

A.C. Greth,
Wrench,
No 84,111, Patented Nov 17, 1868.

Fig. 1.

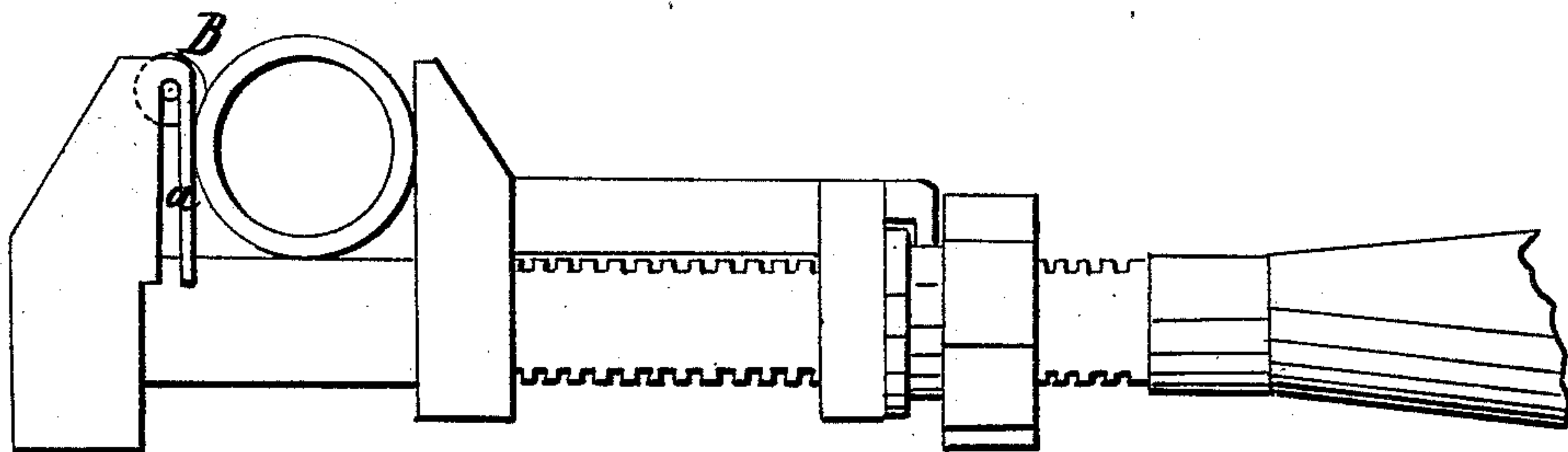


Fig. 2.

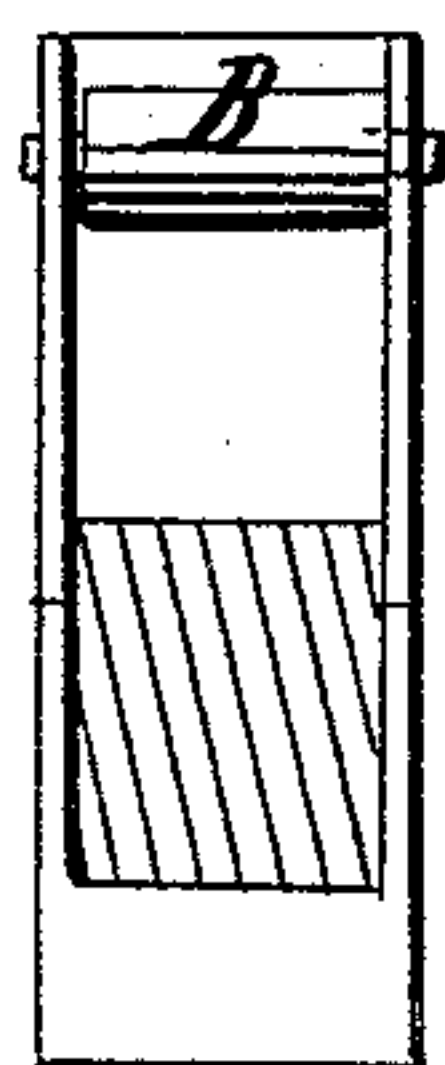


Fig. 3.

