

(No Model.)

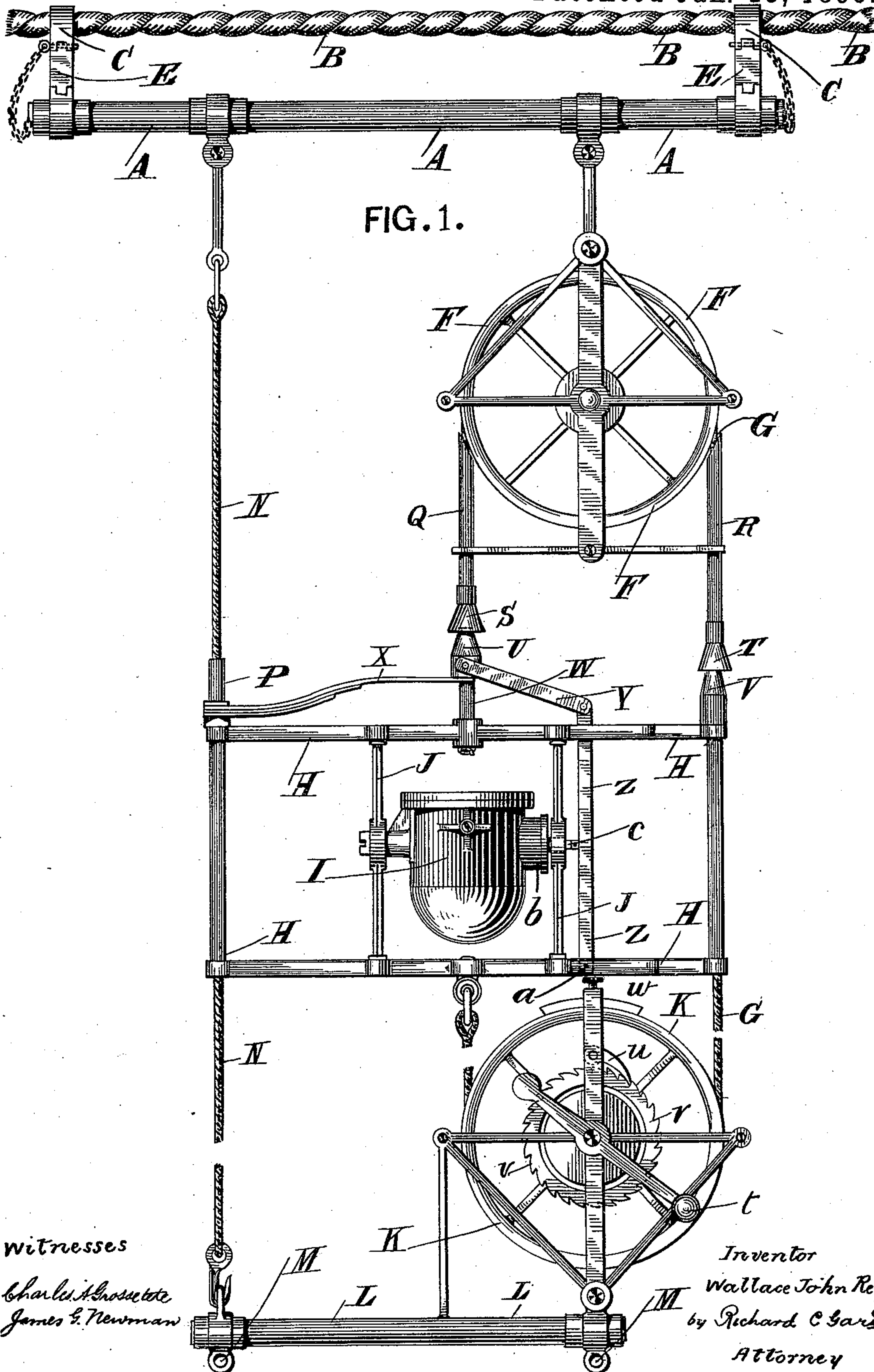
2 Sheets—Sheet 1.

W. J. REYNOLDS.

FACILITATING ADJUSTMENT OF COMPASSES ON BOARD SHIP.

No. 532,582.

Patented Jan. 15, 1895.



(No Model.)

2 Sheets—Sheet 2.

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FIG. 2.

