

No. 607,438.

Patented July 19, 1898.

A. F. HOOD.

BICYCLE.

(Application filed Sept. 6, 1895.)

(No Model.)

Fig. 1.

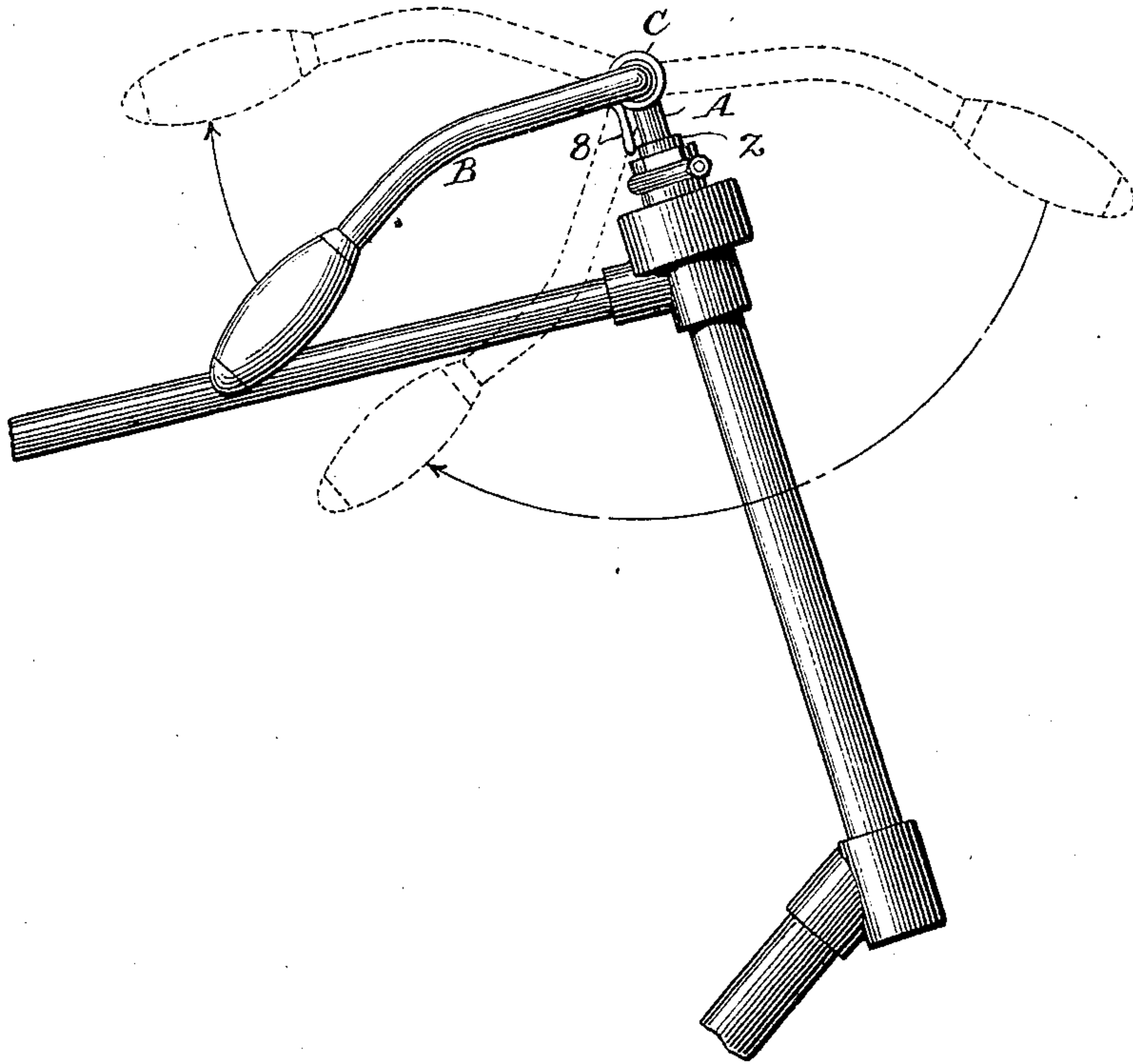
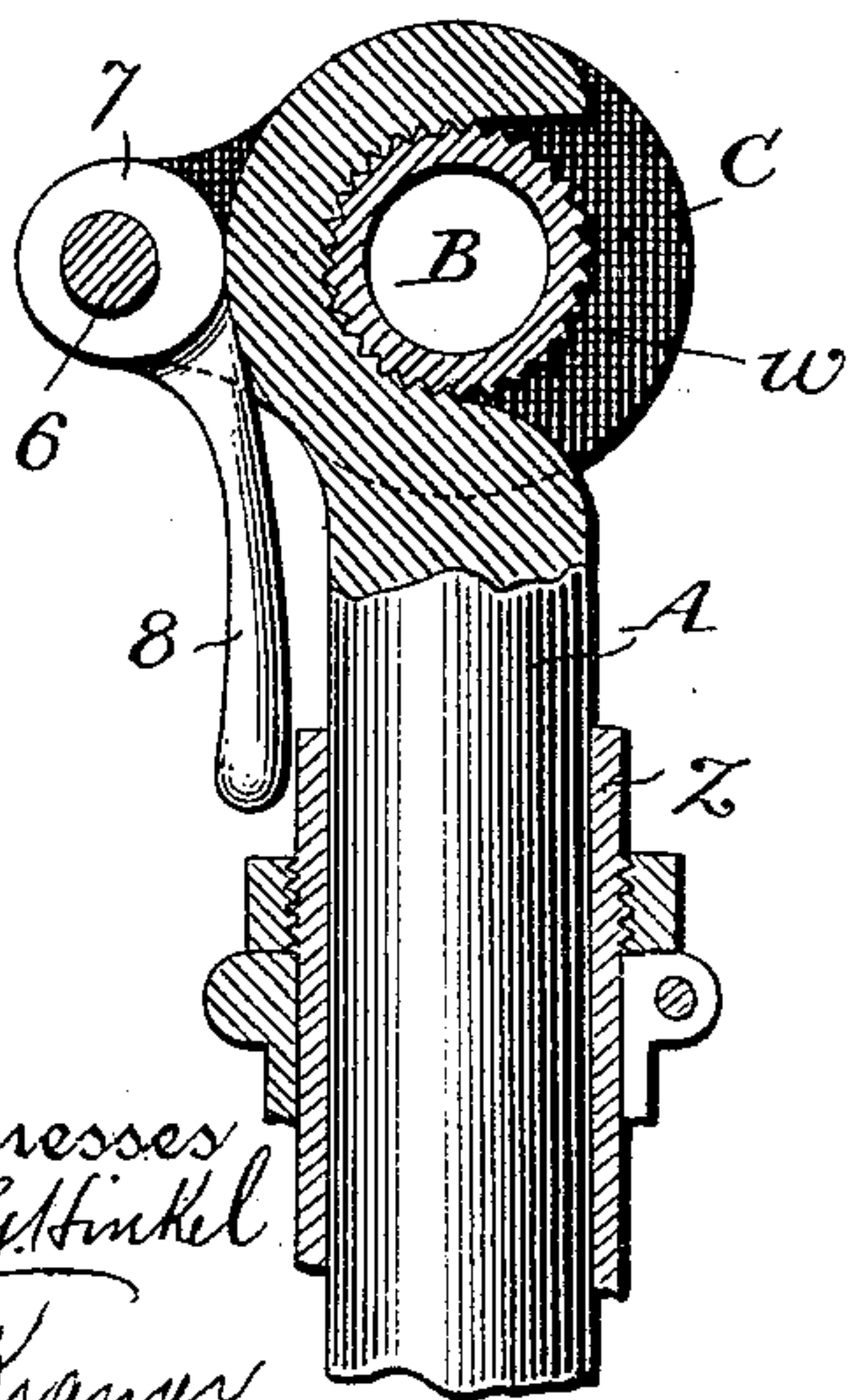
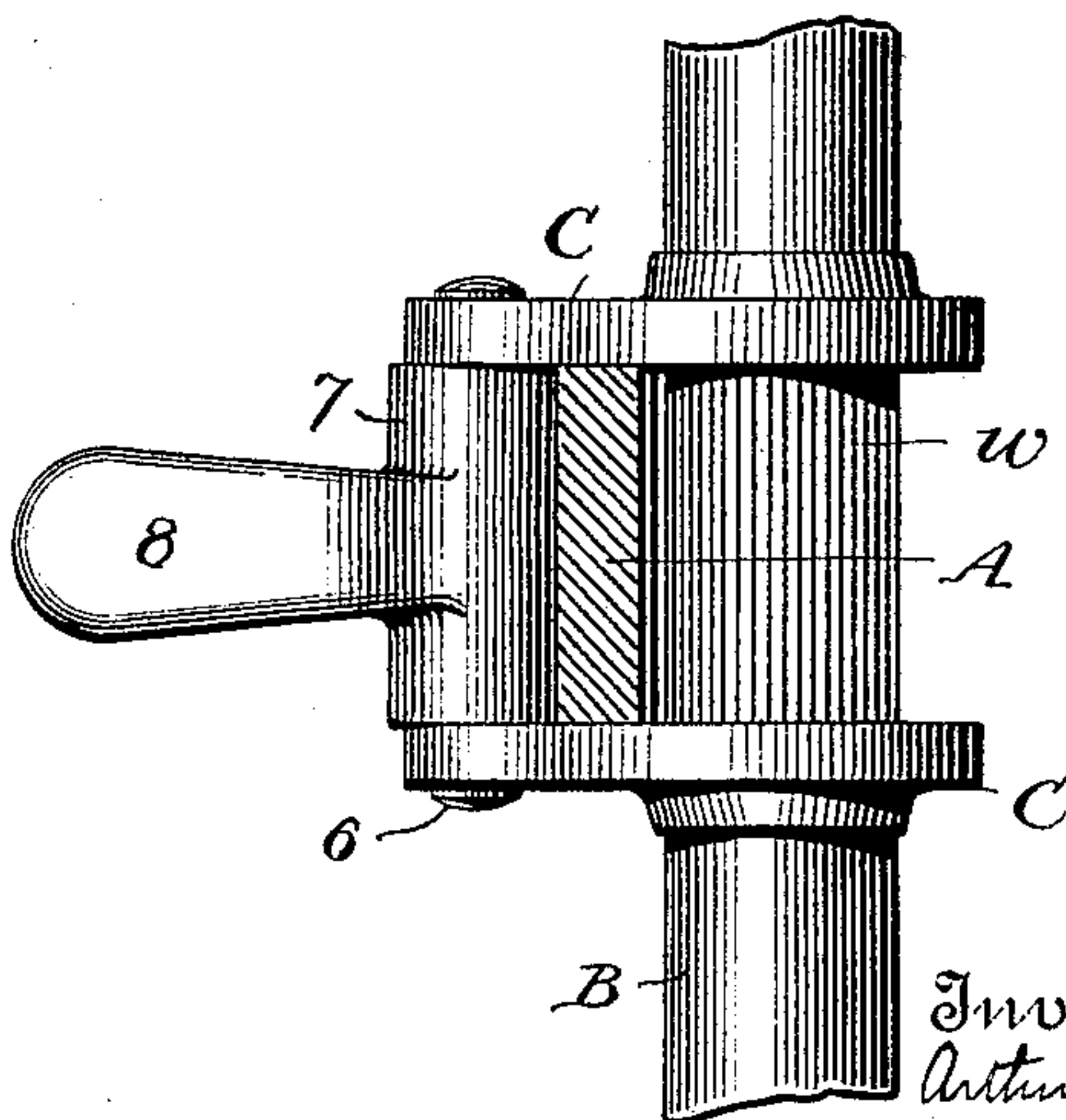


