

No. 657,973.

Patented Sept. 18, 1900.

C. W. WARNER.
BICYCLE STAND.

(Application filed Dec. 1, 1897.)

(No Model.)

Fig. 1

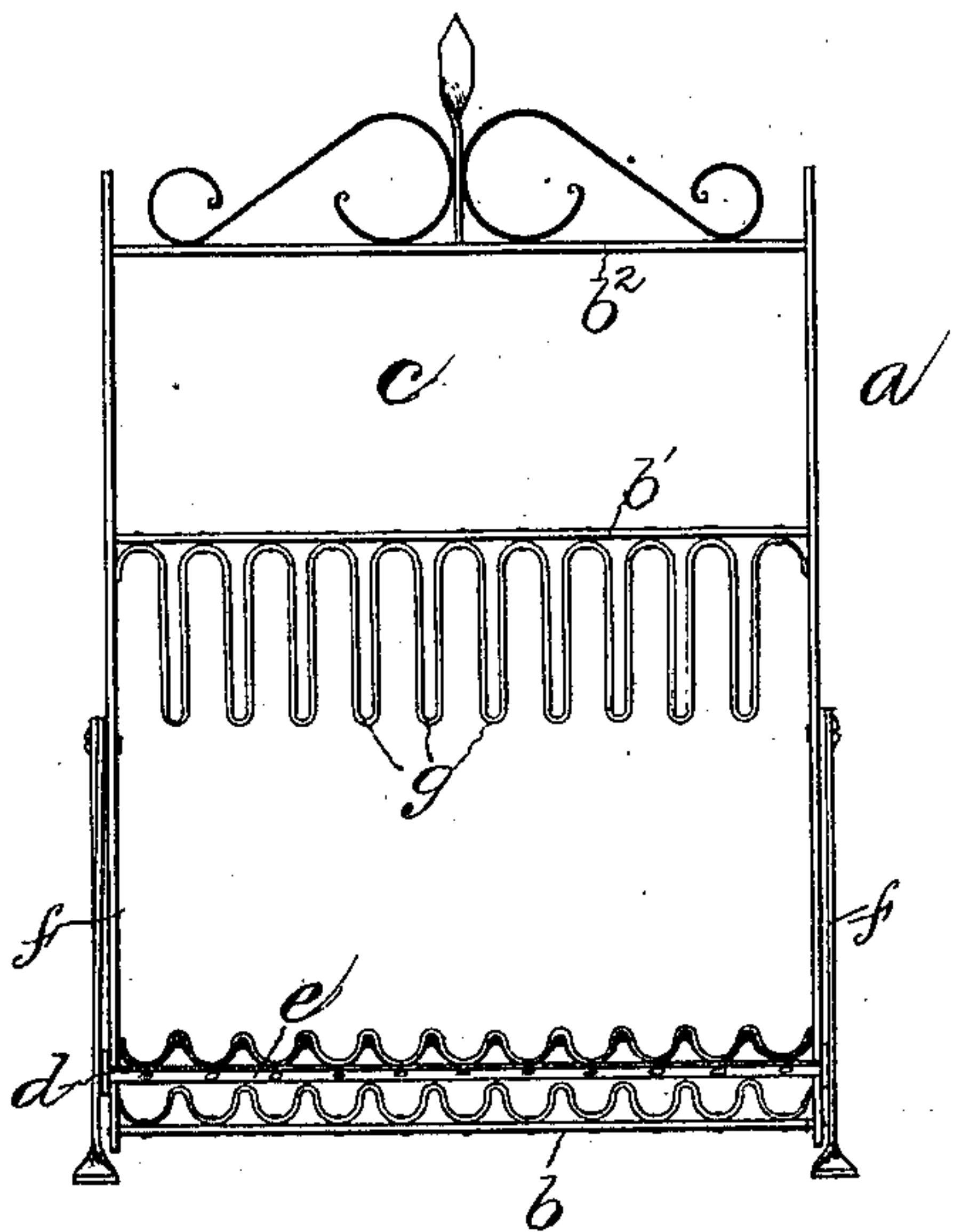


Fig. 2

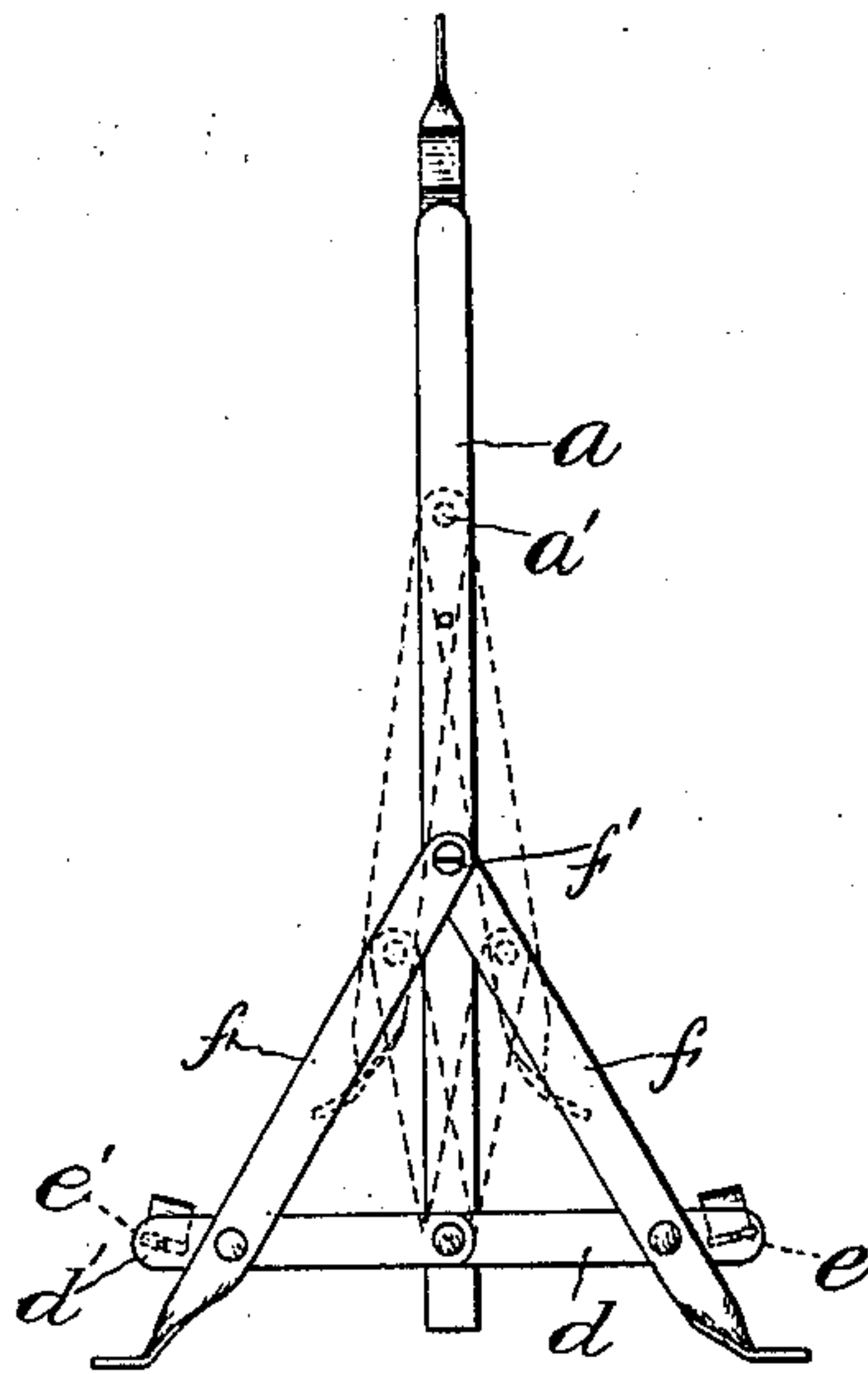


Fig. 4.

