

No. 693,538.

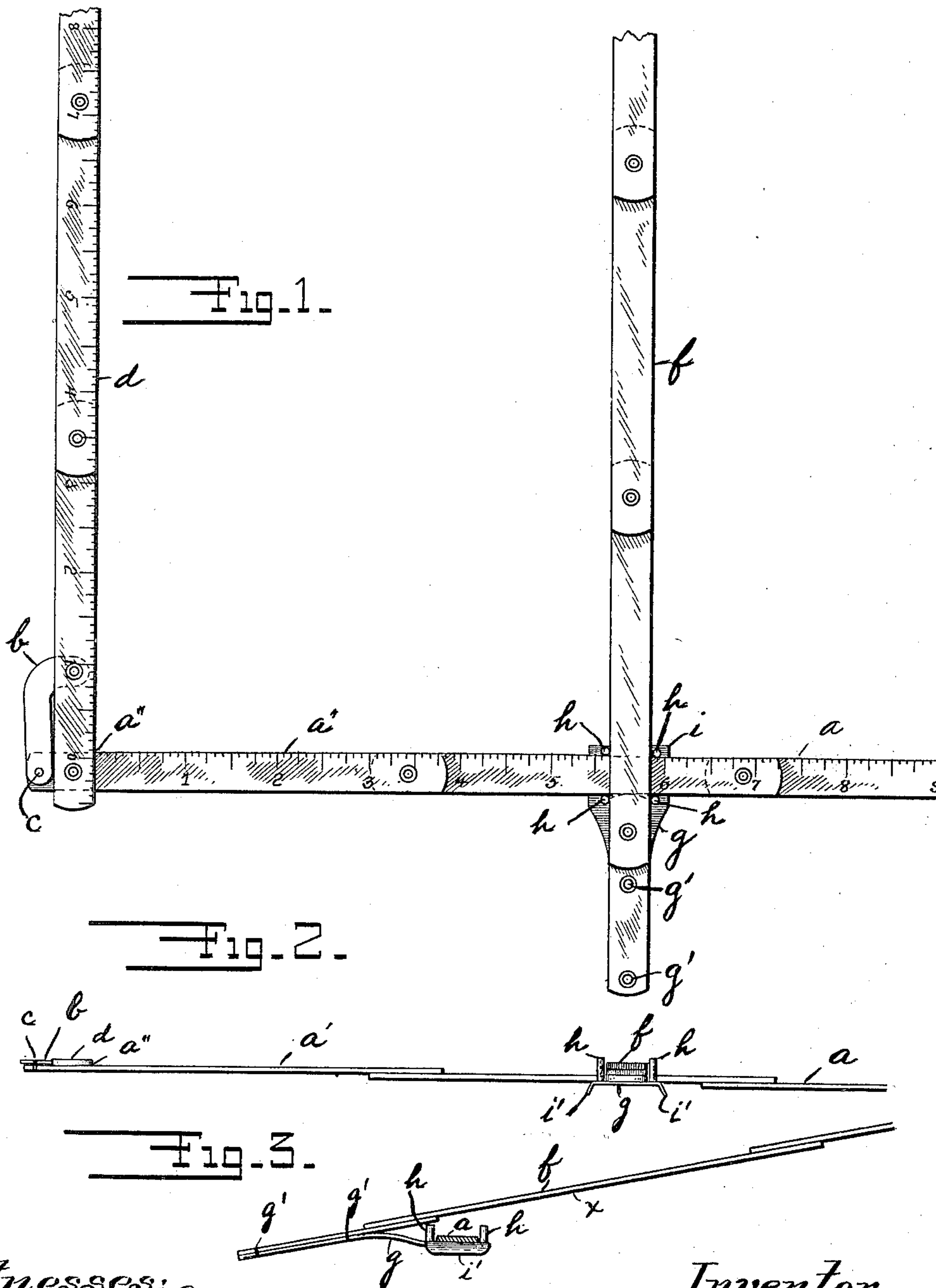
Patented Feb. 18, 1902.