Fig. 2.



Witnesses
Jno. G. Hinkel
G. P. Kramer

Fig. 3.



Inventor
Arthur F. Hood
by *John H. Hume*
Attorneys

UNITED STATES PATENT OFFICE.

ARTHUR F. HOOD, OF HOPKINTON, MASSACHUSETTS, ASSIGNOR TO THE
FENTON METALLIC MANUFACTURING COMPANY, OF JAMESTOWN,
NEW YORK.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 607,438, dated July 19, 1898.

Application filed September 6, 1895. Serial No. 561,641. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR F. HOOD, of Hopkinton, county of Middlesex, State of Massachusetts, have invented an Improve-
5 ment in Bicycles, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

10 In the modern or safety bicycle it has been found necessary to adjust the handles vertically to different positions and also most desirable to so connect the handle-bar with the fork that if the machine should fall or the
15 handles strike any obstruction in running the handle-bar may be turned without any serious straining of the fork or connections between the handle-bar and the fork. It is also very desirable that the handle-bar shall
20 turn in its support, so as to carry the handles to different vertical positions, and for many purposes what are termed "drop" handle-bars are essential, and when drop handle-bars are used it has been found most advan-
25 tageous to be able to so adjust the bars that the handles may incline either upward or downward. These different arrangements and adjustments have been secured in some instances by clamping a drop handle-bar to
30 its support, but they have never all been secured in connection with means whereby the handles can be adjusted vertically and readily clamped and unclamped without the use of
35 detachable parts, screw-fastenings, &c., and without necessitating tedious manipulation and danger of losing portions of the fastening, such as screws, clamps, &c.