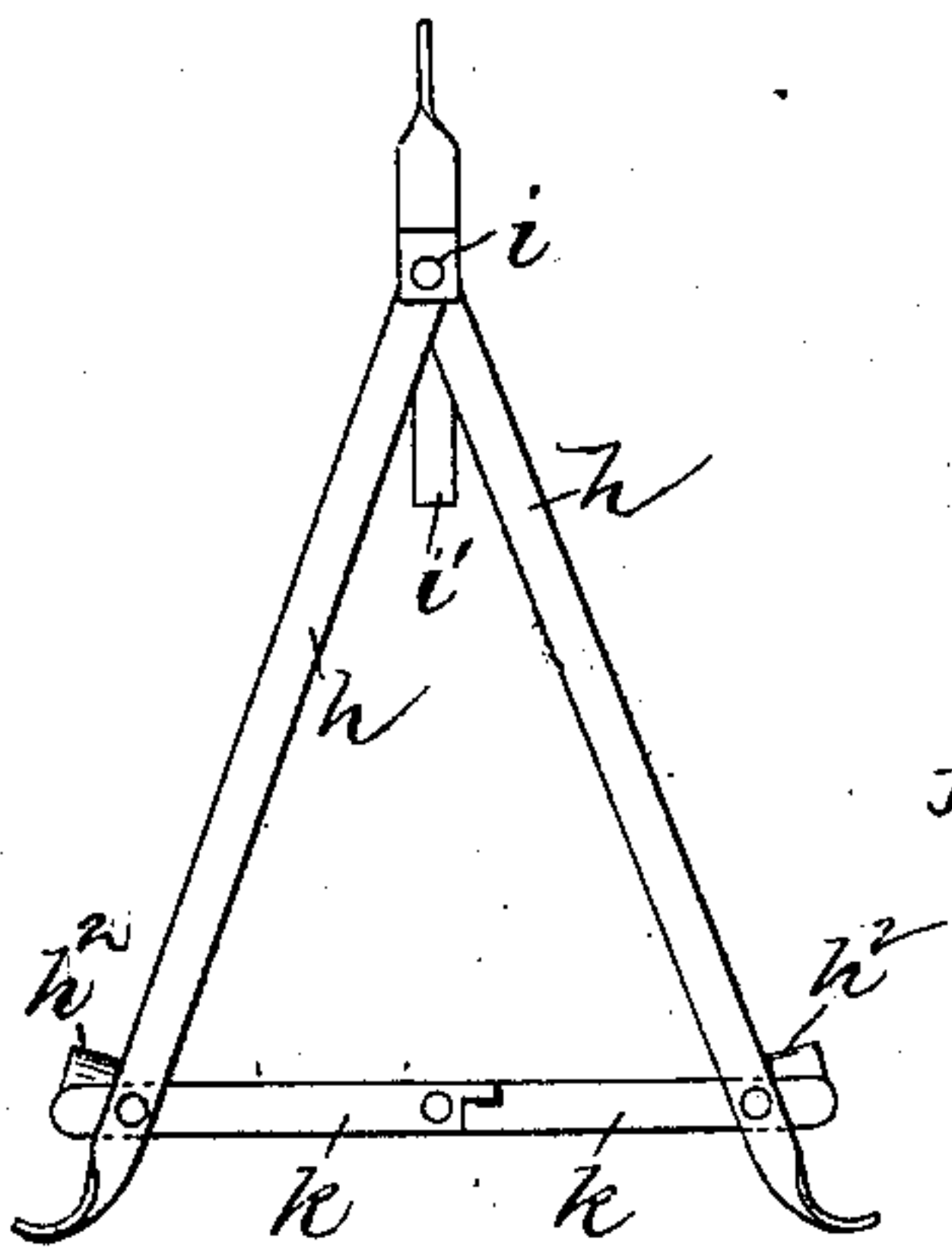


Fig. 3.

