howson
Attorneys.

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

No. 669,406. Patented Mar. 5, 1901.

W. WISHART.

BRAKE ACTUATING MECHANISM.

(Application filed Dec. 28, 1900.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 4.

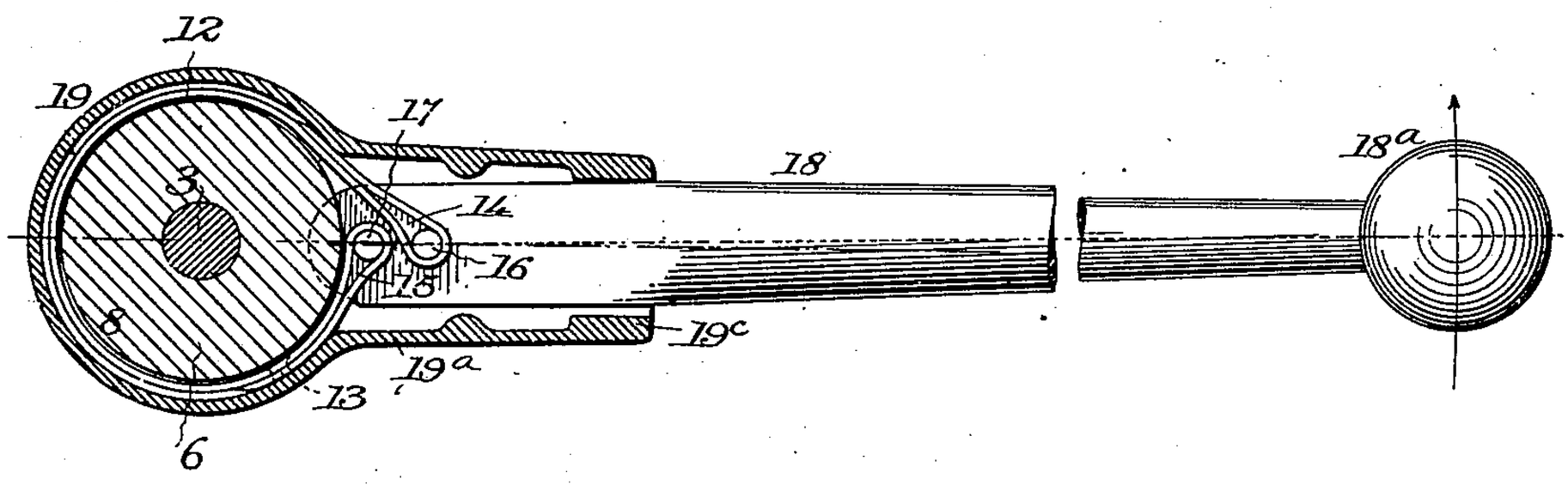
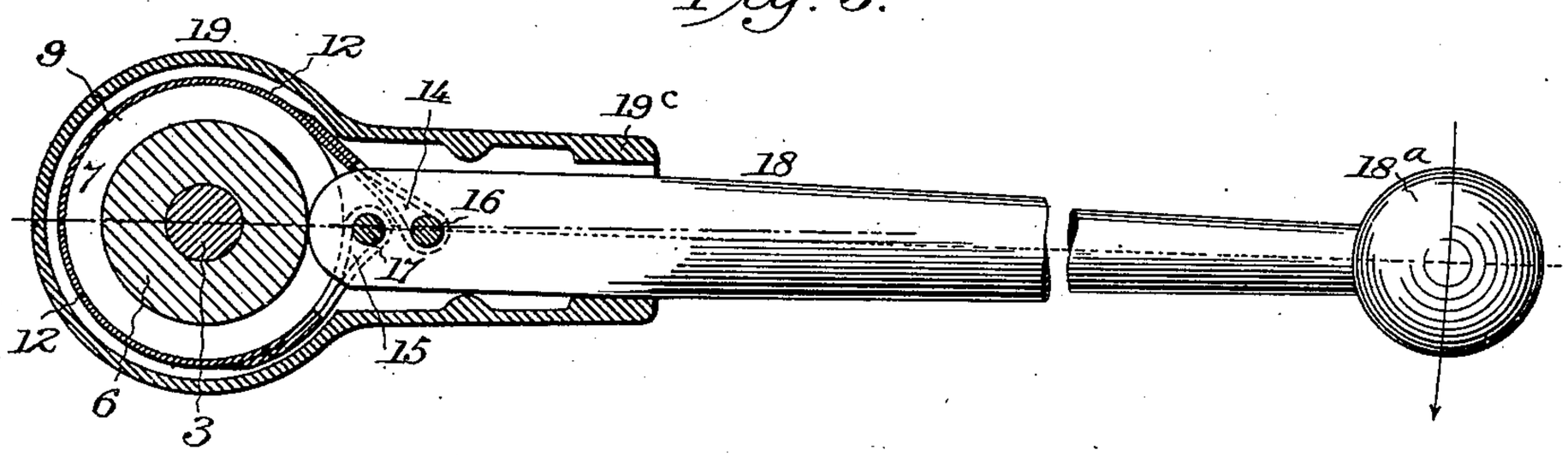