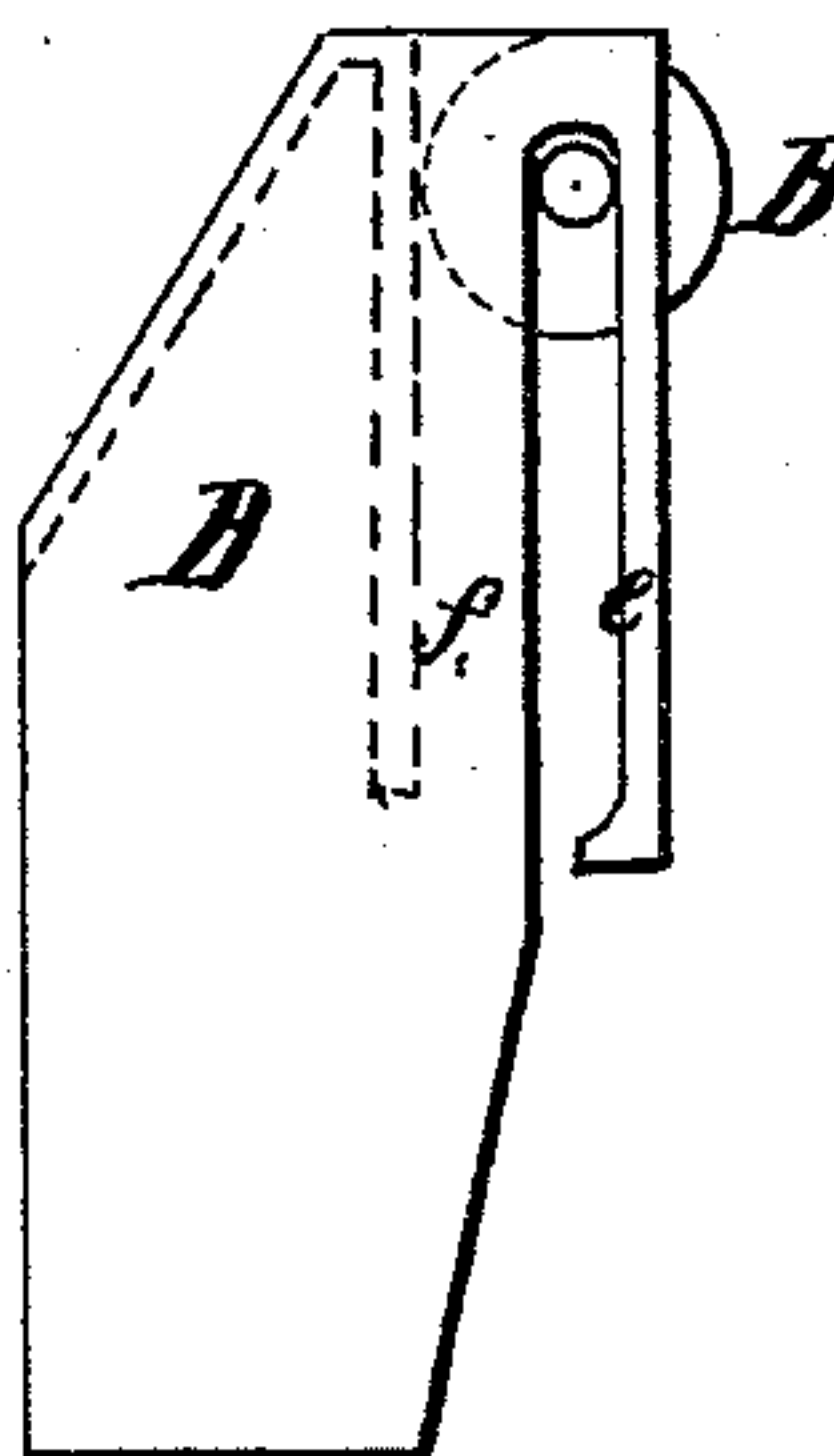
