

(No Model.)

N. CLARK.
HUB FASTENER.

No. 258,557.

Patented May 30, 1882.

Fig. 1.

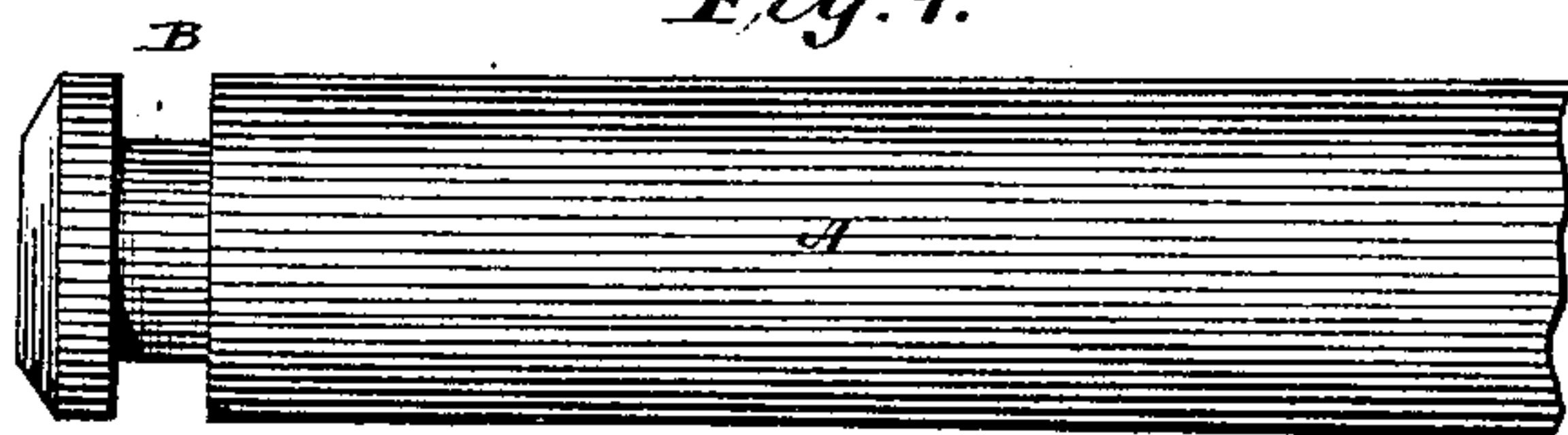


Fig. 2.

