

(No Model.)

A. KENT.
BICYCLE.

No. 559,943.

Patented May 12, 1896.

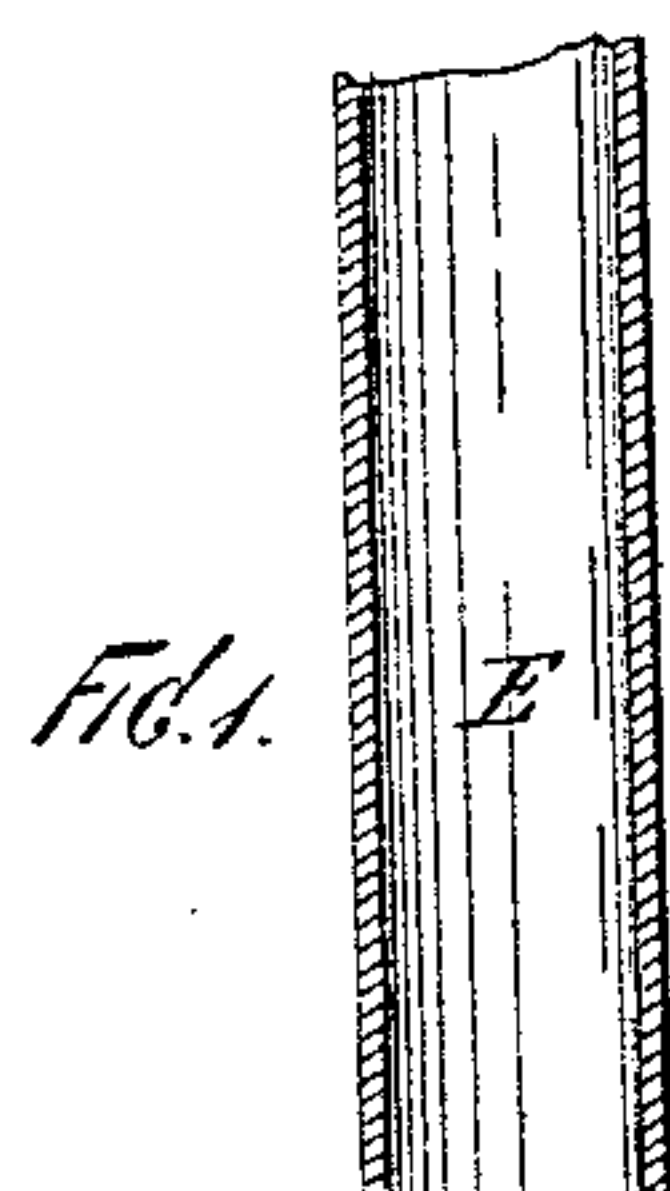


FIG. 6.

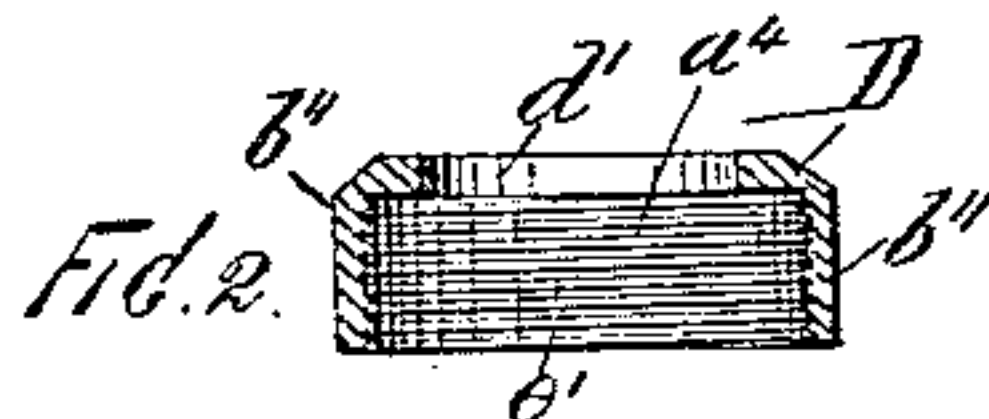


FIG. 7.

