(No Model.)

R. L. FOSBURGH & J. F. MILLIGAN.

BRAKE HANDLE.

No. 484,954. Patented Oct. 25, 1892.

Fig. 1.

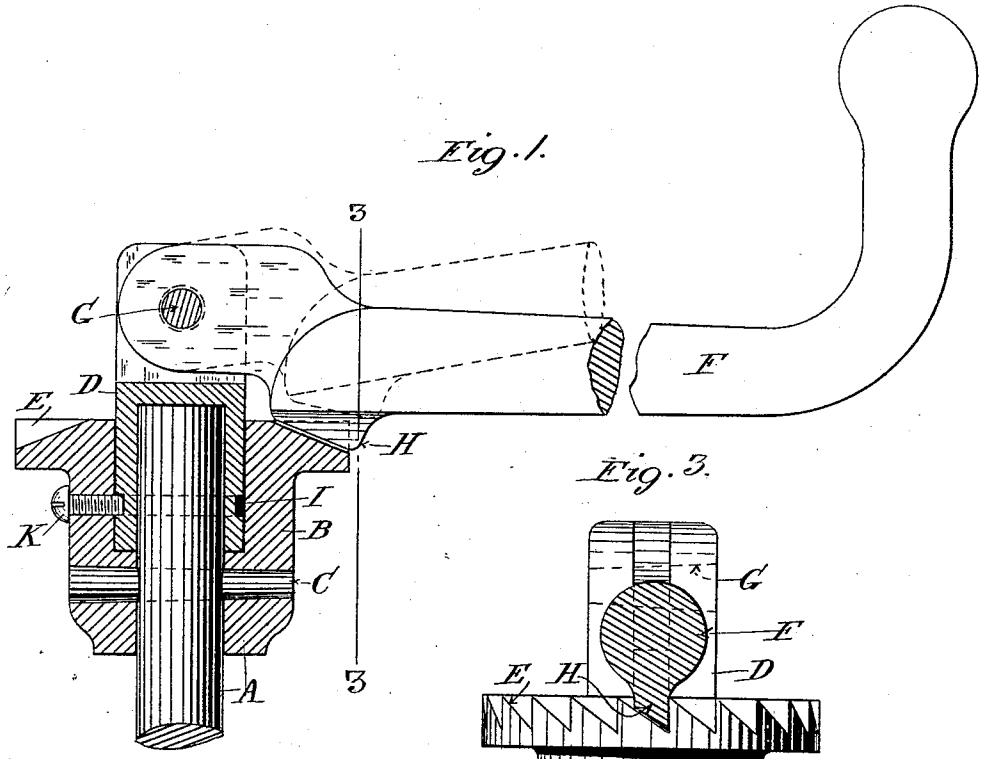


Fig. 3.

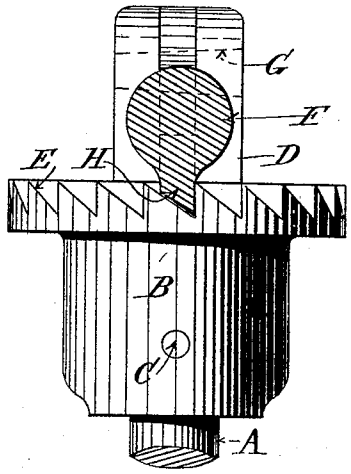
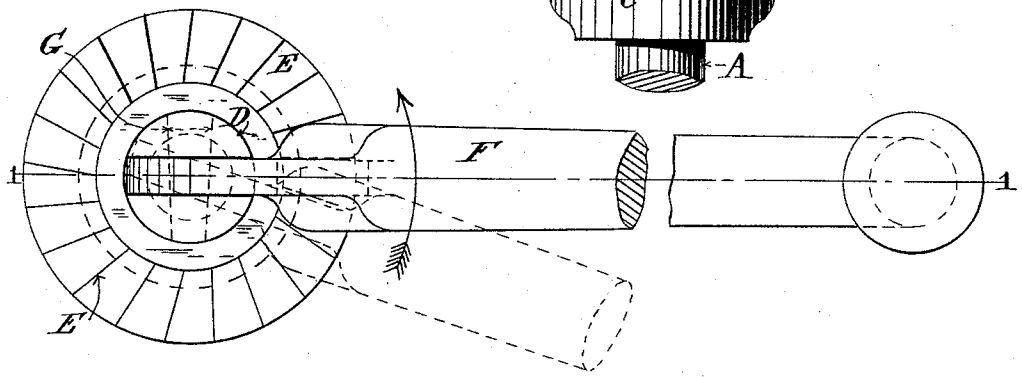


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT L. FOSBURGH AND JOHN F. MILLIGAN, OF ST. LOUIS, MISSOURI.

BRAKE-HANDLE.

