

(No Model.)

H. M. HALL.
HUB ATTACHING DEVICE.

No. 278,942.

Patented June 5, 1883.

Fig. 1.

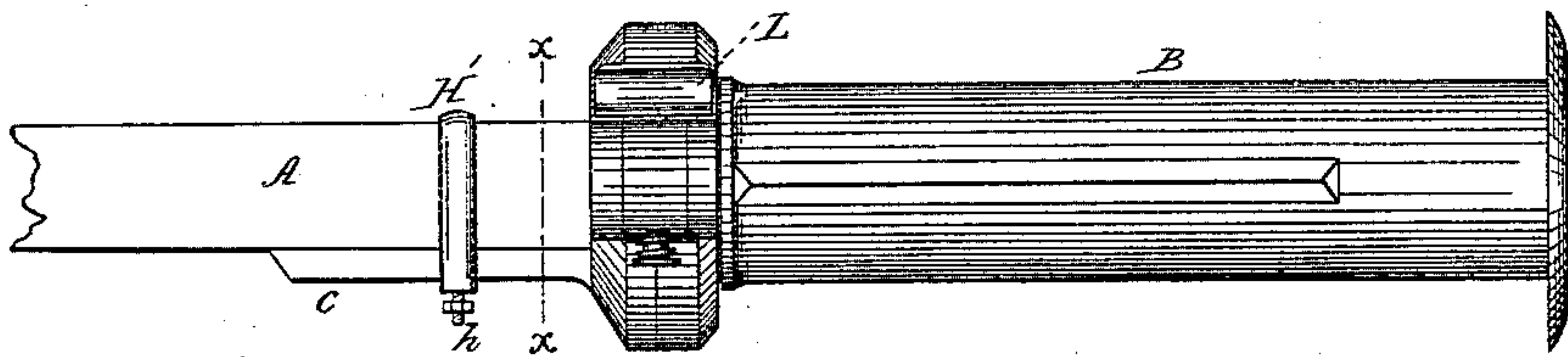


Fig. 6.

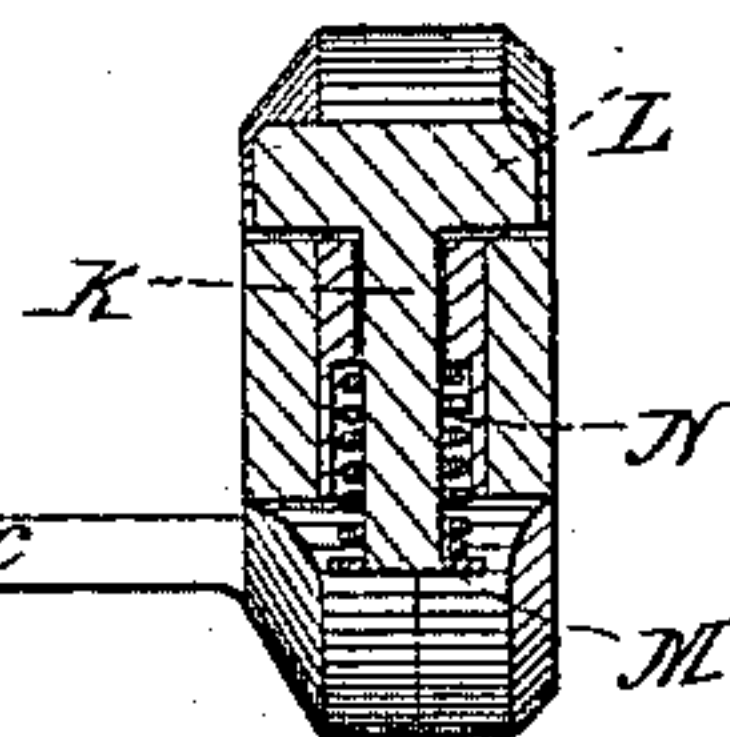


Fig. 2.