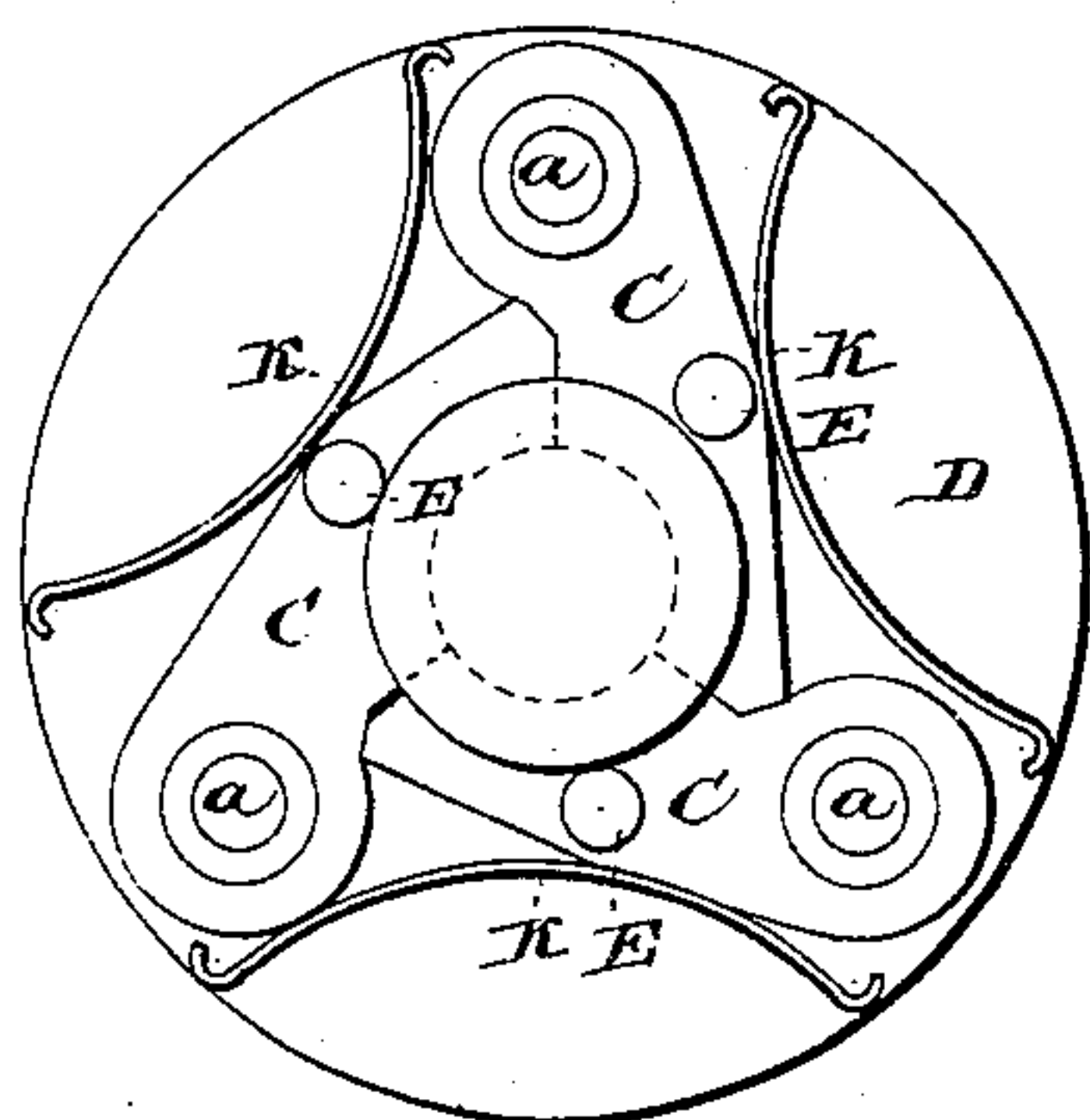


Fig. 3.

