

No. 652,956.

Patented July 3, 1900.

E. FAHLSTROM & F. W. LUSEBRINK.
HANDLE BAR AND SEAT POST BINDER.

(Application filed Oct. 16, 1899.)

(No Model.)

Fig. 1.

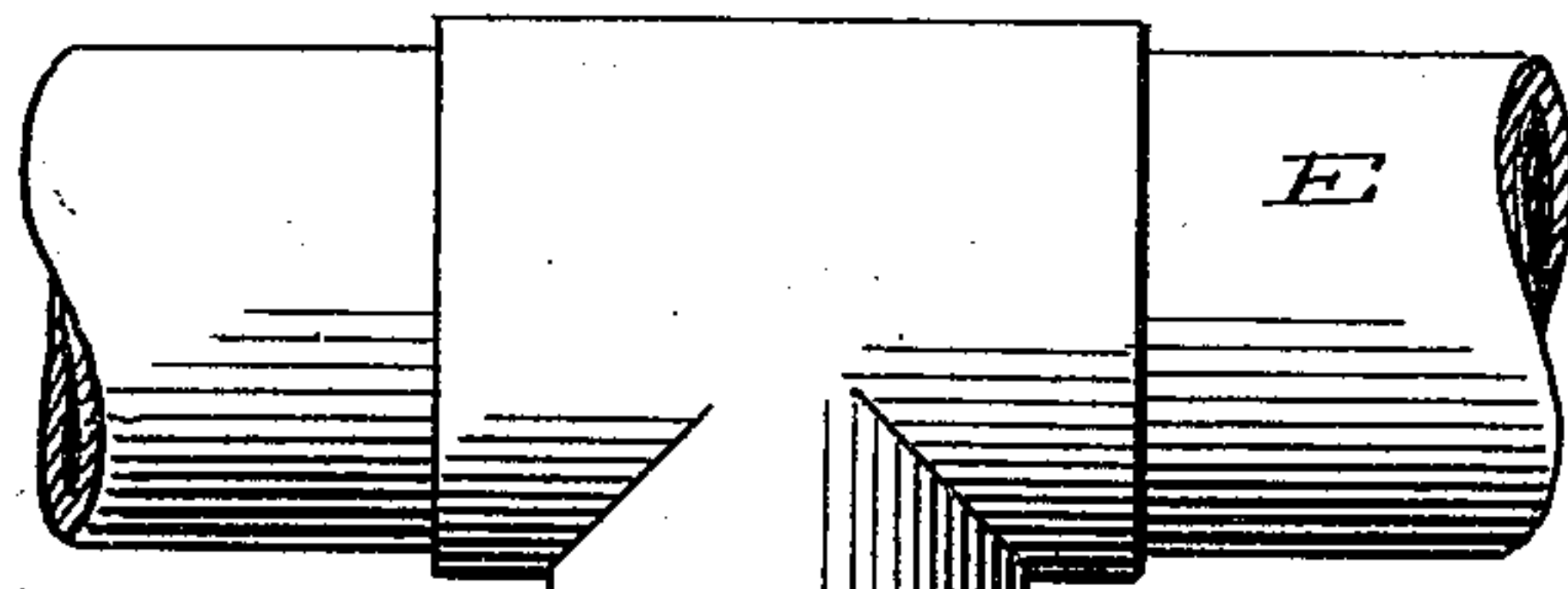


Fig. 2.