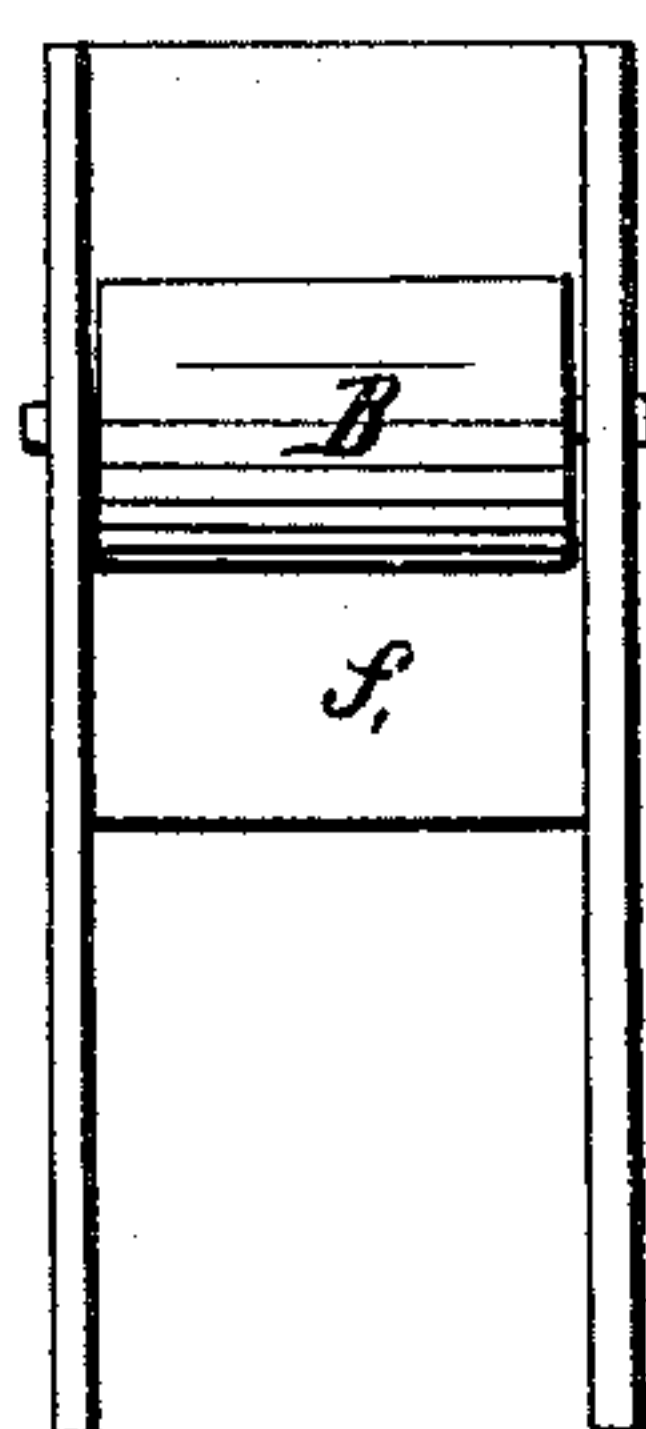