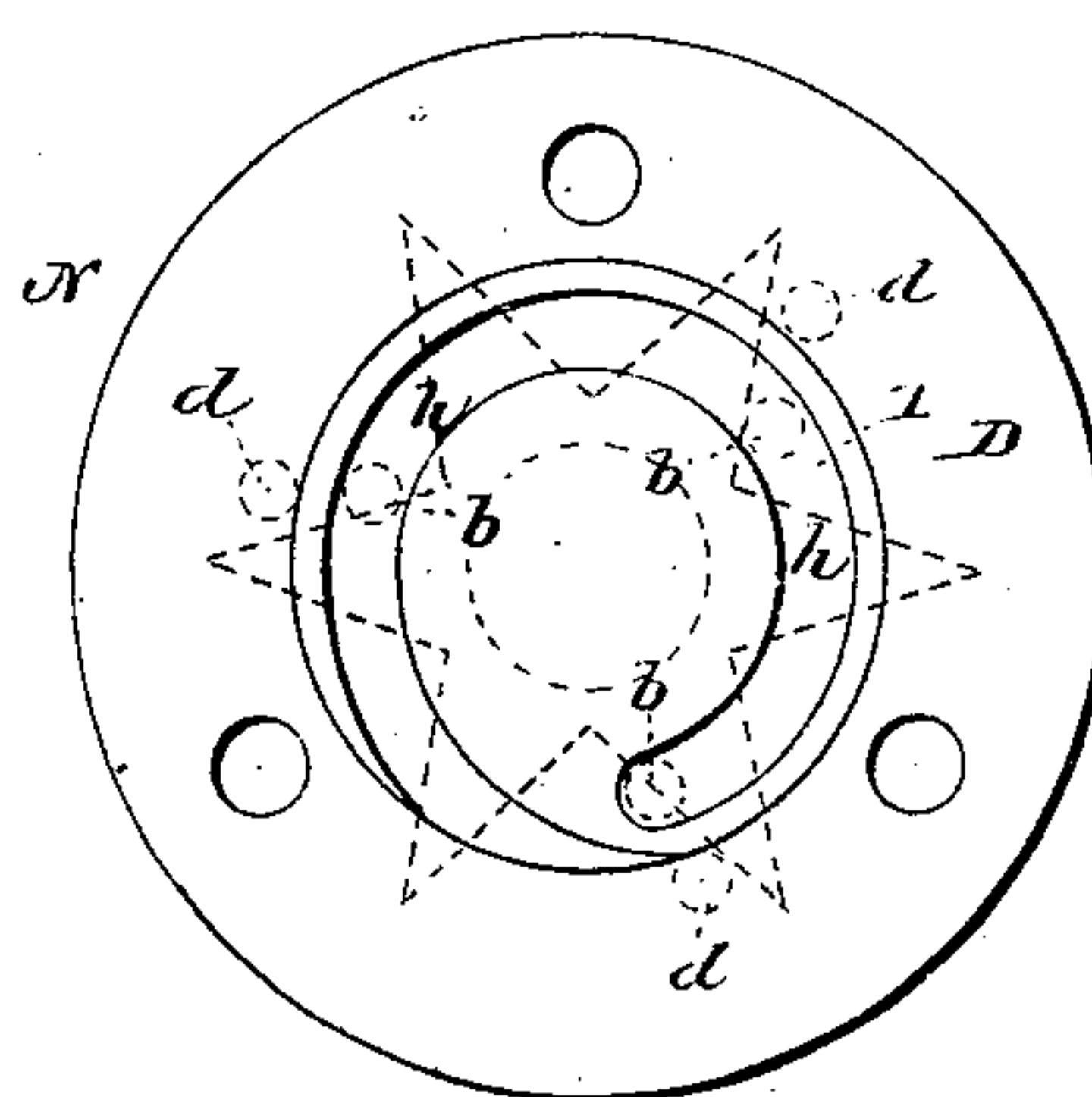


Fig. 4.