The objects of my invention are to secure in a single machine all of the various adjust-
40 ments hereinbefore specified, to permit these adjustments to be made each by a single movement, and to avoid the possibility of the loss of any of the parts. To this end I make use of the ordinary adjustable stem, which
45 is fitted to the head of the fork and which may be raised and lowered and secured in position after adjustment, and I provide the said stem with a socket adapted for the lateral insertion and removal of the bearing por-
50 tion of the handle-bar, preferably a drop han-

dle-bar, and I provide securing devices, which can be adjusted to permit the ready removal of the handle-bar laterally from its socket, and its reinsertion laterally and allow the handle-bar to be reversed, so that the han- 55 dles will be inclined either upward or downward, and, further, which may be slightly loosened and again tightened, so as to permit the handle-bar to be turned in its socket to any desired extent to raise or lower the 60 handles and to positively secure it in place. These adjustments may be effected through the medium of the construction illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation of part of a bi- 65 cycle embodying my improvements; Fig. 2, an enlarged section of the parts adjacent to the head. Fig. 3 is a sectional plan of Fig. 2.

The stem A is at the head of the fork and is detachable, being shown as adjustable, as 70 usual, in the hollow shaft or head z of the fork, and it is provided with a suitable socket of such construction that the central bearing part of the handle-bar B may be inserted or withdrawn laterally, thereby permitting the 75 handle-bar to be reversed, which will incline the ends or handles up or down, when the bar is a drop handle-bar, with the handles at an angle to the general plane of the bar. This also permits the bar to be removed to disable 80 the machine.

Suitable means are provided for securing the bar in the socket after the bar has been applied, which means are carried by the bar, provided they permit the bearing part of 85 the bar to be inserted and removed laterally. As shown in Figs. 1 and 2, the said means are carried by the bar, consisting of a yoke C, upon a cross-bar 6 of which turns a cam or eccentric 7, having a handle 8. After the 90 bar is inserted in the socket x the yoke C is swung to the position shown in Fig. 3, bringing the cam and cross-bar opposite the closed side of the head, after which the cam is turned to the position shown in Fig. 2, 95 thereby drawing the bar firmly into the socket, and by reason of the yoke bearing upon opposite ends of the socket longitudinal movement of the bar in the socket is prevented. The bar or socket may be provided with suit- 100

able engaging ribs or shoulders, so that when the bar is drawn into the socket and clamped the engaging parts will prevent the bar from turning either by their frictional or positive engagement.

The parts are so constructed that by slightly relaxing the securing means the engaging shoulders or parts may be removed from contact, permitting the bar to be turned to adjust the position of the handles, after which the bar is again clamped in place, so as to be held firmly in its new position, this adjustment being effected without removing the bar or the fastenings or of necessity stopping the machine.

It will be seen that by the above construction the handles are adjustable vertically and the bar can turn if it strikes any object without seriously straining any parts, that the bar can be reversed to incline the handles up or down and turned and secured to set the handles in the desired position or removed to disable the machine, and that the adjustments can be effected without the use of tools except to raise and lower the stem and without applying any parts to or separating them from the machine. It will be seen also that in case of injury to the securing devices the stem, bar,

and connecting parts may be disconnected from the head of the fork for repairs.

Without limiting myself to the special form of socket or clamping or securing devices, I claim as my invention—

1. The combination with a handle-bar and a stem having an open socket permitting the insertion and withdrawal of the handle-bar, of a device carried by the handle-bar and constructed and arranged to engage and disengage the ends and side of the stem opposite to its socket and provided with means for clamping the stem and bar, substantially as described.

2. The combination with a handle-bar, of a stem having an open socket adapted to permit the lateral insertion and withdrawal of the handle-bar, a yoke pivotally supported upon the handle-bar, and a cam-lever pivoted to the yoke, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR F. HOOD.

Witnesses:

B. J. NOYES,

A. GILBERT, Jr.