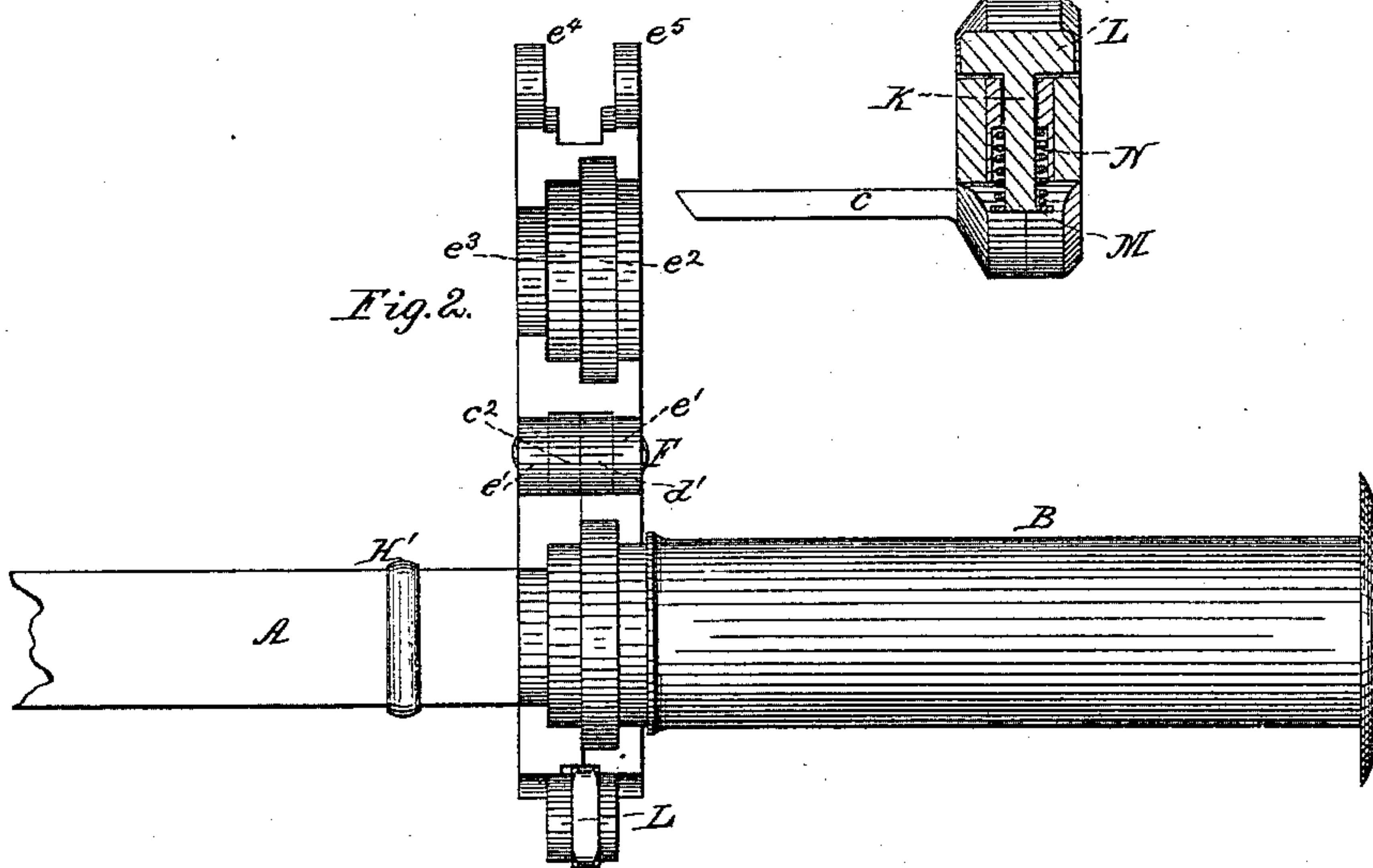


Fig. 3.