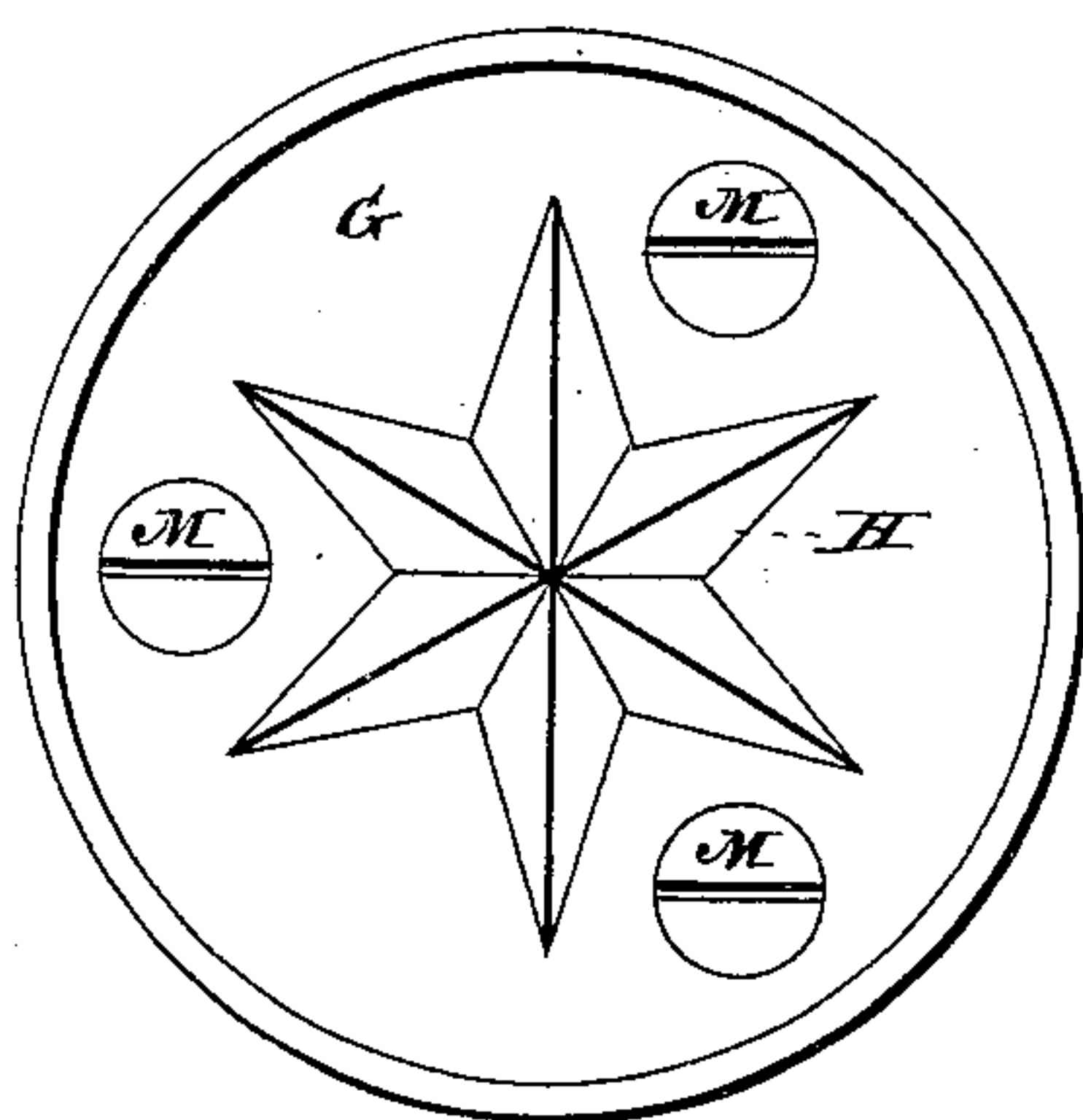
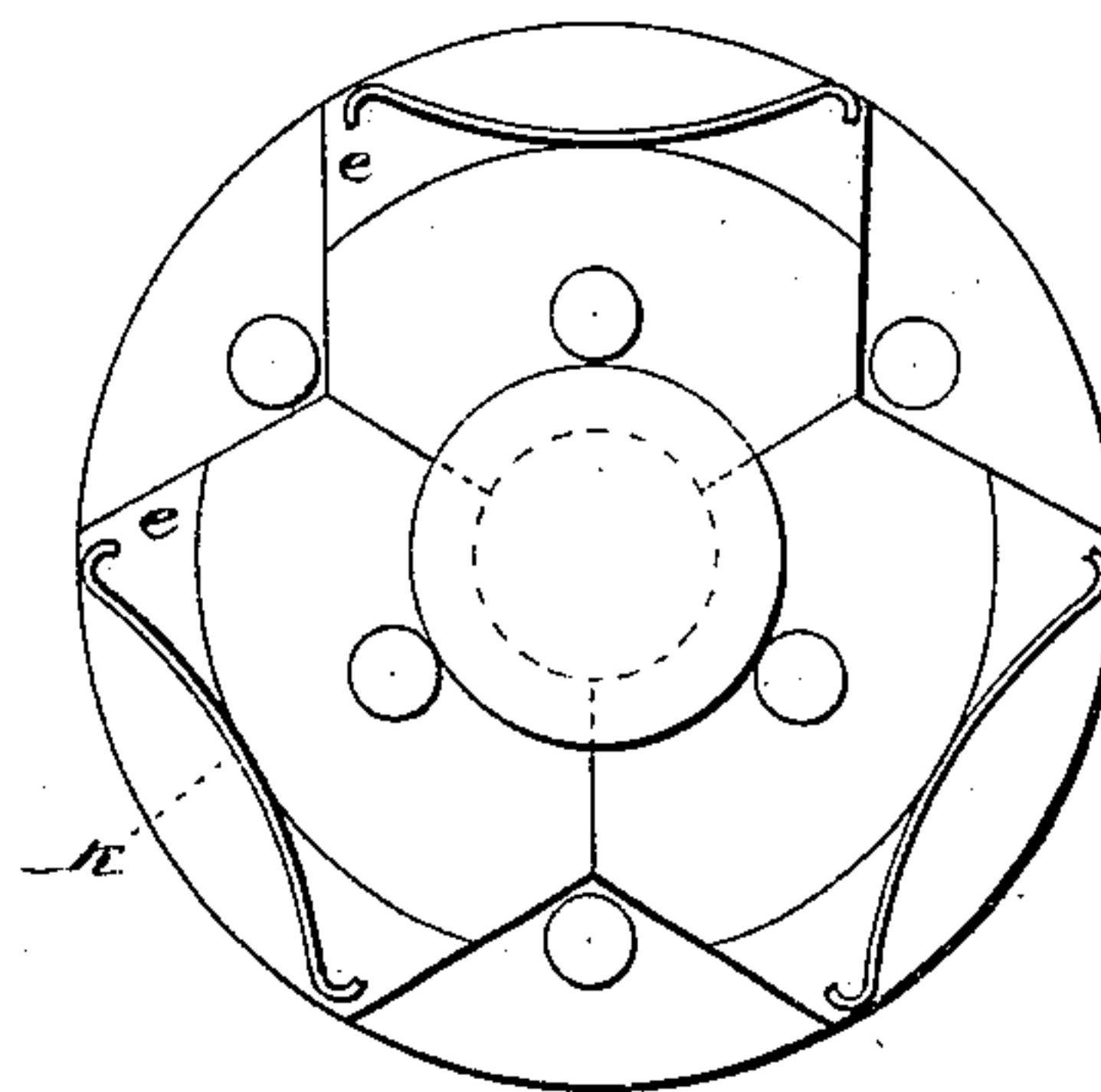


Fig. 5.