Fig. 5.



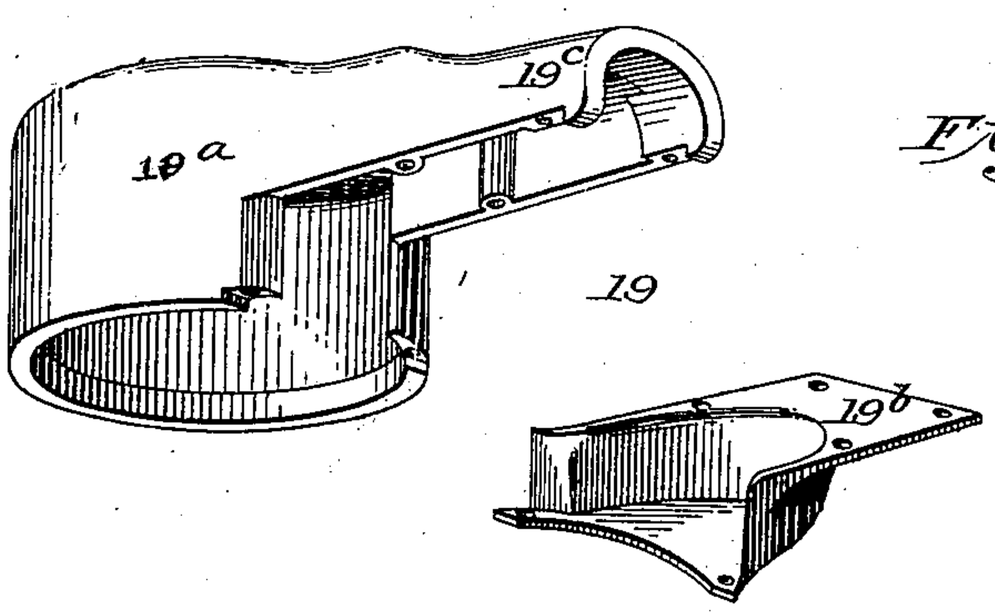


Fig. 6.

Witnesses
Sidney P. Hollingsworth
A. D. Edwards

Inventor
William Wishart
by Church W. T. & Howard
Attorneys.

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

UNITED STATES PATENT OFFICE.

WILLIAM WISHART, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ADAMS & WESTLAKE COMPANY, OF ILLINOIS.

BRAKE-ACTUATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 669,406, dated March 5, 1901.

Application filed December 29, 1900. Serial No. 41,533. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WISHART, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Brake-Actuating Mechanism, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the numerals of reference marked thereon.

My invention relates to a brake-actuating mechanism for use more especially upon motor or other street cars, although it is equally applicable to railway-coaches, and has for its object to furnish a device, operating upon the friction-clutch principle, whereby the motorman or brakeman may set the brake quickly and with great effect and which at the same time shall be simple in construction, possess ample strength, and be little liable to disarrangement.

In carrying out this invention I avoid the use within or as a part of the head of the handle or brake-staff of ratchet mechanism or of friction or gravity pawls or other equivalent devices, the friction-clutch device here employed consisting in a novel combination, with the head of the staff and the handle, of a friction-strap, as hereinafter more particularly specified.

The nature of my invention and its uses will be more fully described in connection with the accompanying drawings, in which—

Figure 1 is a view in perspective of my invention applied to the platform of a car. Fig. 2 is an enlarged side view of the device. Fig. 3 is a longitudinal vertical section. Fig 4 is a horizontal section on the line 4 4 of Fig. 3. Fig. 5 is a similar section on the line 5 5 of Fig. 3. Fig. 6 is a perspective view of a detail hereinafter described.

Similar numerals of reference indicate similar parts in the respective figures.

