

(No Model.)

H. W. SMITH.
ADJUSTABLE NUT.

No. 466,582.

Patented Jan. 5, 1892.

FIG. 1

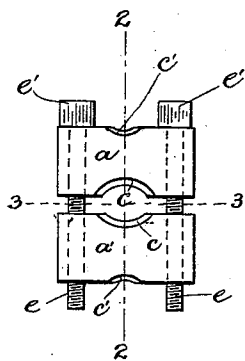


FIG. 2

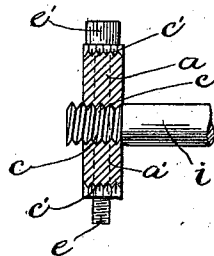
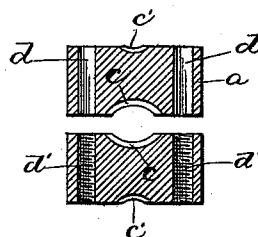


FIG. 3



FIG. 4



WITNESSES.

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UNITED STATES PATENT OFFICE.

HERBERT W. SMITH, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR, BY
DIRECT AND MESNE ASSIGNMENTS, TO HENRY B. NORTHROP, OF
SAME PLACE.

ADJUSTABLE NUT.

SPECIFICATION forming part of Letters Patent No. 466,582, dated January 5, 1892.

Application filed July 1, 1891. Serial No. 398,163. (No model.)

To all whom it may concern:

Be it known that I, HERBERT W. SMITH, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Adjustable Nuts, of which the following is a specification.

This invention has for its object to provide an adjustable nut adapted to be applied to a bolt of any size within certain limits in the event of the loss of the nut belonging to the bolt.

The invention consists in a nut composed of two sections connected by screw-threaded bolts, which permit the sections to be adjusted toward and from each other, the adjacent faces of the sections being provided with cavities having portions or sections of a female screw-thread formed to engage the male screw-thread of a bolt, so that the nut can be clamped upon a bolt and securely engaged therewith, as I will now proceed to describe and claim.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a side view of my improved nut. Fig. 2 represents a section on line 2 2, Fig. 1. Fig. 3 represents a section on line 3 3, Fig. 1. Fig. 4 represents a section on line 4 4, Fig. 3, the connecting-bolts being removed.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a a'* represent the sections composing the nut, each section being a block of metal having in its opposite edges cavities *c c'*, which are provided with sections or portions of a female screw-thread. The cavity *c* in one edge of each section is larger than the cavity *c'* in the opposite edge and has a coarser thread, the sections being invertible, so that the cavities *c c'* can co-operate in engaging a bolt having a given-sized thread, while the cavities *c' c'* can co-operate in engaging a bolt having a thread of a smaller size. The section *a* has bolt-holes *d d*, which are smooth or devoid of screw-threads, and the section *a'* has bolt-holes *d' d'*, which are screw-threaded. (See Fig. 4.)

e e represent screw-threaded bolts, each having a head *e'* at one end. Said bolts are adapted to enter the bolt-holes *d d'*, the threads of the

bolts engaging the threaded holes of the section *a'*. It will be seen that when the bolts *e* are inserted in the bolt-holes their rotation in the direction required to turn them into the threaded holes *d' d'* of the section *a'* will cause the heads *e'* of the bolts to bear on the outer edge of the section *a*, and thus force the sections toward each other and press the cavities at their inner edges against a bolt *i*, interposed between the sections. (See Fig. 2.) The nut is thus firmly clamped on and engaged with the bolt, the sections of the female screw-thread of each cavity being interlocked with the male thread on the bolt. The connecting-bolts *e e* enable the nut to be adjusted to bolts of different diameters, while the invertibility of the sections enables bolt-threads of different sizes to be engaged by the nut. I prefer to make one of the bolts *e* larger than the other, the bolt-holes in the sections *a a'* being correspondingly varied, as shown in Fig. 4. The object of this variation is to prevent the sections from being improperly connected, it being essential that in connecting the sections a given end of each section be opposite a given end of the other section, in order that the sections of screw-thread in the bolt-engaging cavities may have the proper relative positions.

This improved nut is intended chiefly for the use of bicycle-riders, and will usually be made of such size that it will fit such bolts of a bicycle as have nuts which are liable to be lost. The use of the device is not limited, however, and it may be made of any size desired. It is obvious that each section may have but one bolt-engaging cavity instead of two.

I claim—

1. An adjustable nut composed of two sections, each having a bolt-thread-engaging cavity, and connecting-bolts adapted to clamp said sections upon a bolt requiring a nut, as set forth.

2. An adjustable nut composed of two sections, each having two bolt-thread-engaging cavities, one cavity having female thread-sections of smaller size than the other, and connecting-bolts adapted to clamp said sections upon a bolt requiring a nut, as set forth.

3. The improved adjustable nut composed
of the section *a*, having a bolt-thread-engag-
ing cavity and bolt-holes *d d*, the section *a'*,
having a bolt-thread-engaging cavity and
5 threaded bolt-holes *d' d'*, and the connecting-
bolts formed to engage the threads of the
holes *d' d'* and provided with heads *e' e'*, as
set forth.

10 4. The improved adjustable nut composed
of the section *a*, having a bolt-thread-engag-
ing cavity and bolt-holes *d d*, the section *a'*,
having a bolt-thread-engaging cavity and
threaded bolt holes *d' d'*, and the connecting-

bolts formed to engage the threads of the
holes *d' d'* and provided with heads *e' e'*, one 15
of the bolts and one bolt-hole in each section
being larger than the other, as and for the
purpose specified.

In testimony whereof I have signed my
name to this specification, in the presence of 20
two subscribing witnesses, this 25th day of
June, A. D. 1891.

HERBERT W. SMITH.

Witnesses:

C. F. BROWN,

A. D. HARRISON.