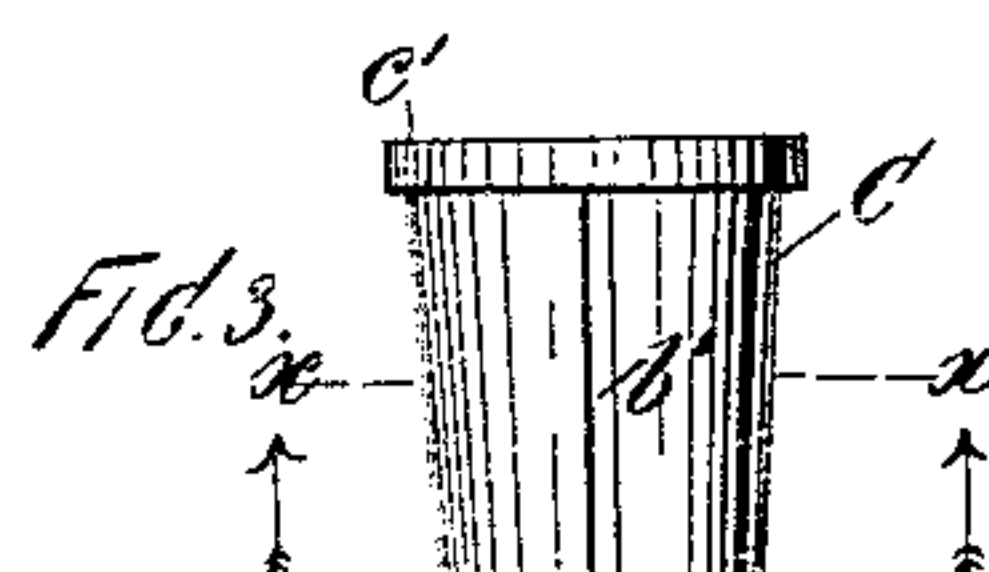
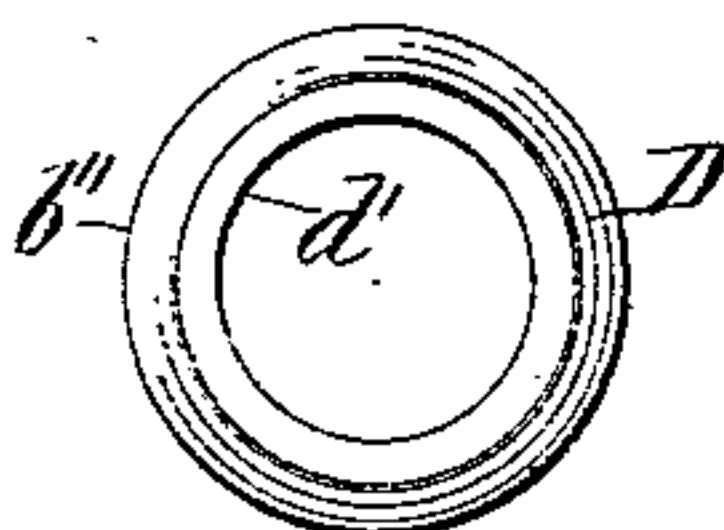


FIG. 8.