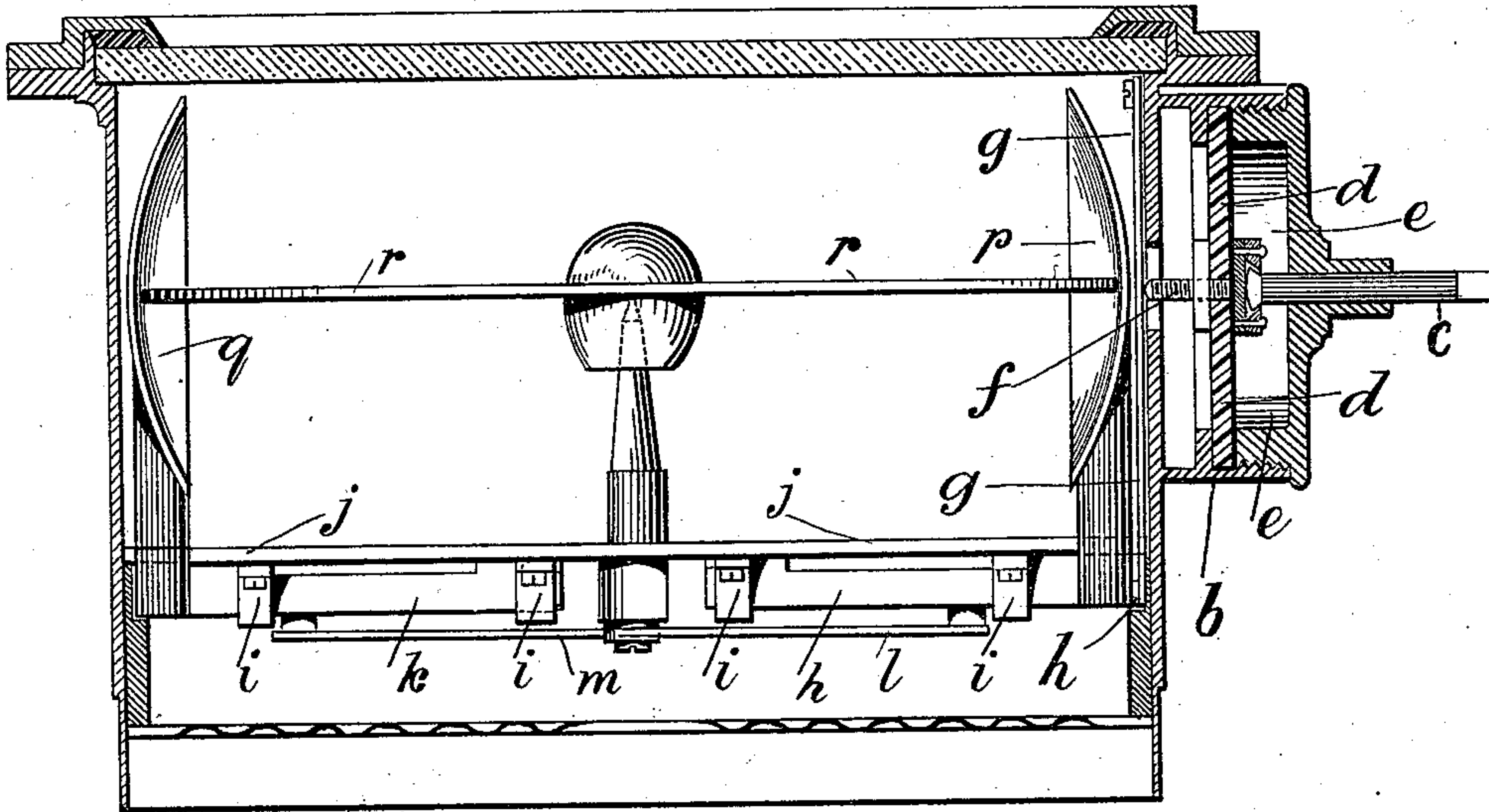