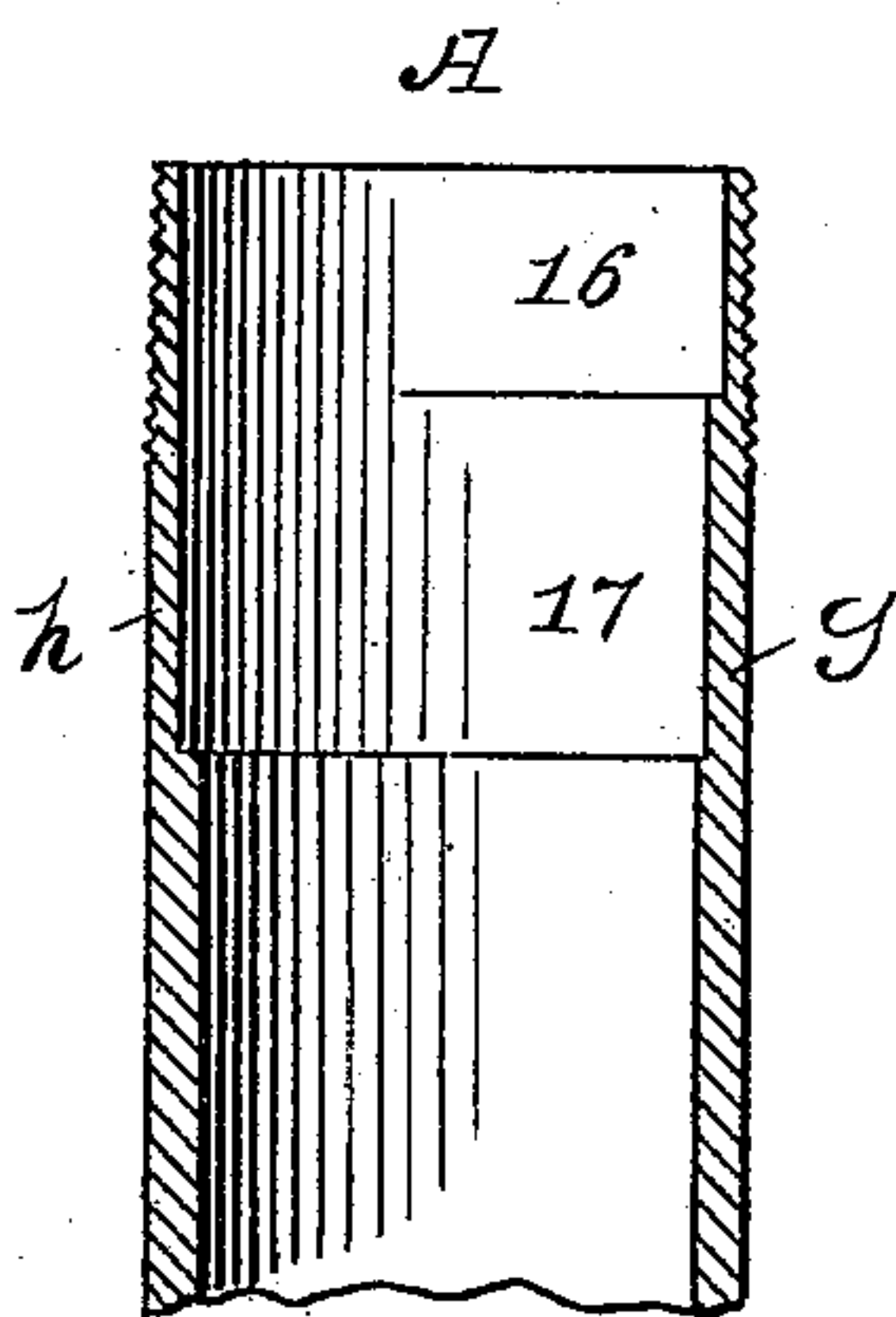


Fig. 3.