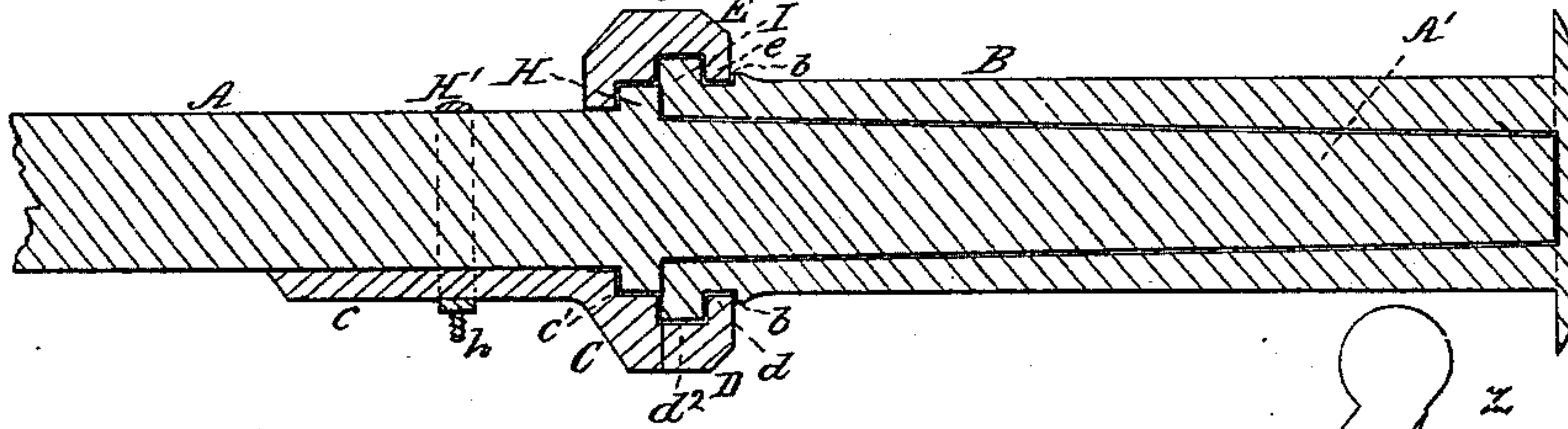


Fig. 4.

