(No Model.)

C. A. WRIGHT.

STUFFING BOX.

No. 594,453. Patented Nov. 30, 1897.

Fig. 1.

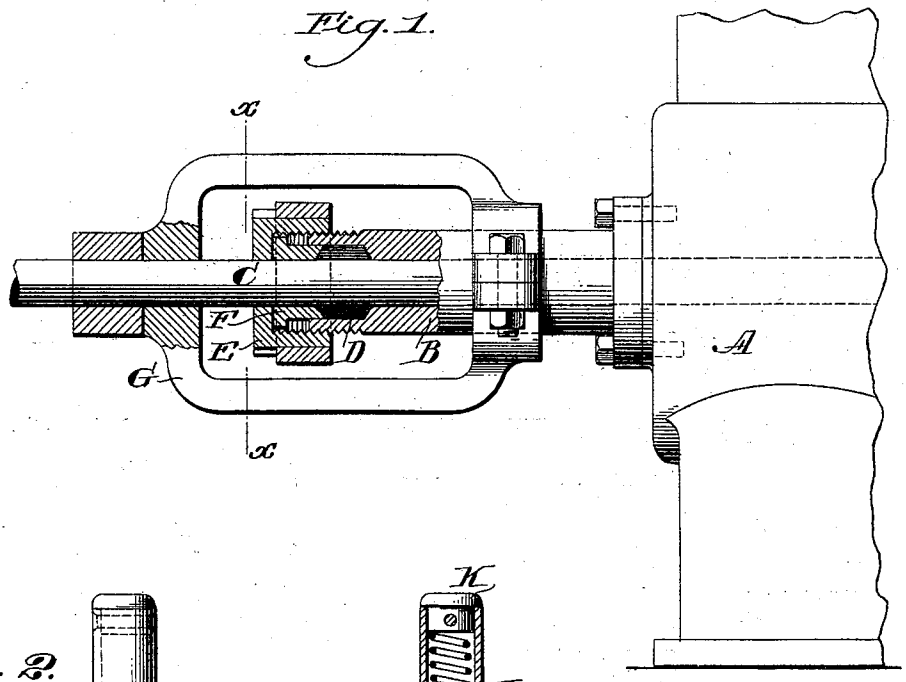


Fig. 2.

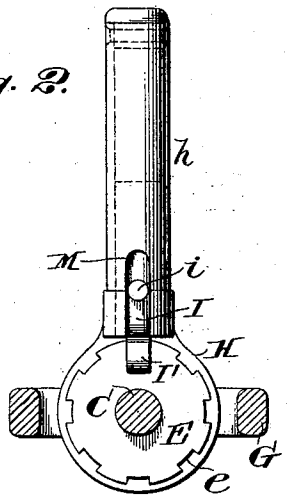
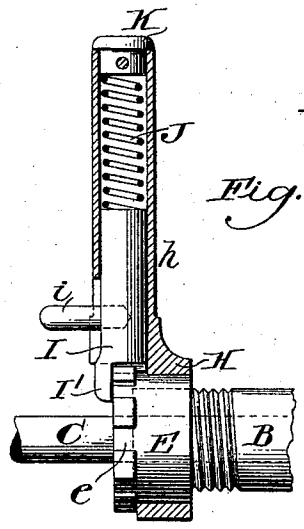


Fig. 3.



Witnesses.

Henry Drury

Wm. L. Evans

Inventor.

Chas. A. Wright

by Thos. G. Orwig & Co.

Attorney.

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

UNITED STATES PATENT OFFICE.

CHARLES A. WRIGHT, OF PHILADELPHIA, PENNSYLVANIA.

STUFFING-BOX.

SPECIFICATION forming part of Letters Patent No. 594,453, dated November 30, 1897.

Application filed June 19, 1897. Serial No. 641,504. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. WRIGHT, of the city and county of Philadelphia, State of Pennsylvania, have invented an Improvement in Stuffing-Boxes, of which the following is a specification.

My invention has reference to stuffing-boxes for engines, &c.; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to provide a compact and practical means forming a part of the stuffing-box mechanism for adjusting the head or cap thereof in tightening and loosening the packing.

My invention is more particularly for use in connection with engines in which but a limited space is provided for securing hold of the stuffing-box cap. In small marine engines, such as employed in vapor-launches, the thrust-block extending from the engine to relieve the thrust of the propeller-shaft incloses the stuffing-box, so that it makes it more or less difficult to apply a monkey-wrench thereto. Furthermore, in engines of this class the motive power is produced from a highly volatile substance, such as alcohol, and it is most important that there shall be no leakage thereof about the stuffing-box. It becomes, therefore, desirable in practice to provide some convenient means whereby a man of ordinary intelligence can with facility and positiveness make the necessary adjustment to the stuffing-box to secure its proper operation. My invention is especially adapted for this class of engines.