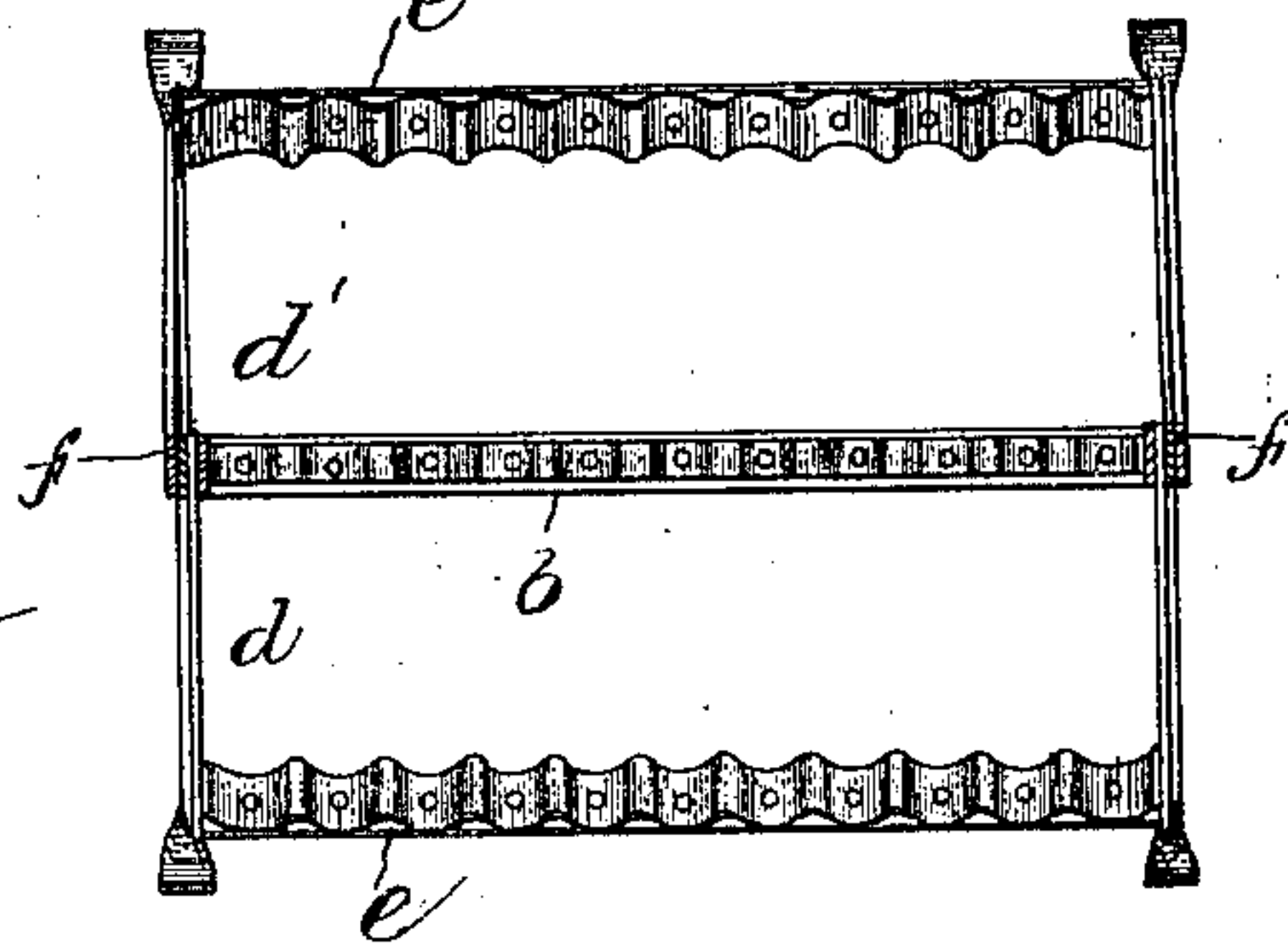
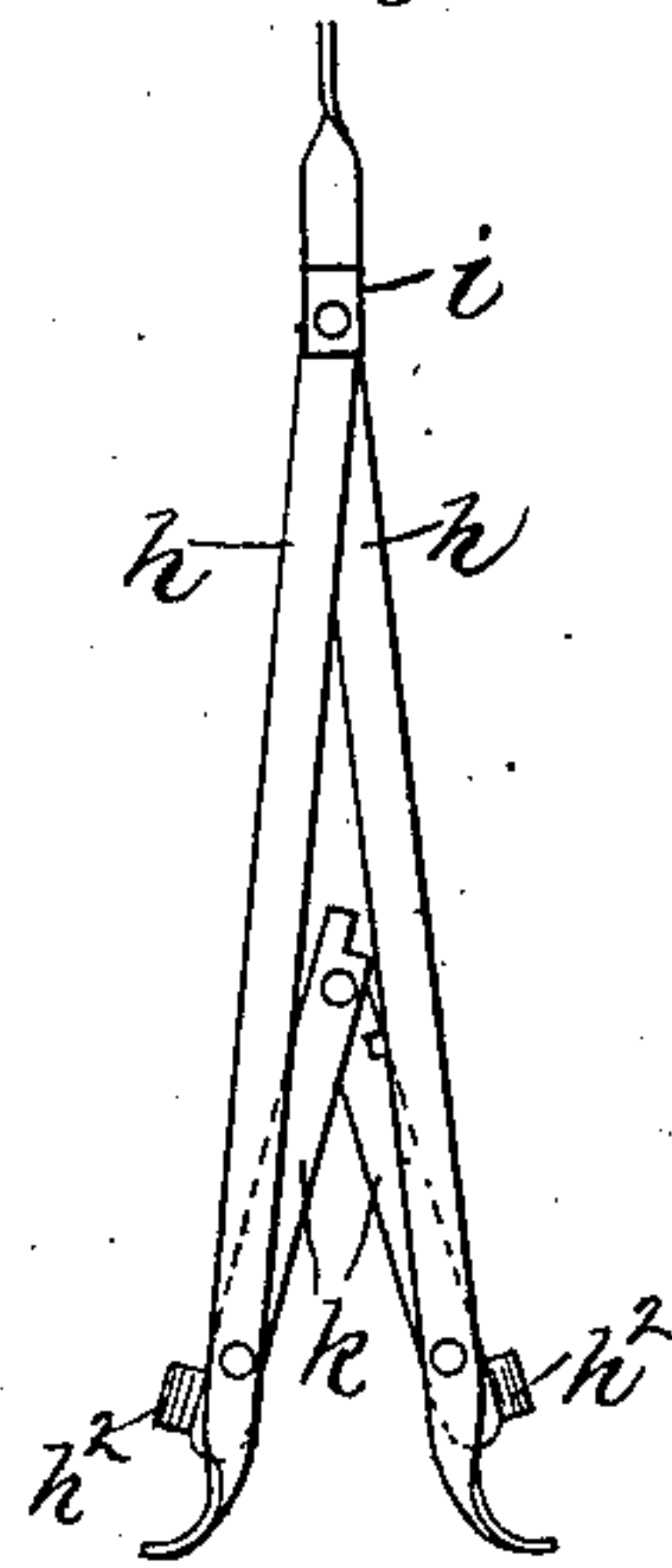