SPECIFICATION forming part of Letters Patent No. 484,954, dated October 25, 1892.

Application filed February 4, 1892. Serial No. 420,307. (No model.)

To all whom it may concern:

Be it known that we, ROBERT L. FOSBURGH and JOHN F. MILLIGAN, citizens of the United States, residing in the city of St. Louis, and State of Missouri, have invented certain new and useful Improvements in Brake-Handles, of which the following is a full, clear, and exact description.

Our invention relates to certain new and useful improvements in ratchet brake-handles, the subject-matter, in part, of an application which was filed in the Office on June 8, 1891, Serial No. 395,609, by us, and a patent for which was allowed on September 18, 1891, except as to such part as related to a modification therein shown and described, and for which the Office required a separate application, which is the subject-matter of this specification.

The invention herein described and claimed consists in certain modified construction of the device the subject of the above-named application, which was by amendment thereto reserved for the subject-matter of a further application.

It has for its object, in addition to the features of improvement described and claimed in the above-named application, a special form of construction peculiarly adapting the said improvement to be applied to already-existing brake-shafts without materially modifying their form of construction.

In the accompanying drawings, in which like letters of reference denote like parts in the several figures, Figure 1 is a vertical section taken diametrically through our improved brake head-piece, or, as on the line 1 1 in Fig. 2, showing the handle proper in elevation. Fig. 2 is a plan view of the same, and Fig. 3 is a side elevation or a sectional view taken as on the line 3 3 in Fig. 1.

A is the brake-shaft, to the upper end of which (see Fig. 1) is rigidly secured, preferably by the transverse pin C, the ratchet head-piece B. The head-piece B is bored out longitudinally concentrically to two different diameters, the opening in the lower end being made to fit the upper end of the brake-shaft. Into the upper relatively-enlarged central opening is fitted the pivotal plug D, which is bored out centrally at its lower end to fit over the upwardly-extending end of the brake-shaft A. The head-piece B is formed with a laterally-extending flange portion, on the outer edge of the upper flat surface of which (see Figs. 1 and 3) are formed the radially-extending ratchet-teeth E. The ratchet-teeth E are formed so as to be inclined to the surface of the plate in which they are cut, being relatively deepest in the radially outer edge of the plate. (See Fig. 1.)

The upper end of the pivotal plug D is slotted out diametrically to receive the flattened or laterally-reduced end of the brake-handle F, which is pivotally secured therein, preferably, by the pivot-pin G.

The under side of the handle F is formed with a lug or projection H, which in the operation of our improved brake handle, as hereinafter described, is so shaped as to adapt it to engage with the ratchet-teeth E when the handle is turned in one direction, (that of the arrow in Fig. 2,) being formed with an inclined shoulder on the other side, so that it will slip over the teeth when the handle is turned in the reverse direction.

The pivotal plug D is formed with a circumferential recess I, into which when the parts are assembled the inner end of screw K projects, permitting the rotation of the plug D, but preventing its removal from the head-piece B.

It is designed to use our improved brake in connection with the ordinary foot-ratchet by which the brake-shaft is held against a return rotation when it is desired to get a new bight with the handle.

The operation is as follows: The handle F is turned in the direction of the arrow in Fig. 2, carrying with it the brake-shaft A by the lug H, engaging with the ratchet-teeth E. When the handle is pushed as far as it is desired in this direction, the foot-ratchet is applied, when the handle F can be turned in the reverse direction, as shown in dotted lines in Fig. 2. When it is desired to release the brake, the outer end of the handle F is simply raised, as shown in dotted lines in Fig. 1, when the shaft A will be free to rotate independently of the brake-handle, unwinding the brake-chain—that is, the brake can be released without the brake-shaft carrying the brake-handle in this reverse motion.

The main features of advantage of this par-

ticular form of construction consist in the peculiar adaptability to already-existing brakes—*i. e.*, its simplicity in application—merely cutting off the upper end of the brake-shaft A and fitting the head-piece B thereto and securing it thereon by the retaining-pin C.

We claim—

In a ratchet brake-handle of the character described, the combination, with the brake-shaft, of a ratchet head-piece bored out concentrically to two different diameters fitted and rigidly secured to the brake-shaft, the upper end of said brake-shaft projecting into the relatively-enlarged hollow space in said head-piece, and a hollow pivotal plug to which the handle is pivotally secured, revolubly fitted in said relatively-enlarged hollow space within the said head-piece and around the inwardly-projecting end of said brake-shaft, combined and operating substantially in the manner and for the purposes specified.

In testimony whereof we have affixed our signatures, in presence of two witnesses, this 26th day of January, 1892.

ROBERT L. FOSBURGH.
JOHN F. MILLIGAN.

Witnesses:
ALFRED RAMEL,
J. W. CROOKES.