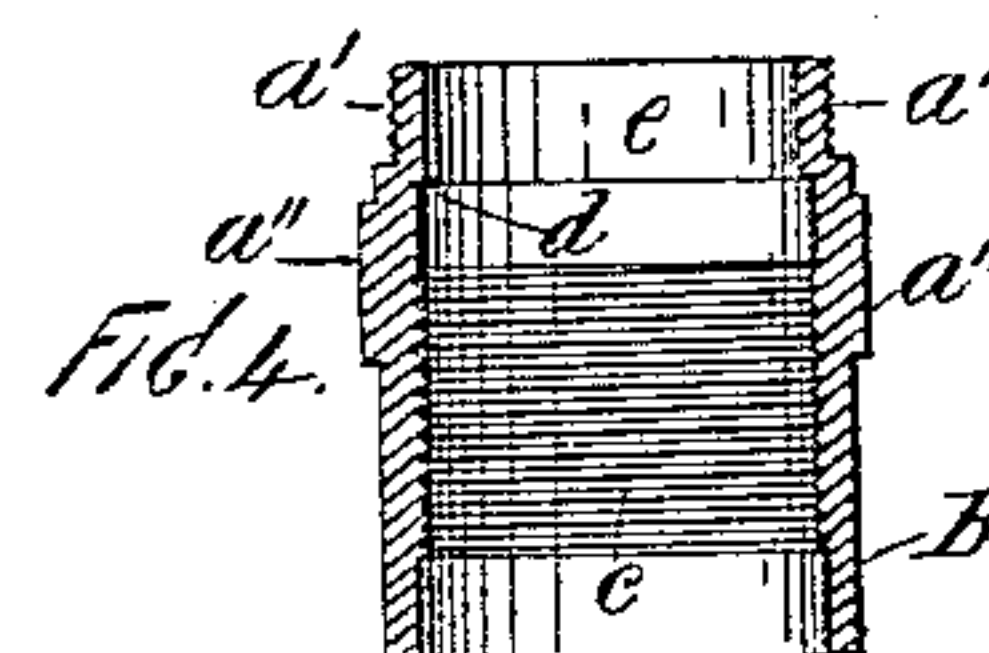
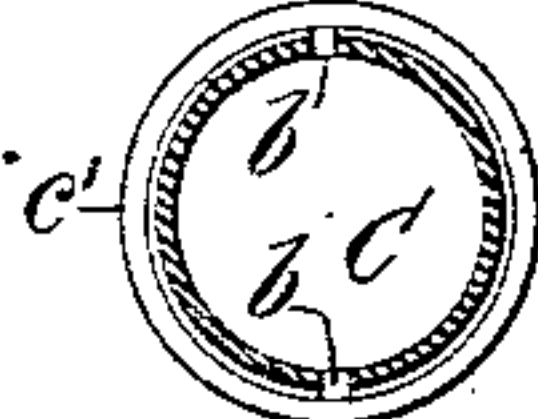


FIG. 9.