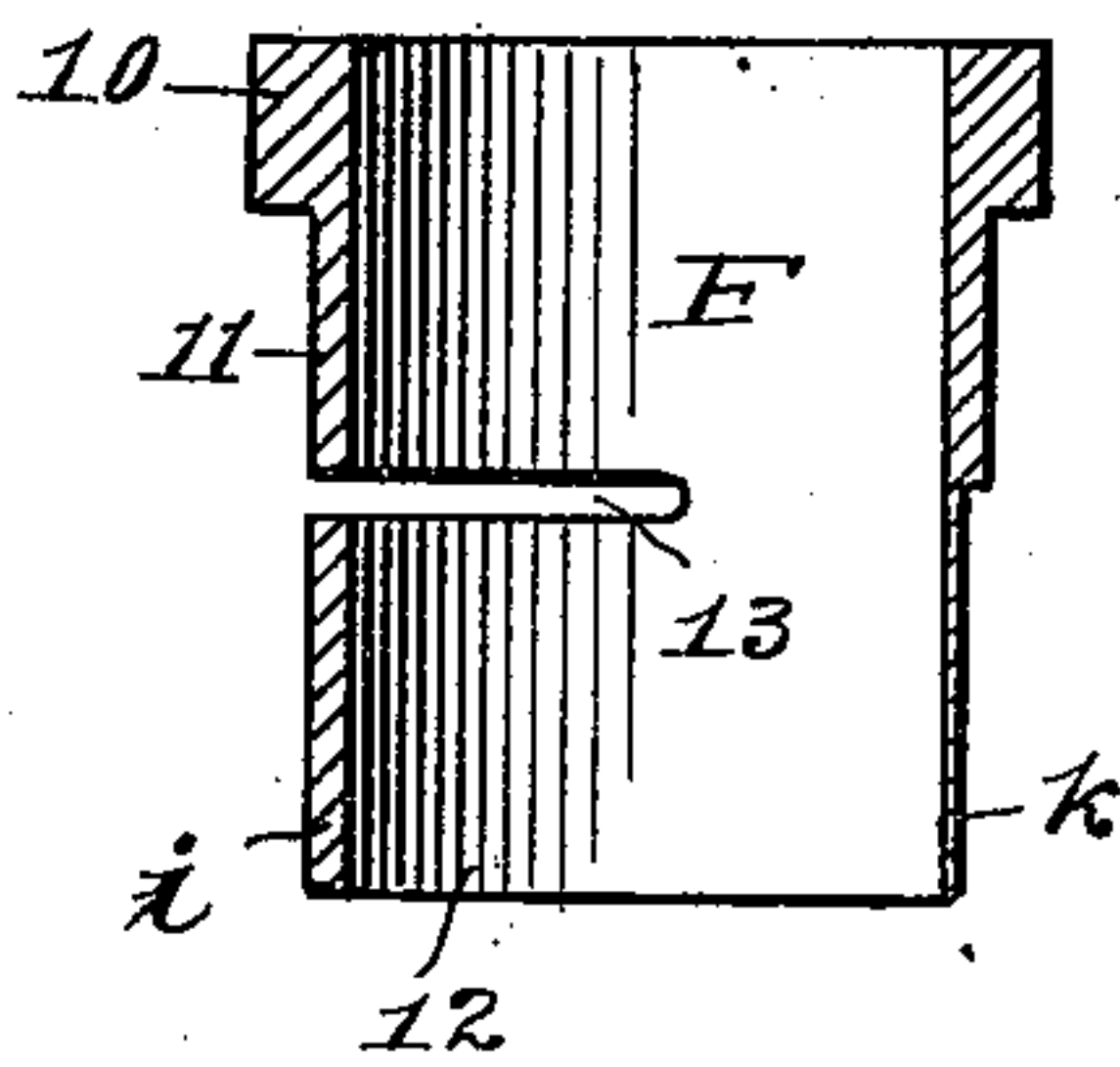


Fig. 4.