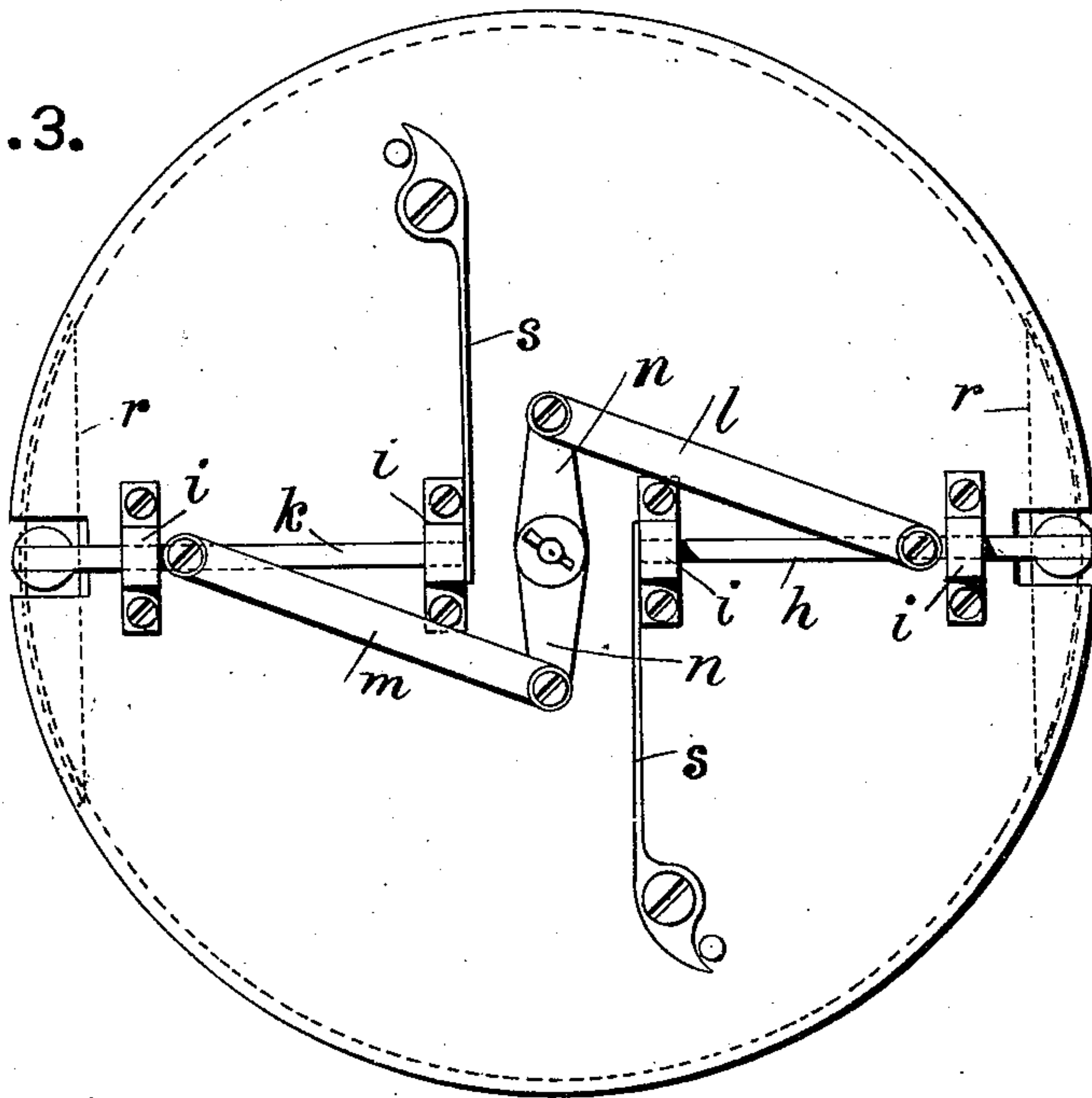