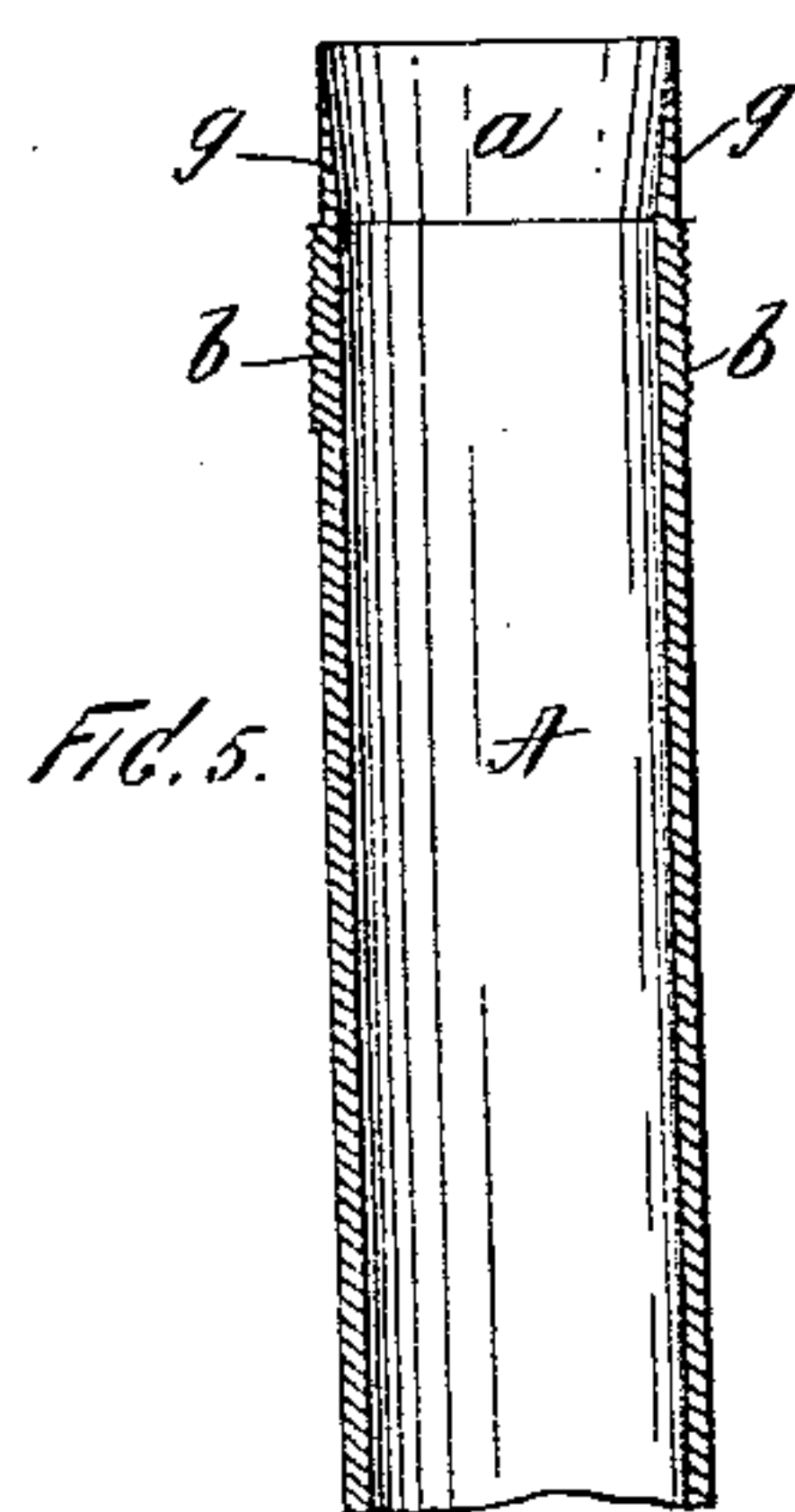
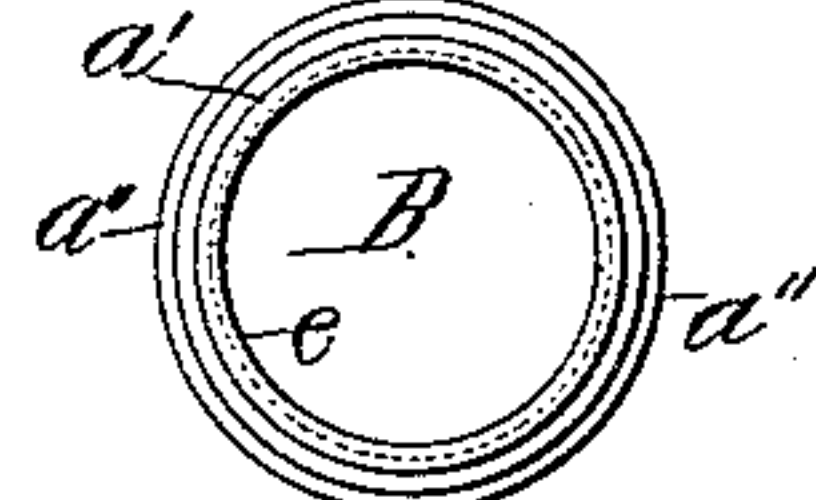


FIG. 10.

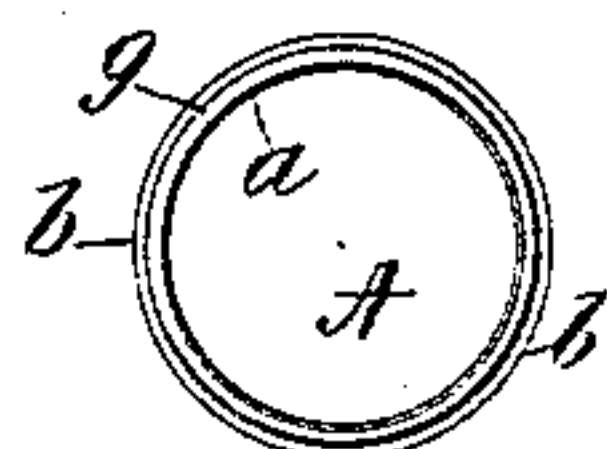


FIG. 11.