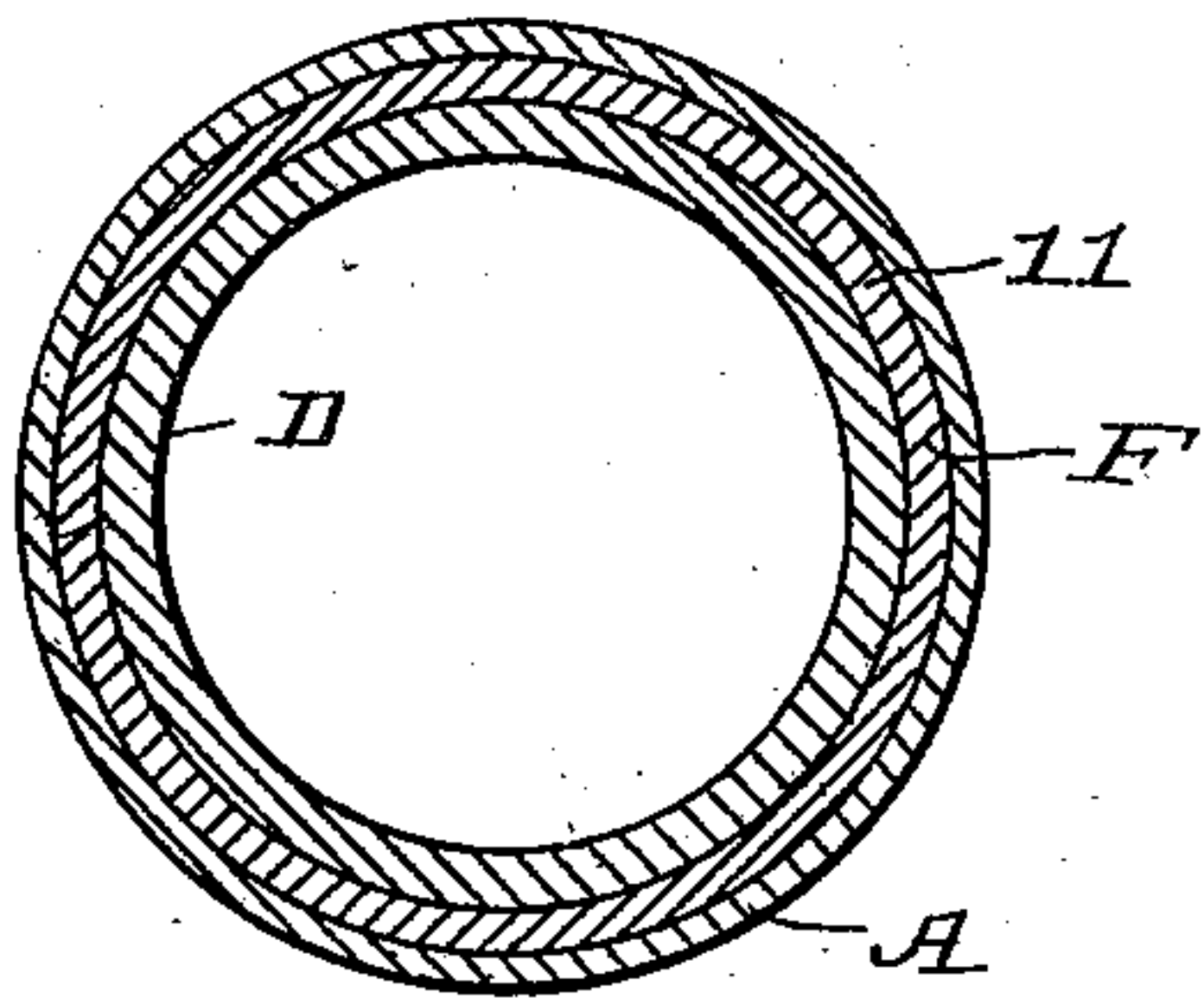


Fig. 5.