Let 1 represent a portion of the platform or the vestibule of a car. Under the rail of the front or dash board is secured a bracket 2, forming the upper support for the brake-staff 3, the lower end or foot of which staff is mounted or journaled in a suitable bearing below the floor of the platform, (not shown,) the staff being further furnished, at or near the floor of the platform, with a ratchet 4 and dog 5, which together serve to hold the staff after each take-up and upon the disengagement of which the handle is released in the usual manner.

Secured to the staff 3 in any suitable way, either by shrinking or otherwise, is a head 6, preferably of steel and having a central annular recess 7, there being thus formed two operative collars or disks 8 9. The head 6 is furthermore provided with two shoulders 10 and 11. Of a width equal to the distance between the shoulders 10 and 11 is a steel strap 12, which surrounds the two collars or disks 8 9, the strap being slotted at each end and duplicated upon itself, each lapped-over end being secured to the main body of the strap by means of rivets 13, as shown in Figs. 4 and 5, there being thus formed loops 14 15. Pins 16 17, secured to the inner end of the handle proper, 18, extend through said loops, the handle proper, 18, being therefore provided with what may be termed a "shifting" pivot. The pins 16 17 stand in the longitudinal center of the handle and may, if desired, be made removable. The inner extremity of the handle 18 rests within the annular space between the collars or disks 8 9, which arrangement assists in preserving the horizontal position of the handle and tends to release the loops 14 15 from strain in a vertical direction. The strap and head of the brake-staff are surrounded and concealed by a casing 19, preferably, as is also the handle, made of brass or composition metal. The casing is formed in two sections—an upper one 19^a and a lower one 19^b—as seen in Fig. 6. The two sections are united by means of screws 20. The casing 19 is provided with a shank 19^c, at the outer end of which sufficient clearance is given for the swing of the handle requisite for each take-up. In Fig. 5 the handle is shown in the position in which the friction-strap 12 is gripping the collars or disks 8 9 of the staff-head 6, while Fig. 4 shows the handle in the opposite position, the strap being released from the collars or disks and in position for the next take-up, which is shown completed in Fig. 5.

The operation will be readily understood, the take-up being effected by first tightening

the friction-strap around the collars or disks 8 9 by the movement of the lever in the direction of the arrow, Fig. 5, the movement in the opposite direction, as shown by the arrow in Fig. 4, resulting in the loosening of the strap. It will be understood that the operative rotation of the brake-staff is communicated to the brake-chain, which is secured to a worm or other device of any approved construction fixed at the foot of the brake-staff. The necessary braking action having been effected and it being desired to release the brakes, all requisite to be done is that the brakeman shall release the dog 5 from the floor-ratchet 4 and remove the pressure from the handhold 18ª of the handle.

I do not wish to restrict myself to the exact details hereinbefore described, it being obvious that minor and unimportant changes may be made in the construction and arrangement without departing from the main features of my invention. Such minor and unimportant changes as may suggest themselves to the skilled mechanic without the exercise of the inventive faculty are considered to be fully within the scope of my invention. For example, the strap may be otherwise operatively connected to the handle, as by clevis connections of separate pieces of metal riveted or otherwise secured to the strap. Other changes in the shape, form, size, and proportions of the several parts may be made to adapt the invention for use in the vestibule of a railway-coach or to the various types of motor or other street cars.

Having thus described my invention, I claim—

1. In a brake-actuating mechanism, the combination of a brake-handle, a brake-staff having a head comprising two collars or disks separated by an annular space receiving the inner end of the handle, a friction-strap surrounding the said collars or disks and operatively connected to the handle, and a retaining mechanism, substantially as set forth.

2. In a brake-actuating mechanism, the combination of a brake-handle, a brake-staff having a head, a friction-strap surrounding the brake-staff head and operatively connected to the handle, and a casing, formed in two separable parts, surrounding and concealing the brake-staff head and the strap, said parts being suitably secured together, substantially as set forth.

3. In a brake-actuating mechanism, the combination of a brake-handle, a brake-staff having a head, a friction-strap surrounding the brake-staff head and operatively connected to the handle, and a casing surrounding and concealing the brake-staff head and the strap, said casing being provided with a shank allowing clearance for the movement of the inner end of the handle, substantially as set forth.

In testimony whereof I hereunto set my hand.

WILLIAM WISHART.

Witnesses:

WILLIAM BRASSIL,

P. G. EMERY.