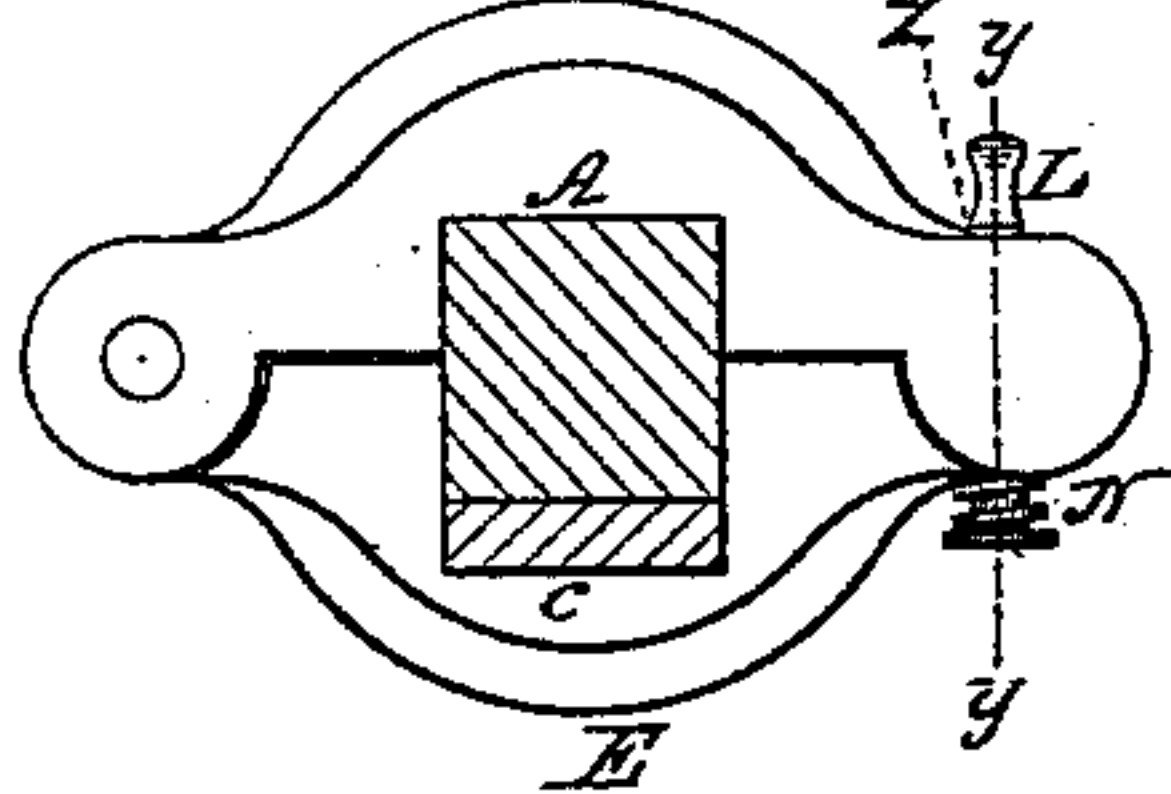
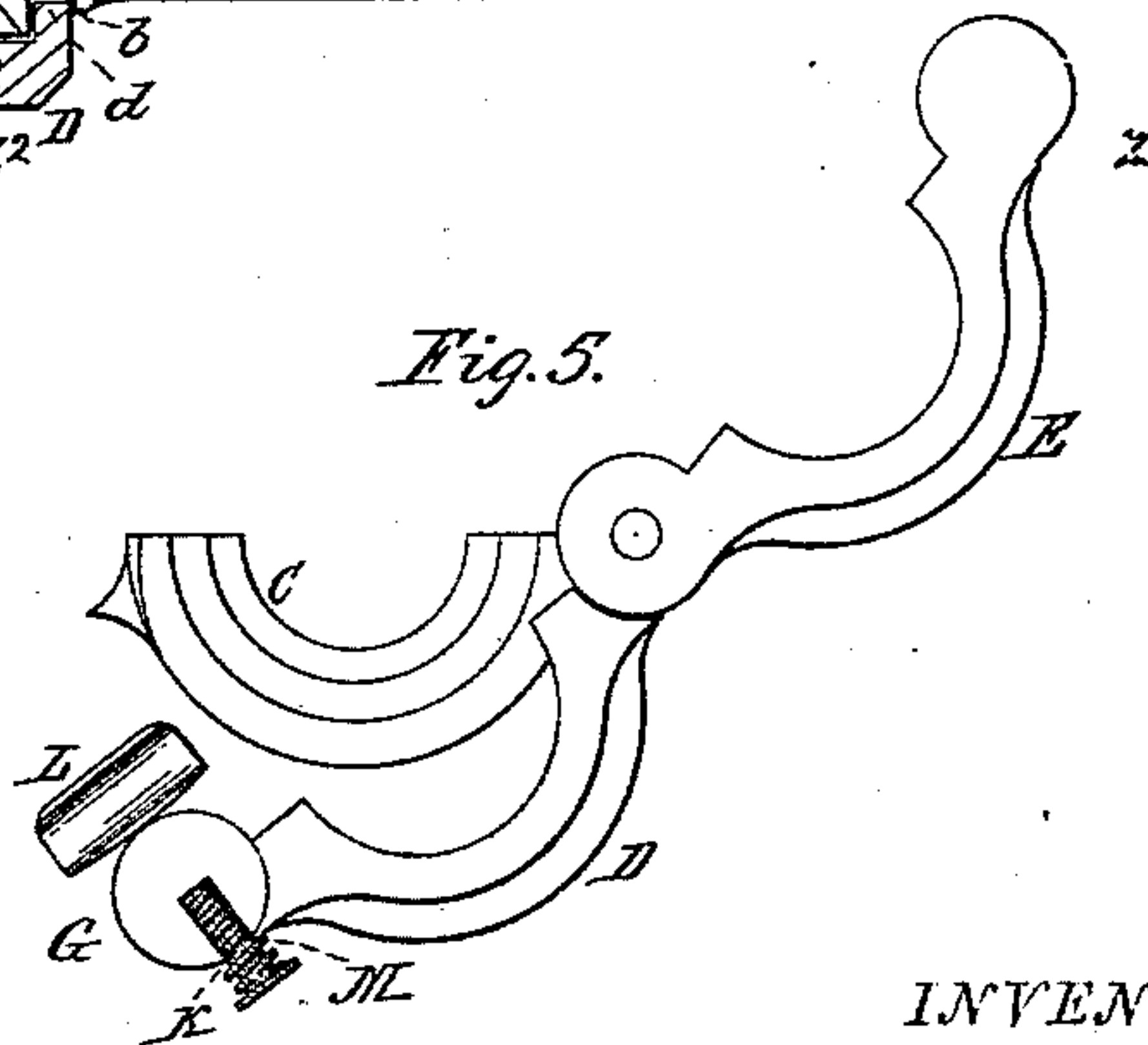


Fig. 5.



WITNESSES

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HORACE M. HALL, OF TAUNTON, MASSACHUSETTS.

HUB-ATTACHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 278,942, dated June 5, 1883.

Application filed March 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, HORACE M. HALL, of Taunton, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Hub-Attaching Devices; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my improved device closed, showing the manner of attaching a wheel to an axle. Fig. 2 is a top view of the same open. Fig. 3 is a longitudinal sectional view of the device. Fig. 4 is a cross-sectional view of the device closed, taken on the line *x x* of Fig. 1. Fig. 5 is a similar view of the device wholly open, looking in the opposite direction. Fig. 6 is a section on the line *y y* of Fig. 4, showing the improved means for locking the device.