Fig. 4.



Witnesses:

C. H. Brown

E. R. Beadle

Inventor

A. C. Greth by

of W. Beadle

Atty

United States Patent Office.

A. C. GRETH, OF READING, PENNSYLVANIA.

Letters Patent No. 84,111, dated November 17, 1868.

IMPROVEMENT IN WRENCHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, A. C. GRETH, of Reading, in the county of Berks, and State of Pennsylvania, have invented a new and useful Improvement in Monkey-Wrench; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to an improvement in monkey or key-wrenches, for screwing up pipes, studs, or any round or irregular forms; and

It consists, primarily, in a roller, adapted to work on the face of one of the jaws of the wrench, causing the jaws to gripe the pipe or rod more firmly as the pressure of turning increases; and

Subordinately, it consists in a case or shell, fitted to slip over one of the jaws of wrenches of ordinary construction, this case or shell bearing on its face the same roller as in the first instance, both of which points are hereinafter more fully set forth.

In the drawings annexed to this specification—

Figure 1 represents a side view of a wrench having my improvement, the roller being applied to the lower jaw.

Figure 2 represents the inner face of the jaw, having the roller attached.

Figures 3 and 4 represent different views of the detachable case or shell, with its slotted sides and roller.

The same letters refer to identical parts in all the figures.

In the construction of my improved wrench, all the parts are of the ordinary form, with the exception of one jaw, it is immaterial whether the upper or lower. In the drawings I have represented the improvement attached to the lower jaw.

The lower jaw A, which is attached to the shank or handle in the ordinary manner, is formed, on the edges of its inner face, with slotted bearings or guides, *a a*, the slots being in flanges formed by an extension of the sides of the jaw.

In the bearings or guides is placed a roller, B, the axes of which play in the slots *a a*, and are guided by them. The roller is so constructed that it rests upon the inner face of the jaw, and does not bear upon the axes in the slots, and it is of such diameter relative to the flanges in which are the slots, that the rod or pipe to be turned by the wrench shall bear upon the roller, and not upon the slotted flange.

The construction now described, applies to wrenches made with my improvement, the slotted flanges forming a part of the jaw itself. I have also, in a very simple and efficient manner, adapted my improvement for application to wrenches already in use.

This modification is represented in figs. 3 and 4, in which D represents the shell or case, so constructed as

to fit over the jaw of an ordinary wrench. It is made hollow, being open in front and rear sufficiently to allow the sides to pass down over the shank.

The slotted guides are formed by an extension of its sides, *e e*, and the construction and arrangement of the roller are the same as in the form described above.

Attached to the sides *e e* is the face-plate *f*, on which the roller presses. This face-plate rests upon the face of the jaw. The end which fits over the end of the jaw is also covered. The roller may be a plain cylinder, or may have a fluted or roughened surface to hold better on the pipe.

In the operation of my device, the roller being in its place in the slotted guides on the lower jaw, the jaw is moved up in the ordinary manner, until it presses the pipe or rod against the upper jaw. The roller, which is on the outside, or near the end of the jaw, is pressed up till it impinges against the pipe or rod. Then the handle is pressed to that side on which the jaws are located, as in the act of turning with the wrench. This motion tends to force the roller under the pipe, and, obviously, the greater the force exerted, the greater the automatic gripe of the wrench, and the pipe, or whatever irregular form is held between the jaws, is turned with a ready and certain gripe. At the same time, as soon as the pressure of turning is relaxed, the wrench instantly unlooses its gripe, and may be removed. It will be observed that the direction of turning is such, that the shell or case, when placed on an ordinary wrench, is, by the turning, itself pressed into its place, and needs no other mode of attachment.

I do not confine myself to the precise form of slotted guides, as other methods may be devised to hold the roller in its place, the roller depending on the guides only for the purpose of retaining it in its proper place.

The roller or case may be applied to the upper jaw, it being required, in that case, only that the direction of the wrench be reversed.

Having thus fully described my invention,

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

1. The roller B, moving in the slides *e e*, when applied to the jaw of a wrench in the manner described, for the purpose set forth.

2. The shell or case, of substantially the described construction, when carrying the roller B, and fitted to be placed over the jaw of an ordinary monkey or key-wrench, in effect as and for the purpose set forth.

This specification signed and witnessed, this 4th day of August, 1868.

A. C. GRETH.

Witnesses:

MATTHIAS MENGEL,
LEVI J. SMITH.