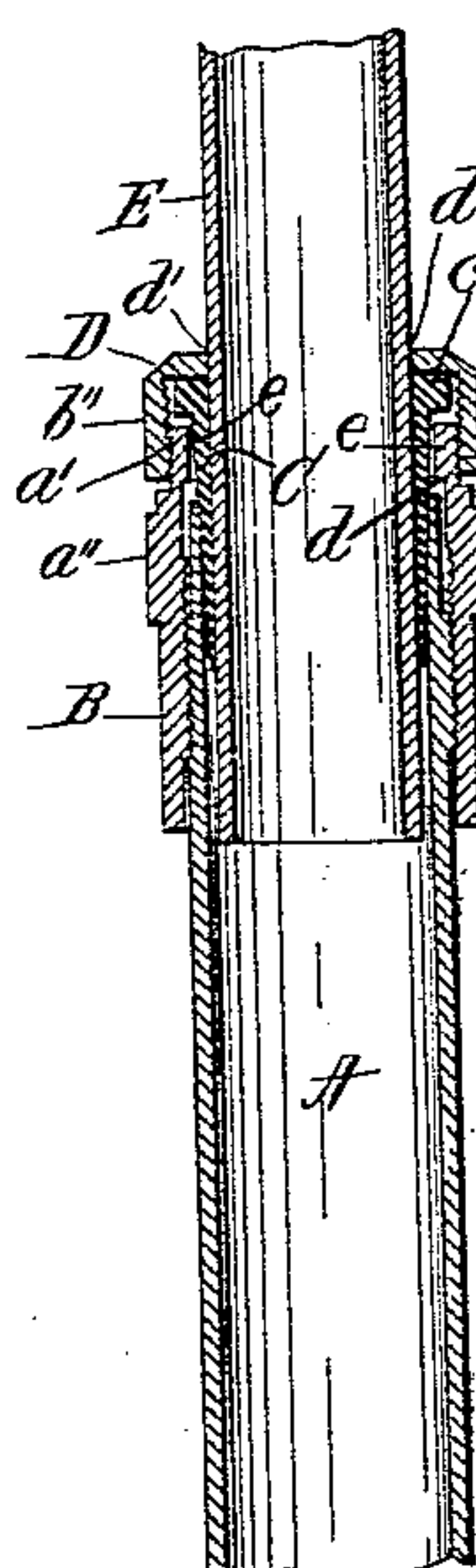


FIG. 13.

