

(No Model.)

N. A. DIDIER.
EXTENSIBLE BRACE.

No. 531,785.

Patented Jan. 1, 1895.

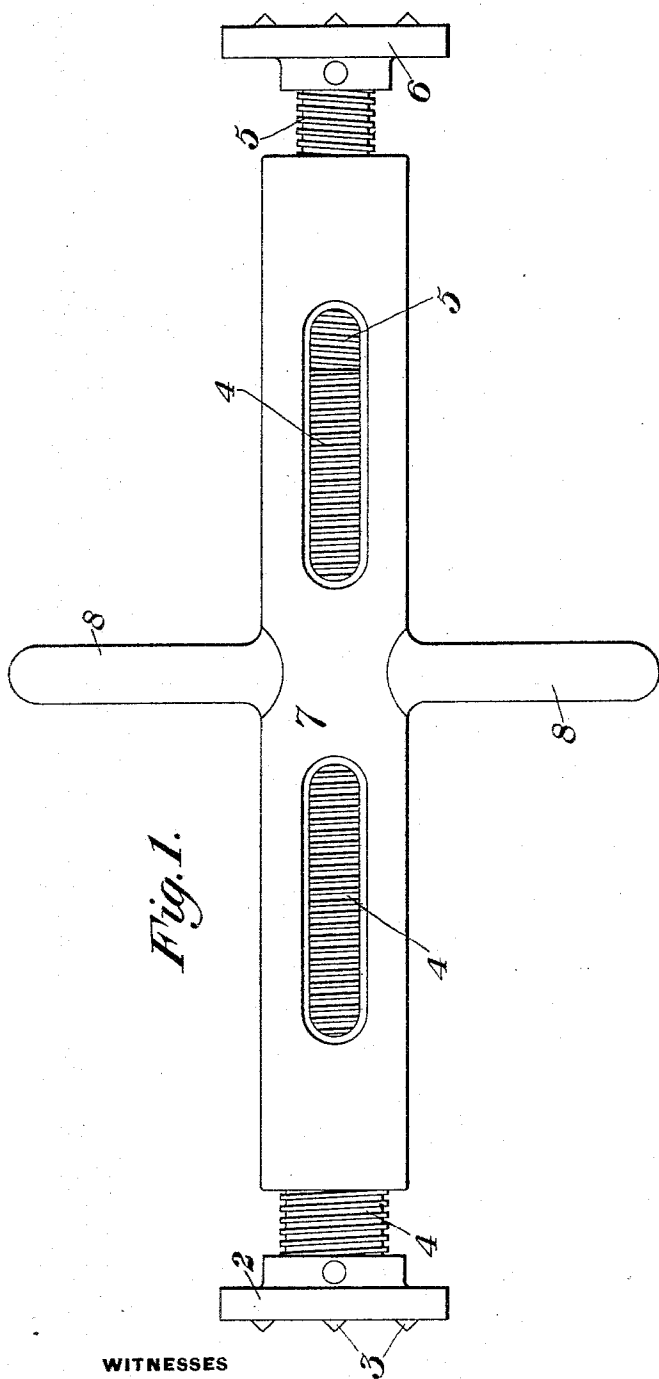


Fig. 1.

WITNESSES

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Harren H. Swartz

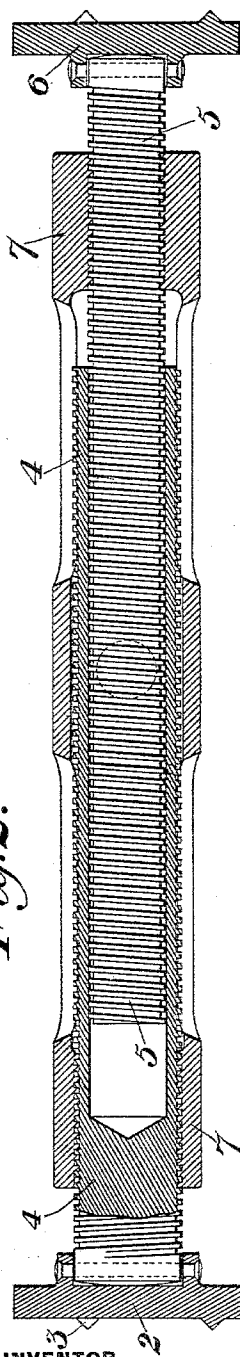


Fig. 2.

INVENTOR

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UNITED STATES PATENT OFFICE.

NICOLAS A. DIDIER, OF ALLEGHENY, PENNSYLVANIA.

EXTENSIBLE BRACE.

SPECIFICATION forming part of Letters Patent No. 531,785, dated January 1, 1895.

Application filed August 23, 1894. Serial No. 521,059. (No model.)

To all whom it may concern:

Be it known that I, NICOLAS A. DIDIER, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and
5 useful Improvement in Extensible Braces, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a side elevation of my improved brace partly extended; and Fig. 2 is a longitudinal central section of Fig. 1.

My invention relates to the braces used in
15 ditches and similar excavations to hold the retaining boards or planks in place and prevent falling in of the earth, and it is designed to provide a brace which may be lengthened or shortened as desired in order to fit different widths and cross sections of excavations.

20 In the drawings, 2 represents a contact cap provided with spuds or sharpened projections 3 to enter the material of the planks and hold the cap or head in place. This cap is loosely secured to the end of a tube or pipe-
25 section 4, which is provided upon its exterior with a right-handed screw-thread extending preferably the entire length of the pipe. Inside this pipe or tube slides a smaller
30 pipe 5 to whose protruding end is pivotally secured a head 6 similar to the head or cap 2. The inner pipe is provided on its exterior with a left-handed screw-thread extending preferably throughout its length, and with
35 the screw threads of both telescoping pipes engage inner screw threads upon an exterior tubular casting 7, this casting having its end portions of smaller internal diameter so as to fit closely about the pipes 4 and 5, and these
40 end portions being provided with interior right and left-hand screw-threads respect-

ively to interfit with the corresponding exterior threads upon the telescoping pipes. The outer tube is provided with spokes 8 for turning or rotating it, and it is obvious that by this turning of the outer tube the tubes 4 and 5
45 are moved out or in as desired to lengthen or shorten the brace. By turning the tube when the brace is in place, the planks may be forced apart and the sides of the excavation held firmly in place. As the heads are loosely con-
50 nected to the tubes, the brace need not be placed exactly at right angles to the boards, but will adjust itself when the boards are not parallel to each other.

The advantages of the invention will be ap-
55 parent to those skilled in the art. The device is simple, of few parts and may be easily and quickly changed in length to fit different cross sections.

The device may be used as a lifting jack, or
60 by replacing the heads by hooks, it may be used to draw together ropes or other articles.

Many other changes may be made in the form and arrangement of the parts without
65 departure from my invention; since

What I claim is—

A brace comprising a hollow casing having oppositely screw-threaded end portions, an inner pipe having exterior screw threads engaging the threaded portion at one end, and
70 an extensible section telescoping within the pipe and having screw threads engaging the threaded portion at the other end of the casing; substantially as described.

In testimony whereof I have hereunto set
75 my hand.

N. A. DIDIER.

Witnesses:

W. B. CORWIN,
H. M. CORWIN.