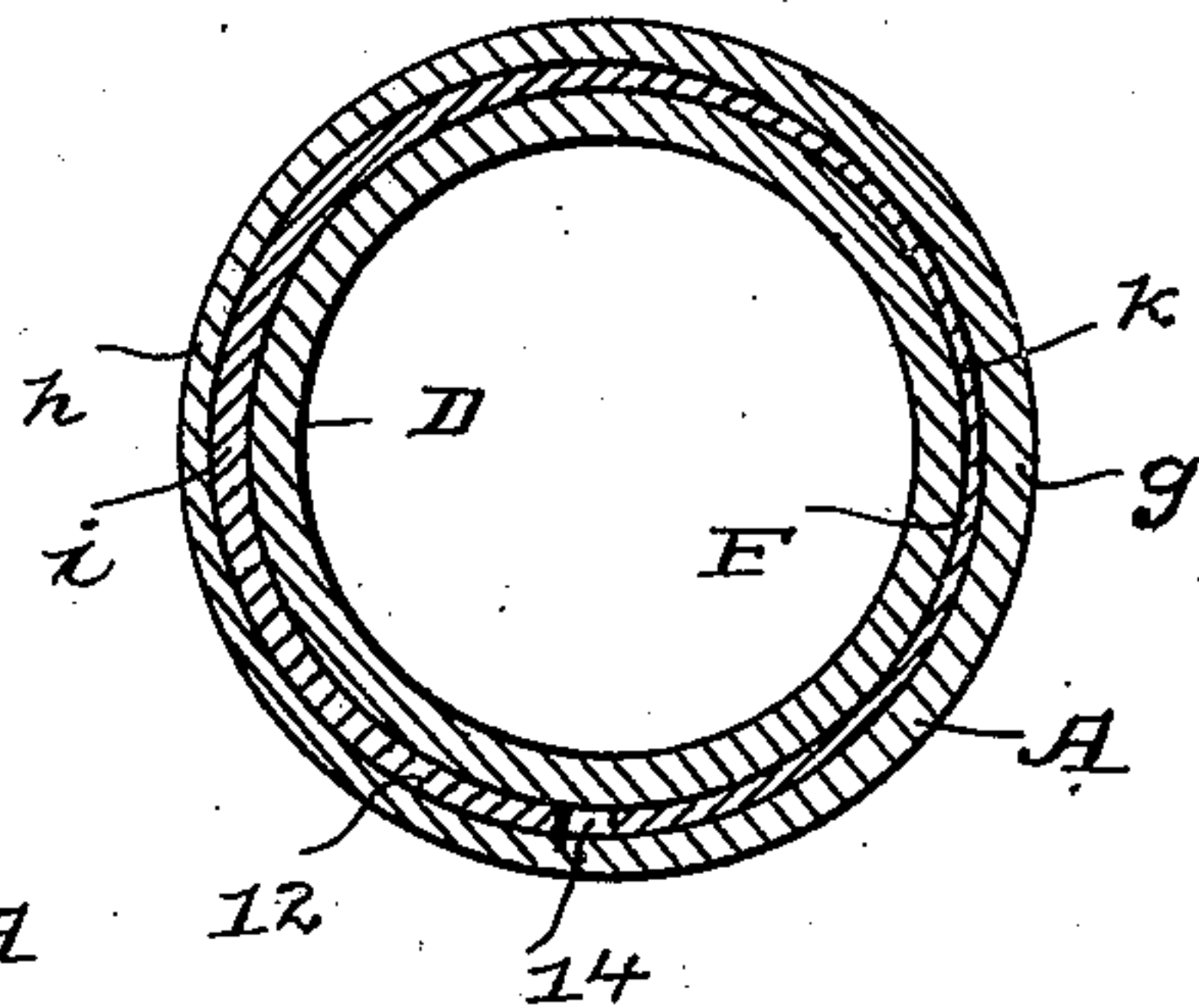
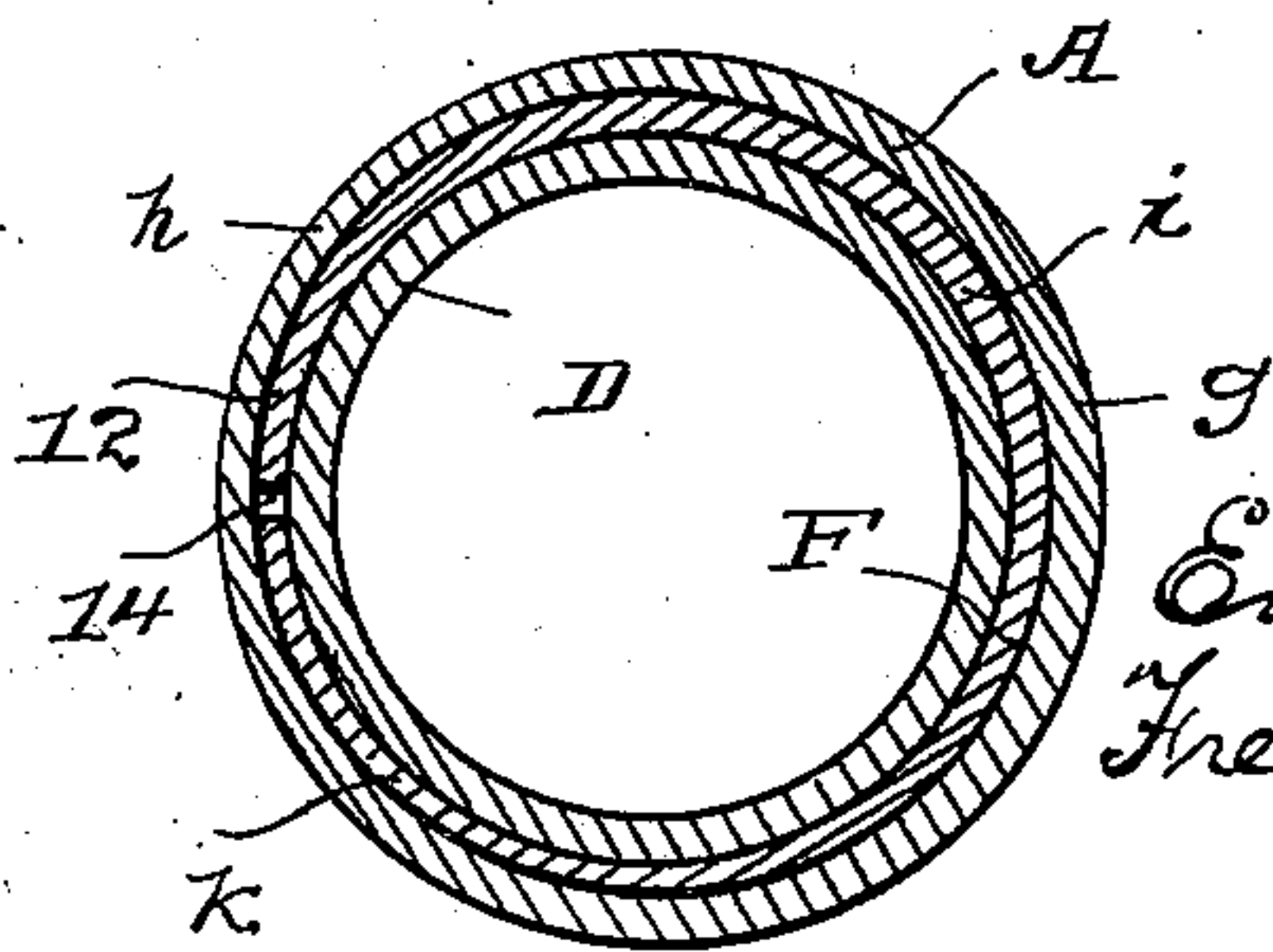