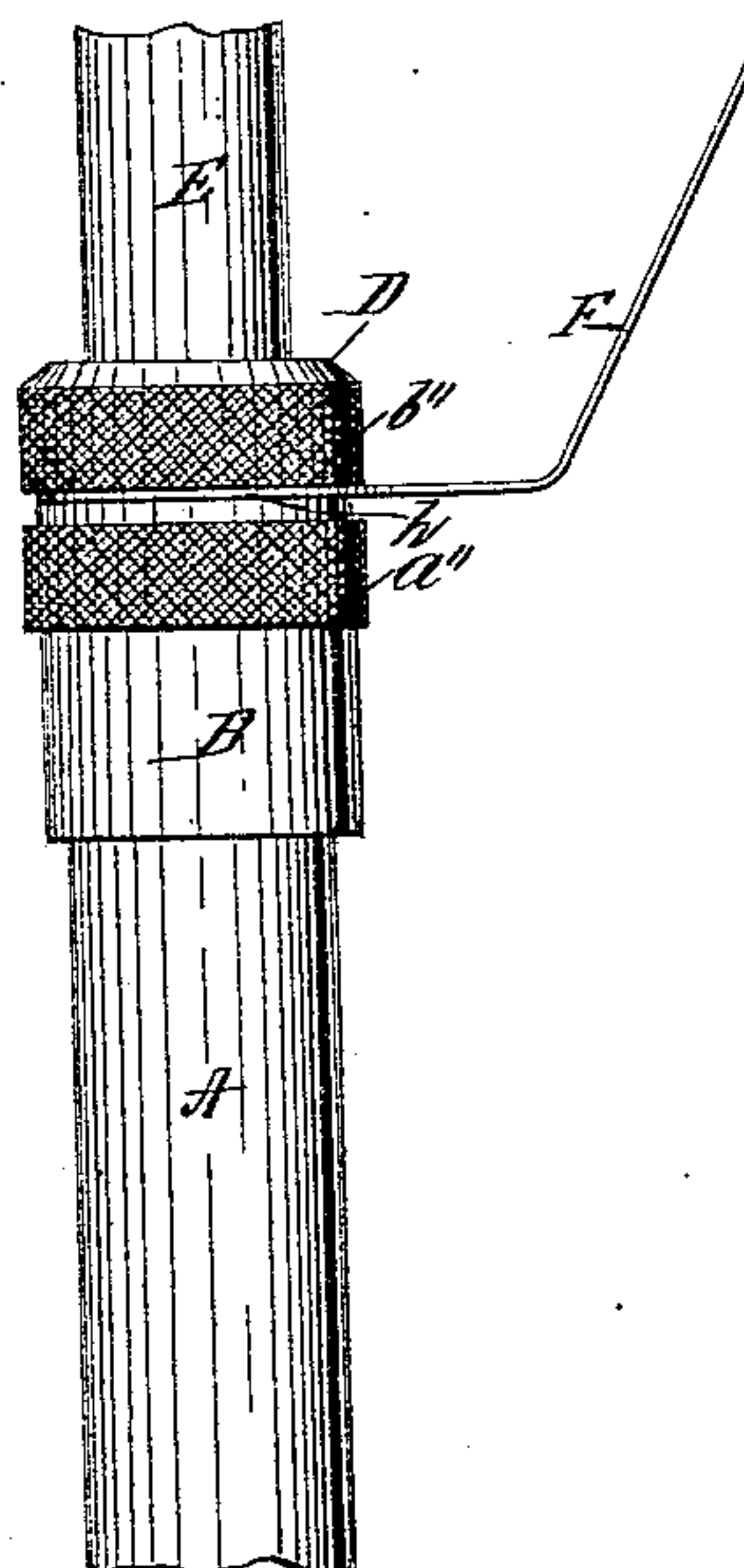
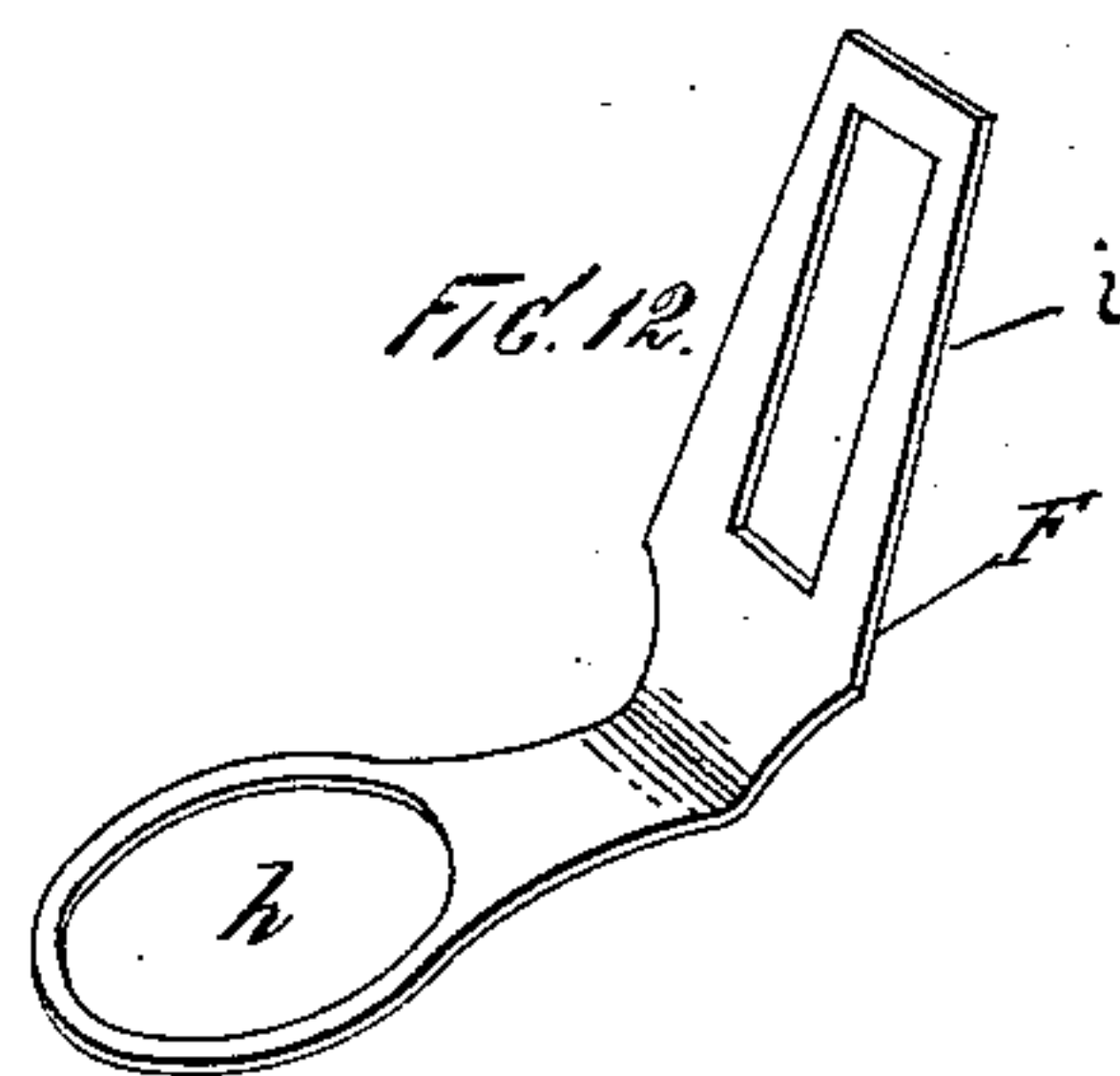