Fig. 5



Witnesses:

William H. Barker.
Grace E. Metcalf

Inventor:

Charles W. Warner

By Chas. L. Burdett,
Attorney

UNITED STATES PATENT OFFICE.

CHARLES W. WARNER, OF MIDDLETOWN, CONNECTICUT.

BICYCLE-STAND.

SPECIFICATION forming part of Letters Patent No. 657,973, dated September 18, 1900.

Application filed December 1, 1897. Serial No. 660,357. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. WARNER, a citizen of the United States, and a resident of Middletown, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Bicycle-Stands, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

My invention relates to the class of devices used for supporting a bicycle in an upright position; and one object of my invention is to provide a device of this class that while steadily supporting the vehicle shall be free from the defects present in prior structures, whereby attachments, as a lantern or cyclometer, may be injured; and a further object is to provide supporting means that shall be strong and rigid and that may be constructed in a cheap and economic manner and readily attached to a structure. Mechanism by means of which these objects may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a view in front elevation of the device. Fig. 2 is a view in end elevation of the device, showing in dotted outline the position of the parts when folded. Fig. 3 is a detail top view in section through the device. Fig. 4 is an end view of a stand, showing the invention embodied in another form of stand. Fig. 5 is a like view with parts folded.

In the accompanying drawings the main frame *a* is constructed, preferably, of rectangular form, having cross-pieces disposed at proper intervals along the frame, the cross-piece *b'* being located at a distance from the bottom piece *b* sufficient to receive and support the wheel of a bicycle in common use. The upper cross-piece *b²* is located near the upper part of the frame, and a sign *c* may be located between the cross-pieces *b'* and *b²*, if desired. A sectional arm is pivoted near the bottom at each end of the frame, the sections *d* of this arm being connected by a rest *e* and the sections *d'* being connected by a rest *e'*. Braces *f* are pivoted at or near the outer ends of these arms and extend upward, preferably, to a common point of attachment *f'* on the main frame. Locking-recesses *a'* may be located in the sides of the main frame, to which the upper ends of the braces *f* may be secured

for the purpose of holding the device in its folded position, as shown in dotted outline in Fig. 2 of the drawings.