WITNESSES:

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HUB-FASTENER.

SPECIFICATION forming part of Letters Patent No. 258,557, dated May 30, 1882.

Application filed March 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, NORMAN CLARK, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Hub-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention pertains to that class of hubs which have closed outer ends, and has more special reference to certain novel devices for preventing the casual escape of the wheel, which devices are located at the outer extremity of the hub.

In the drawings, Figure 1 is a side view of the spindle. Fig. 2 is an end view of the fastener in position, the outer plate being removed. Fig. 3 is the inner face of the outer plate, showing the wheel I with the annular groove therein. Fig. 4 is the outside of the outer plate in position. Fig. 5 exhibits a modification of the devices shown in Fig. 2.

A is the spindle or end of the axle upon which the hub revolves.

B is an annular recess formed around the spindle A, near the outer end of the latter.

C C C are three latches, pivoted respectively at *a*, and having part of their inner faces cut into a partial circle, so that such circular recesses of the three latches C in the aggregate entirely encircle the axle A in the annular recess B. The latches C are each pivoted to the circular plate D at the points *a*, such points being so located that the latches can be drawn back sufficiently to permit the insertion or withdrawal of the axle A.

E E E are three short studs, formed one each on the outside of the latches C, and extending outward against the inner face of the outer plate, G. The ornamental star-lever H is axled through the center of the plate G, while on the inside of the plate G, rigidly fixed on the same axle with the lever H, is the wheel I, having the annular groove *h* on the side thereof. The lever H may be a four-sided or

octagon nut. The purpose in the grooved wheel I and lever H is to hold and remove the latches C by acting on the studs E. When the latches C are locked snugly into the recess B, entirely encircling it, the outer ends of the studs E rest in the groove *h* at the equidistant points represented by the letters *b b b* in Fig. 3. When the grooved wheel I, by means of the lever H, has been turned to the right an entire revolution, the studs E occupy the equidistant points *d d d* on the outside of the groove *h* of the wheel I, Fig. 3, being thrown and held outward and carrying the latches C with them sufficiently far to permit the insertion or withdrawal of the axle A.

A triple cam axled with the lever H can be used instead of the grooved wheel I in throwing the latches C out; but it affords no means of holding the latches in.

The latches C are still further held in place and the grooved wheel I prevented from casually withdrawing by the plate-springs K K K, which are placed at the back of each latch, and between the latter and the inside of the ordinary projecting hub-band N. The plates are fastened together and to the outside of the hub by means of the screws M M M, which respectively pass through the pivots *a* of the latches C into the end of the hub.

In Fig. 5 is shown a modification of the latches C, in which the latter, instead of being pivoted, travel to and from the axle A in parallel ways *e e*.

The advantages of my invention are that it is located outside of the spokes of the wheel, where it is easy of access, and where the recess B does not weaken the spindle, as it would at the shoulder of the latter. The breakage of no one spring, nor of any number less than the whole, will permit the escape of the wheel. By entirely encircling the recess B the latter is wholly filled, the wheel held more firm, and the lubricating-oil on the axle prevented from escaping. The use of a less number than three latches, and at the same time entirely encircle the axle A, is impracticable, as to release the axle the contiguous faces of the latches must be withdrawn nearly half the diameter of the axle in order to clear the inside corner of such contiguous face, and no device

thus far suggested will accomplish such withdrawal, and neither is there room for it on the outer face of the hub. With three or more latches a less and practicable action is
5 sufficient.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

10 The latches C C C, pivoted near one end, and used in groups of not less than three, and having their inner faces recessed circularly, so that such recessed faces, in the aggregate, en-

circle the axle A at the recess B therein, whereby such recess is completely filled, and at the same time less space and action are required to
15 withdraw such latches from said recess B, substantially as shown, and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

NORMAN CLARK.

Witnesses:

JNO. J. CUSHING,
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