H. BUBE.

CÁLIPERS:

(Application filed Oct. 18, 1901.)

(No Model.)



Witnesses:
J. B. McGirr.
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UNITED STATES PATENT OFFICE.

HANS BUBE, OF BOTHFIELD, GERMANY.

CALIPERS.

SPECIFICATION forming part of Letters Patent No. 693,538, dated February 18, 1902.

Application filed October 18, 1901. Serial No. 79,061. (No model.)

To all whom it may concern:

Be it known that I, HANS BUBE, a subject of the Emperor of Germany, residing at Bothfield, in the Province of Hanover, Germany, have invented certain new and useful Improvements in Calipers, of which the following is a specification.

My invention relates particularly to devices for measuring both the lengths and diameters of logs and the like; and its object is to provide a device of this kind which may be used for the measurement of both lengths and diameters, of strong, light, and simple construction, which may be readily folded for the purpose of packing or transportation.

It consists of the combination of parts and arrangement of details hereinafter described and claimed, and illustrated in the accompanying drawings, forming a part hereof.

Heretofore calipers have been made for measuring large diameters of logs, trees, and the like in several parts adapted to be folded up. The size and weight of such calipers have necessarily been so great as to render them cumbersome in use or transportation.

I have produced a device which consists of two parts, the one adapted to be set at right angles to the other and to slidably engage the same, both parts being made in links adapted to fold together and the links so connected to each other that while in use they may be securely held in alinement.

In the accompanying drawings, Figure 1 is a plan view of the calipers and measuring instrument embodying my improvements. Fig. 2 is an edge view of the same. Fig. 3 is a side view of the movable arm and engaging device.

One of the links a' of the rule a in the drawings has a movable arm b pivotally attached thereto and provided on its outer end with a pin c , adapted to snap into a hole on the end of the fourth link when the three links are disposed at right angles to the others. In this position the first three links form an arm d of the calipers. The number of links, however, which are used for forming the arm d may be varied at will; but in most cases the number of links shown in the drawings will

be sufficient for measuring the diameter of any ordinary body.

One side of the rule a may be provided with divisions for lineal measurement in the ordinary way, while the other side is provided with division-marks beginning from the inner edge a'' of the turned-up arm. The movable arm f is formed by a rule, which may also be provided, if desired, with division-marks, so that when detached it will serve as a measuring-rule. The plate-spring g is fixed on the same by any suitable means, as the rivets g' and g'' , its free end being a plate i , with its two side edges i' turned upwardly to form beveled flanges j , which will enable the slide to easily pass over the uneven joints of the links. The plate is also provided with inwardly-projecting teeth h on either edge, which in connection with the plate form the guide for the movable arm f , as shown in Fig. 3. The movable arm f is clamped onto the rule, the latter being pressed against the face x of one link of the arm f , and then the diameter of the edge being measured may be read off at once from the inner edge of the arm f in the division of the rule a .

What I claim as new is—

1. In calipers provided with two graduated arms each composed of links and provided with means for holding the same when extended at right angles to each other, and a third movable arm provided with elastic means for engaging and disengaging the same with one of the other arms and keeping the same at right angles thereto, substantially as described.

2. In calipers provided with two graduated arms each made of links and means for holding the arms at right angles to each other, of a third movable arm adapted to be held at right angles to one of the other arms by means of a plate-spring fixed on one side of the third arm and having two of its side edges turned over to form beveled flanges which will enable the third arm to slide easily over the uneven joints of the links of the arm, with which it is engaged.

3. In calipers provided with two graduated arms each made of links and means for hold-

ing the arms at right angles to each other,
of a third movable arm adapted to be held
at right angles to one of the other arms by
means of a plate-spring fixed on one side of
5 the said third arm and having inwardly-pro-
jecting teeth on either edge forming a guide
for keeping the movable arm at right angles
with the arm with which it is in engagement.

Witness my hand this 30th day of Septem-
ber, 1901, in the presence of two subscribing 10
witnesses.

HANS BUBE.

Witnesses:

LEONORE RASCH,
C. C. STEVENSON.