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

EMIL FAHLSTROM AND FREDERICK W. LUSEBRINK, OF BRIDGEPORT,
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HANDLE-BAR AND SEAT POST BINDER.

SPECIFICATION forming part of Letters Patent No. 652,956, dated July 3, 1900.

Application filed October 16, 1899. Serial No. 733,728. (No model.)

To all whom it may concern:

Be it known that we, EMIL FAHLSTROM and FREDERICK W. LUSEBRINK, citizens of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Handle-Bar and Seat Post Binder, of which the following is a specification.

Our invention has for its object to provide a binder for handle-bar posts and seat-posts of cycles which shall be simple and inexpensive to produce, quick and easy to operate, will hold seat-posts and handle-bar posts with perfect rigidity and certainty, and which will do away with the various unsightly clamps and other exterior holding devices now upon the market, a narrow collar through which the post passes being the only portion of our novel binder that is in sight. In order to accomplish the desired result, we have devised the novel eccentric binder, of which the following description, in connection with the accompanying drawings, is a specification, reference characters being used to designate the several parts.

Figure 1 is a vertical section of the upper portion of a cycle-head, illustrating the application thereto of our novel binder, the handle-bar post and the binding-sleeve being in elevation; Fig. 2, a section of the upper end of the fork-tube detached; Fig. 3, a section of the binding-sleeve detached; Fig. 4, a section, on an enlarged scale, on the line 4 4 in Fig. 1, the head being removed; Fig. 5, a section, on an enlarged scale, on the line 5 6 in Fig. 1, the head being removed and the binding-sleeve in the unlocking position; and Fig. 6 is a similar view, the binding-sleeve having been turned to the locking position.

A denotes a tube, which may be either the fork-tube or the seat-post tube of a cycle; B, a cycle-head; C, the parts which together comprise the upper ball-bearing; D, a handle-bar post, and E a handle-bar. All of these parts, with the exception of the tube, (in the present instance a fork-tube,) may be of any ordinary or preferred construction.