In devices of this class constructed prior to my invention rods or like parts have been extended between cross-pieces, the spaces between the rods being intended for the reception of a wheel; but a fault has been found in such devices from the fact that attachments to the wheel, as cyclometers and lanterns, have been injured by coming in contact with these rods. By the use of my improved device this fault is obviated in the construction of the holds that extend only a limited distance from the cross-bar *b'*. An important feature of invention lies in the construction of these holds *g*, that are composed, preferably, of a single piece of metal formed into loops at regular intervals and secured to the cross-piece *b'*. These loops are of sufficient length to provide a hold *g*, any number of which may be formed from a single piece of metal properly bent. The bottom piece *b* and rests *e e'* are provided with lugs at suitable intervals, these lugs being, constructed, preferably of a single piece of metal formed and bent in a manner similar to that forming the holds *g*, care being taken, however, that the metal joining the lugs shall be curved to the approximate shape of the cross-sectional curve of the tire of a wheel. From this construction it will be seen that the holds *g* may be made of any light material, the peculiar construction by the bending of the wire enabling the hold to have sufficient rigidity for the purposes in hand, the extension of the side parts of the hold in opposite directions at the base providing a brace. The peculiar construction of the parts also enables the device to be folded in a manner to occupy but little space in a direction edgewise of the main frame and of a size not greater than the size of the main frame.

While there is shown herein holds and lugs located on a piece constructed of a single strip of metal and extending across the frame, my invention contemplates the forming of such parts, one or more, of a single piece of metal, and it is obvious that any construction of the holds to firmly unite them to the cross-piece and extend a short distance there-

from will come within the scope of my invention.

In the form of the invention shown in Figs. 4 and 5 of the drawings the main frame consists of two members *h*, preferably of rectangular form, pivotally connected at their upper ends, the cross-piece *i*, supporting the holds *i'*, forming the upper end of both members. The holds *i'* are attached to the cross-piece and are of similar form as those hereinbefore described. The end pieces *h'* at the bottom of each member of the frame bear rests *h''*, similar to those hereinbefore described, located in a like position. Connecting-strips *k* in this form of device are made in two sections, connecting the members of the frame at each side, each section of a connecting-strip being pivoted at one end to a main-frame member and at the opposite end pivotally connected to each other. In this form of a device the inner ends of the sections of the connecting-piece may be thrown upward as the stand is folded, thus retaining the ends of each of the main-frame members in contact with a floor or like surface and enabling the device to be self-supporting in an upright position.

I claim as my invention—

1. In combination in a bicycle-stand, a frame including a cross-piece bearing holds, braces secured to each end of the frame and extending on opposite sides at each end thereof, and arms pivoted at one end to the lower ends of the braces and pivotally connected at their opposite ends.

2. In combination in a bicycle-stand, a

frame including a cross-piece bearing holds, braces secured at a common point at each end of the frame and extending on opposite sides thereof, sectional arms connecting the braces at opposite ends of the frame, the sections of each arm being pivotally connected at one end and pivotally connected to a brace at the opposite end.

3. In combination in a bicycle-stand, a frame including a cross-piece bearing holds, braces detachably secured at one end to said frame, a sectional arm pivoted to the opposite end of said braces and each section being pivotally connected to each other and to the frame.

4. In combination in a bicycle-stand, a frame including a top and bottom cross-piece each bearing holds, braces pivotally connected at one end and detachably secured to the frame and extending downward on opposite sides of the frame, and arms each pivoted at one end to the lower end of a brace and pivotally connected at their opposite ends to each other and to the frame.

5. In a bicycle-stand in combination, a cross-piece bearing holds, braces connected with the cross-piece at each end and extending on opposite sides thereof, sectional arms connecting the braces at opposite ends of the frame, the sections of each arm being pivotally connected at one end and pivotally connected to a brace at the opposite end.

CHARLES W. WARNER.

Witnesses:

GEORGE S. SCOVILLE,
HARRIS WARNER.