FIG. 12.



Witnesses:
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UNITED STATES PATENT OFFICE.

ARCHIBALD KENT, OF BROOKLYN, NEW YORK.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 559,943, dated May 12, 1896.

Application filed November 14, 1894. Serial No. 528,756. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD KENT, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Bicycles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figures 1 to 5, inclusive, are longitudinal sectional views, and Figs. 6 to 10, inclusive, transverse sectional detail and separate views, of certain parts of an apparatus made according to my invention. Fig. 11 is a longitudinal view showing the said parts as put together and conjoined as in my invention. Fig. 12 is a perspective view of an additional element which enters into another combination of parts also embraced in my said invention, and Fig. 13 is a side view showing the manner of thus combining this additional element with the others.

In bicycles as usually constructed the lower part of the handle-bar is attached to the upper part of the fork by a divided collar, the lugs of which project laterally or radially and which are tightened toward each other by means of a set-screw. This abrupt deviation from the cylindrical contour of the parts is unsightly and detracts materially from the finished and symmetrical appearance which the handle-bar and fork would otherwise possess, and which is desirable in high-grade articles of this class.

The object of this invention is to obviate this drawback to the pleasing and elegant appearance of the bicycle at this portion of its structure.

A further object of the invention is to provide a novel and convenient means for holding a lantern in due relation with the handle-bar and fork.

My said invention comprises certain new and useful combinations of parts whereby these objects are effectually secured.

A is the upper part of a bicycle-fork, the latter of any ordinary or suitable structure. The upper end of this is internally tapered, as shown more clearly at *a* in the section in Fig. 5. Below this is an external screw-thread *b*.

B is a tubular nut provided with an internal screw-thread *c*, which is adapted to receive the screw-thread *b*, just hereinbefore referred to. Above this internal screw-thread *c* is an annular shoulder *d*, and upward beyond this projects a flange *e*, upon which is an external screw-thread *a'*. The shoulder *d* so narrows the diameter that the internal diameter of the flange is less than that of the other portions of the nut.

C is a tapering bushing or annular wedge, which is divided lengthwise at one or more places along its circumference, as shown at *b'*, so that it may be made to radially expand and contract, as hereinafter more fully set forth, and around its upper or larger end is a circumferential shoulder *c'*.

D is a cap which has a circular opening *d'* at its center, and which has also an internal screw-thread *e'*.