My invention comprehends a cap adapted to screw upon or off the neck of the stuffing-box and provided with a series of notches about its periphery, combined with a handle journaled upon said cap or concentric therewith and provided with a spring-actuated tooth adapted to the notches of the cap, so that it may be locked relatively thereto and moved therewith as a unit.

My invention will be better understood by reference to the accompanying drawings, in which—

Figure 1 is a plan view of my improvement shown partly in section. Fig. 2 is a cross-section of same on line *x x;* and Fig. 3 is a vertical elevation of the stuffing-box with my improvements applied thereto, with a portion in section.

A is the engine.

C is the power-shaft, which may be rotating or reciprocating.

B is the neck of the stuffing-box, and is screw-threaded upon its end to receive the cap E.

D is a packing of any suitable construction, and F is the gland directly acting upon the packing and moved under the action of the cap. The cap has at its forward end a flange which is notched about its circumference, as at *e*, to form teeth, the spaces between which have upright shoulders. Journaled upon the cap to the rear of the front flange is a hub H, provided with an extended handle *h*.

I is a locking-tooth which is fitted into a tubular hole in the handle and is provided with a depending extension I′, which fits over the front of the cap, so that the hub is located and held in position upon the cap at all times by the tooth. The locking-tooth is pressed downward toward the cap by means of a spring J, inclosed in the hollow handle *h*.

K is a block in the end of the handle for holding the spring J in position. By employing this block it is convenient to bore the handle out from its outer end, making a more perfect construction. It would furthermore allow the removal of the spring in case of loss of elasticity and a new one introduced without dismantling the apparatus.

The locking-tooth I is provided with a projecting finger *i*, working through a vertical slot M in the handle *h*, which prevents the locking-tooth from turning and insuring its proper presentation to the notches *e*. It will now be observed that by lifting up on the finger *i* the handle *h* may be thrown to either of its extreme positions. The locking-tooth being then liberated will enter one of the notches *e* of the cap. By then turning the handle the cap will be positively moved. As the notches and the locking-tooth have straight shoulders the cap may be moved positively in either direction to screw on or off the neck of the stuffing-box, as required. Furthermore, the operating-handle cannot be

taken away from the stuffing-box. Hence it is always in position for proper operation and in addition thereto acts as a positive lock to prevent the accidental turning of the cap under the jarring of the engine.

G represents the thrust-bearing, which in the particular construction of engine under consideration is adjustably clamped upon the neck of the stuffing-box and has the side arms which limit the throw of the handle *h*, but so that the latter can at least make somewhat more than a quarter of a revolution about the power-shaft C, as will be clearly understood from an examination of Fig. 2.

The minor details of construction may be modified without departing from the principles of construction.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A stuffing-box having a rotatable adjustable cap formed with a series of notches about its periphery, in combination with a hub journaled upon the cap and formed with a tubular handle extension for operating it having a slot M near its hub, a locking-tooth fitted in the tubular handle and movable to and from the notches of the cap and also furnished with a detachable extending finger or projection *i* for operating said tooth working in said slot M, and an extended portion I′ to hold the hub against longitudinal motion, a spring also arranged within the tubular handle for pressing the locking-tooth positively toward the cap, and a block K secured in the outer end of said tubular handle to form an abutment for the spring.

2. A stuffing-box having a rotatable and adjustable cap formed with an annular flange having a series of notches about its periphery, combined with a handle journaled concentrically to and upon said cap and fitted to one side of the annular flange, and a spring-actuated tooth adjustable upon the handle adapted to the notches for turning it and further provided with a projection extending over the cap to hold the adjustable handle from movement longitudinally thereon.

3. The combination of a stuffing-box, with a handle permanently journaled concentrically to the cap of the stuffing-box, and a detachable and adjustable locking connection between the handle and the cap of the stuffing-box having a retaining projection for holding the handle against longitudinal movement relatively to the cap, whereby the said handle and cap may be positively connected and disconnected at intervals for the purpose of imparting a rotary motion in either direction to the cap by a reciprocating motion of the handle and held after adjustment against accidental rotation due to the jarring of the engine or machine and at the same time the handle be continuously held in working relation to the cap.

4. A stuffing-box having a rotatable and adjustable cap E formed with a flange having a series of notches *e* about its periphery, in combination with a tubular handle *h* having a hub H journaled upon the cap to one side of the notched flange thereof, a locking-tooth I carried in the tubular handle and having an extension I′ for holding the hub H against longitudinal movement upon the cap and a spring J arranged within the tubular handle for pressing the tooth toward the cap.

In testimony of which invention I hereunto set my hand.

CHARLES A. WRIGHT.

Witnesses:
R. M. HUNTER,
R. M. KELLY.