FIG. 3.



Witnesses

Charles A. Grossetete
James S. Newman

Inventor

Wallace John Reynolds
by Richard C. Gardner
Attorney

UNITED STATES PATENT OFFICE.

WALLACE JOHN REYNOLDS, OF LONDON, ENGLAND.

FACILITATING ADJUSTMENT OF COMPASSES ON BOARD SHIP.

SPECIFICATION forming part of Letters Patent No. 532,582, dated January 15, 1895.

Application filed April 26, 1894. Serial No. 509,117. (No model.) Patented in England December 4, 1888, No. 17,711.

To all whom it may concern:

Be it known that I, WALLACE JOHN REYNOLDS, a subject of the Queen of Great Britain, and a resident of 32 Crutched Friars, London, England, have invented certain new and useful Improvements in Facilitating the Adjustment of Compasses on Board Ship, (patented in Great Britain December 4, 1888, No. 17,711,) of which the following is a specification.

This invention has for its object adjusting the ordinary or deck compass from a duplicate compass which after being raised to a high elevation and out of the magnetic influence of the ship and the card becomes steady, said card can be fixed and its compass be then lowered for the ordinary ship's compass or compasses to be set or adjusted to correspond to the duplicate compass.

To carry my invention into practice and as will be understood by the annexed drawings, Figure 1, is a general view of the appliances with the duplicate compass affixed to a framing. Fig. 2, is a section of my duplicate compass, Fig. 3 being an under view of a partition plate and locking gear.

A is a spar or rod lashed or clipped to the jumper-stay B by the clips C, C, for suspension by the link E the pulley wheel F over which a rope G is passed with one end attached to the upper part of the frame H within which the duplicate compass I is secured between the two rails J, J, the other end of the rope G being attached to the bottom of the frame H after passing under the lower pulley wheel K, said rope being kept tight by the bottom spar or rod L lashed to the deck by the rings M, M. The two spars or rods A L have a rope N attached as a steadying and as a guide for the thimble P to slide on, said thimble being part of the frame H.

Q, R, are two tubes affixed to the frame of the upper pulley F through which tubes the rope G also rides and each tube has a coned cup S, T, at the lower ends for the reception of coned plugs U, V, on the upper parts of the frame H, one U being loose on the stem W and the other V fixed. The loose plug U bears on the spring X and has connected to it the link Y for throwing the lever Z in or out from the pivot a.

One of the supporting arms *b* of the duplicate compass is hollow and a rod *c* passes through said arm with the end projecting and attached to the lever Z. The opposite end of the rod is affixed to a diaphragm *d* in a box *e* forming part of the arm *b*, this diaphragm having also a pin *f* projecting from the opposite face and passing through a hole in the bowl of the duplicate compass to bear against a strip of material *g* hung from the upper part of the bowl and with its lower end bearing against a rod *h* which can slide in the guides *i, i*, attached to the bottom of the partition plate *j*, said rod *h* being connected to another rod *k* through the links *l, m*, and the oscillating beam *n*, so that both rods *h, k*, can be simultaneously operated for moving dished bodies *p, q*, and put them in contact with the compass card *r*, the springs *s, s*, returning the dished bodies when the card *r* has to be clear of them.

The shaft of the lower pulley K has a handle *t* to enable the frame H to be raised and lowered. A pawl *u* and ratchet wheel *v* facilitate the fixing of the frame at any elevation.

w is a brake to regulate the descent of the frame H as desired.

In the view Fig. 1, the cone plugs U, V, are represented as just entering the cone cups S, T, the plug U being slightly in advance so that said plug V is the first to engage its cup S to be forced down the stem W and so throw the lever Z and draws the rod *c* outward, the card *r* being then free to turn and adjust itself out of the magnetic influence of the ship. After a short time the card *r* becomes steady and ready to be lowered by reversing the travel of the rope G. It is then that the spring X forces the plug U up its stem W to draw the lever Z and push the rod *c* for the dished bodies *p, q*, to press against and lock the card *r* and keep it locked until completely lowered for the reading to be taken and the ship's ordinary compass or compasses corrected from it, the card *r* remaining locked until it is again raised to become free for a readjustment of itself.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In apparatus for facilitating the adjust-

ment of deck compasses on board ship, the combination of the frame H, guide rope N, rope G, wheel K, cone plugs U, V, lever Z card *r*, dished surfaces *p*, *q*, strip *g*, rod *c*, links
 5 *l*, *m*, rods *h*, *k*, and locking spring X, substantially as and for the purpose shown and described.

2. In apparatus for facilitating the adjustment of compasses on board ship the combination of frame H, locking spring X, cone
 10 plugs U, V, levers Y, Z, rod *c*, links *l*, *m*, rods *h*, *k*, dished plates *p*, *q*, compass card *r* in compass I, pulleys F, K, guide rope N, rope G connecting frame H with pulleys F, K, cone end

tubes Q on frame of pulley F, substantially as 15 and for the purpose shown and described.

In witness whereof I have hereto signed my name, in the presence of two subscribing witnesses, this 18th day of December, 1893.

WALLACE JOHN REYNOLDS.

Witnesses:

ALEX. RIDGWAY,
Notary Public, St. Michael's Alley, London,
E. C.

HAROLD J. MOORE,
Notary's Clerk, St. Michael's Alley, London,
E. C.