Similar letters of reference in the several figures denote the same parts.

The object of my invention is to provide a cheap and simple device whereby a wheel can be attached to and detached from an axle without the use of a wrench; and to this end it consists in certain novel details of construction and combinations of parts, which I will first describe, and then point out particularly in the claims at the end of this specification.

In the accompanying drawings, A represents the axle to which the hub is to be attached, provided with the collar H and the long smooth bearing portion A'.

B represents an ordinary axle-box, provided at its inner end with a collar, I, and with a groove, *b*, into which a portion, *d*, of the part of the coupling D and the portion *e* of the part E of the coupling are adapted to work.

The connecting device or coupling consists of three distinct main parts, C, D, and E. The part C has a projection or extension, *c*, extending back underneath the axle, to which it is secured by the strap H', which encircles the axle, and has a bolt, *h*, in its under side, adapted to press the projection *c* firmly against the axle; and it is also provided with a groove, *c'*, in its upper forward portion to receive the collar H of the axle A. This part C has a lug, *c''*, provided with a perforation, through which

passes the pin F, connecting the parts C, D, and E together. The portion D, which is also pivoted on the pin F, has a lug, *d'*, through which said pin is passed, and on its opposite end a corresponding lug, not perforated laterally, but having the device G for securing the coupling together, and which will be more fully described hereinafter. This portion D also has the groove *d''*, into which the collar I on the box B is adapted to work. Portions C and D constitute the under or lower part of the coupling. The upper portion of the coupling is provided with a bifurcated lug, or, rather, two lugs, *e' e'*, perforated and straddling the lugs *c''* and *d'* of the lower portions, C and D. Said upper portion also has grooves *e'' e''* in its inside circumference (the groove *e''* being deeper and wider than *e''*) for the purpose of retaining the collars on the box and axle, respectively. On one end of E are two lugs, which, when the coupling is closed, embrace the lug on D, containing the devices for locking the coupling together. The locking device on the lug of the portion D is composed of a bolt or stem, K, passing through a perforation in said lug, and having a thumb-piece, L, at its upper end and a head, M, at its lower end. Between the head M and the under side of the perforation is a spiral spring, N, whose function is to keep the thumb-piece L normally against the top of the perforation.

The operation of the device is as follows: When the wheel is to be put on the axle, the coupling is opened and the wheel slid onto the axle, the end of the box in the hub being close against the collar on the axle. Then the lower piece C is raised, after which the second lower piece, D, provided with the lug containing the locking device, is also raised. Then the upper portion, E, is clasped over the collars on the axle and box, the stem and thumb-piece in the lug *d* passing between the lugs *e'* and *e''* on said upper portion. The thumb-piece is then turned across the space between the lugs, and the spring around the stem pulls the stem down, and the thumb-piece, dropping behind the shoulders *z z*, is prevented from accidentally turning.

The extension *c* of the part C is only for the purpose of retaining the coupling on the axle and preventing it from rotation, and bears no

part of the strain longitudinally of the axle, to which the collars of the axle and hub respectively are subjected.

Having thus described my invention, I claim
5 as new—

1. A hub-attaching device consisting of three main parts hinged together, and one of which constitutes one half of the device, and is provided with grooves for the reception of collars on the axle-box and axle, respectively, and the other two of which together constitute the other half of the device, having grooves or recesses corresponding to those of the first-mentioned part, but which are capable of separation, so as to permit the axle-box, with its collar, to be slid longitudinally off the axle, one of the parts of the two-part half being adapted to be secured to the axle, substantially as described.

20 2. A hub-attaching device consisting of three main parts hinged together, and one of which constitutes one half of the device, and is provided with grooves for the reception of collars on the axle-box and axle, respectively,

and the other two, of which one is adapted to be secured to the axle, together constituting the other half of the device, having grooves or recesses corresponding to those of the first-mentioned part, but which are capable of separating, so as to permit the axle-box, with its collar, to be slid longitudinally off the axle, and means for locking all the parts together, substantially as described.

3. The coupling consisting of the upper half, having the grooves for the reception of the collars on the axle-box and axle, respectively, and the two parts forming the corresponding lower half of the device, one of which is adapted to be secured to the axle, and having grooves for the reception of said collars, in combination with the device for locking said parts together, consisting of the thumb-piece, stem, and spring, all arranged substantially as described.

HORACE M. HALL.

Witnesses:

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