For convenience in description we shall speak of the fork-tube as the "tube" and the handle-bar post as the "post."

F denotes the binding-sleeve as a whole.

This binding-sleeve comprises a collar 10, which is adapted to rest upon the top of the tube and may be made angular to receive a wrench or provided with one or more holes 15 to receive a pin or spanner for the purpose of oscillating the sleeve, below said collar a circular portion 11, which in use lies within the tube, and below portion 11 a spring-eccentric 12, said spring-eccentric being in the present instance integral with the collar and portion 11, and being formed by means of a horizontal slot 13, and at one end of said horizontal slot a vertical slot 14. At the upper end of the tube is a circular internal recess 16, which receives portion 11 of the binding-sleeve freely, and below recess 16 is an eccentric recess 17, which receives the spring-eccentric 12 of the binding-sleeve. In the drawings we have indicated the relatively-thick portion of the wall of eccentric recess 17 by *g*, the relatively-thin portion of the wall of said recess by *h*, the relatively-thick portion of spring-eccentric 12 by *i*, and the relatively-thin portion of spring-eccentric 12 by *k*.

In use the binding-sleeve is inserted in the tube with the spring-eccentric in approximately the position relative to the eccentric recess which we have indicated in Fig. 5—that is to say, the relatively-thick portion of the spring-eccentric lies contiguous to the relatively-thin portion of the wall of the eccentric recess, this being of course the unlocking position of the binding-sleeve. In this position of the parts the post may be readily inserted and when at the desired height may be readily locked there by a rotary movement—for example, a quarter-turn—of the binding-sleeve, the operator applying a suitable tool to collar 10 and giving the binding-sleeve a positive movement in the locking direction. The effect of this movement of the binding-sleeve is to place the relatively-thick portion of the spring-eccentric in engagement with the relatively-thick portion of the wall of the eccentric recess in the tube, and thereby clamp the spring-eccentric upon the post, vertical slot 14 in the binding-sleeve being partially closed, as will be seen by comparison of Fig. 6 of the drawings with Fig. 5. To release the post for the purpose of removal or adjustment, it is sim-

ply necessary to apply a pin, spanner, or wrench and impart a backward movement to the binding-sleeve sufficient to release the grip of the spring-eccentric upon the post. 5 It will thus be seen that a slight oscillation of the binding-sleeve—for example, a quarter-turn in either direction—is the only movement required to lock or release the post. The device is thus very quick in its action to 10 either bind or release and locks the post with perfect rigidity, for the reason that the frictional contact of the spring-eccentric with the post extends entirely around the latter, with the exception of the slight width of the 15 vertical slot.

Having thus described our invention, we claim—

1. The combination with a tube having at its upper end a circular recess and below said 20 circular recess an eccentric recess, of a binding-sleeve having a circular portion corresponding with the circular recess and a spring-eccentric corresponding with the eccentric recess substantially as shown, for the purpose 25 specified.

2. The combination with a tube having at its upper end a circular recess and below said circular recess an eccentric recess, of a binding-sleeve having a circular portion adapted 30 to lie within the circular recess, a spring-eccentric adapted to lie within the eccentric recess and a collar adapted to engage the top

of the tube whereby the sleeve may be oscillated to lock or release a post.

3. The combination with a tube having at 35 its upper end a circular recess and below said circular recess an eccentric recess, of a binding-sleeve having a circular portion adapted to engage the circular recess and below said circular portion an eccentric portion having 40 horizontal and vertical slots to impart spring action, said eccentric portion being adapted to lie in the eccentric recess, the relatively-thick portion of the spring-eccentric corresponding with the relatively-thin portion of 45 the wall of the recess so that when the binding-sleeve is oscillated the spring-eccentric will be compressed and will bind a post.

4. The binding-sleeve F having a circular portion 11, eccentric portion 12 and slots 13 50 and 14 substantially as shown, for the purpose specified.

5. The binding-sleeve F having collar 10 with hole 15, circular portion 11, eccentric portion 12 and slots 13 and 14 substantially 55 as shown, for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

EMIL FAHLSTROM.

FREDERICK W. LUSEBRINK.

Witnesses:

A. N. WOOSTER,
S. W. ATHERTON.