E is the lower part of the handle-bar of a bicycle. This handle-bar may be of any ordinary or suitable structure, so long as its said lower end is cylindrical and of a size duly proportioned to the parts with which in my invention it is designed to cooperate.

In putting the devices together the part E of the handle-bar may be thrust through the opening *d'* of the cap D, so that the latter may afterward be conveniently screwed home to its place, as hereinafter described. The annular bushing C is slipped upon the said part E and is then inserted in the upper part of the nut B, and the screw-thread *e'* of the cap D is then screwed down upon the screw-thread *a'* of the nut, thus binding the flange *c'* of the tapering bushing between the inner end of the cap and the adjacent end of the nut, thereby holding the bushing in a fixed position with reference to the nut, the cap, and the handle-bar, with a space *c''* (shown more clearly in Fig. 11) between the outer circumference of the bushing and the inner circumference of the nut. The thread *b* of the fork A is then screwed into the thread *c* of the nut B, with its plain extremity *g* extended into the space *c''* just mentioned, and with its internal tapering surface *a* surrounding and in contact with the correspondingly-tapered outer surface of the bushing C. As the thread *b* is screwed home to its place within the thread *c* its tapering surface *g* acts upon the

tapering outer surface of the bushing, and as it is forced toward the larger end thereof crowds and binds it firmly upon the cylindrical surface of the handle-bar E. As the inner surface of the bushing, which grips the cylindrical surface of the handle-bar, is considerable its grip or frictional hold upon the handle-bar is very great, and as the tapered surface *g* of the fork, which is in contact with the tapering surface of the bushing, acts thereon with a wedge-like action it follows that it not only compresses the bushing upon the handle-bar, but is itself firmly impacted against the surface of the bushing, so that the frictional hold of the bushing upon the handle-bar and of the fork upon the bushing is sufficient to resist any tendency on the part of the handle-bar to turn with reference to the fork, or vice versa, thereby insuring the proper connection of the handle-bar to the fork and the desired operation of the latter by the former without liability of slipping. When it is desired to separate the handle-bar from the fork, it is only necessary to turn the nut in a reverse direction to relieve the grip of the taper *g* upon the taper of the bushing and of the latter upon the handle-bar.

Referring now to Figs. 12 and 13, F is a bracket made preferably of stiff sheet metal and having at one end an annulus *h*, which is fitted upon the flange *e* of the nut, and at the other a suitable arm *i*, which may be slotted or otherwise constructed to receive any appropriate lantern-fastening. The cap D being screwed upon the nut as hereinbefore explained the annulus is snugly confined between the adjacent surface of the nut and cap, and this holds the bracket in position, so that by means of the same combination of devices by which I connect in operative relation with each other the handle-bar and the fork I also provide for the retention in proper position

with reference to said parts of the lantern-bracket. The nut B and the cap D may each be provided with a milled outer surface, (indicated at *a''* and *b''*, respectively,) by which they may be conveniently turned in putting the parts together or in taking them apart.

It will be noticed that as the joining devices are covered by the nut, which is of a simple circular or cylindrical contour, there is no unsightly excrescence or projection to mar the symmetry of the apparatus, and the weight, as compared with the means heretofore in use for joining the handle-bar and fork, is very materially reduced.

What I claim as my invention is—

1. The combination with the fork, A, having the external screw-thread, *b*, and handle-bar, E, of the nut, B, having the internal screw-thread, *c*, and external screw-thread, *a'*, the longitudinally-divided tapering bushing, C, having the flange, *c'*, and the internally-screw-threaded cap, D, having the opening, *d'*, the whole constructed for joint use and operation, substantially as and for the purpose herein set forth.

2. The combination with the fork, A, having the external screw-thread, *b*, and handle-bar, E, of the nut, B, having the internal screw-thread, *c*, and external screw-thread, *a'*, the longitudinally-divided tapering bushing, C, having the flange, *c'*, the internally-screw-threaded cap, D, having the opening, *d'*, and the bracket, F, having at one end the annulus, *h*, confined between the nut, and the cap the whole constructed for joint use and operation, substantially as and for the purpose herein set forth.

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Witnesses:

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