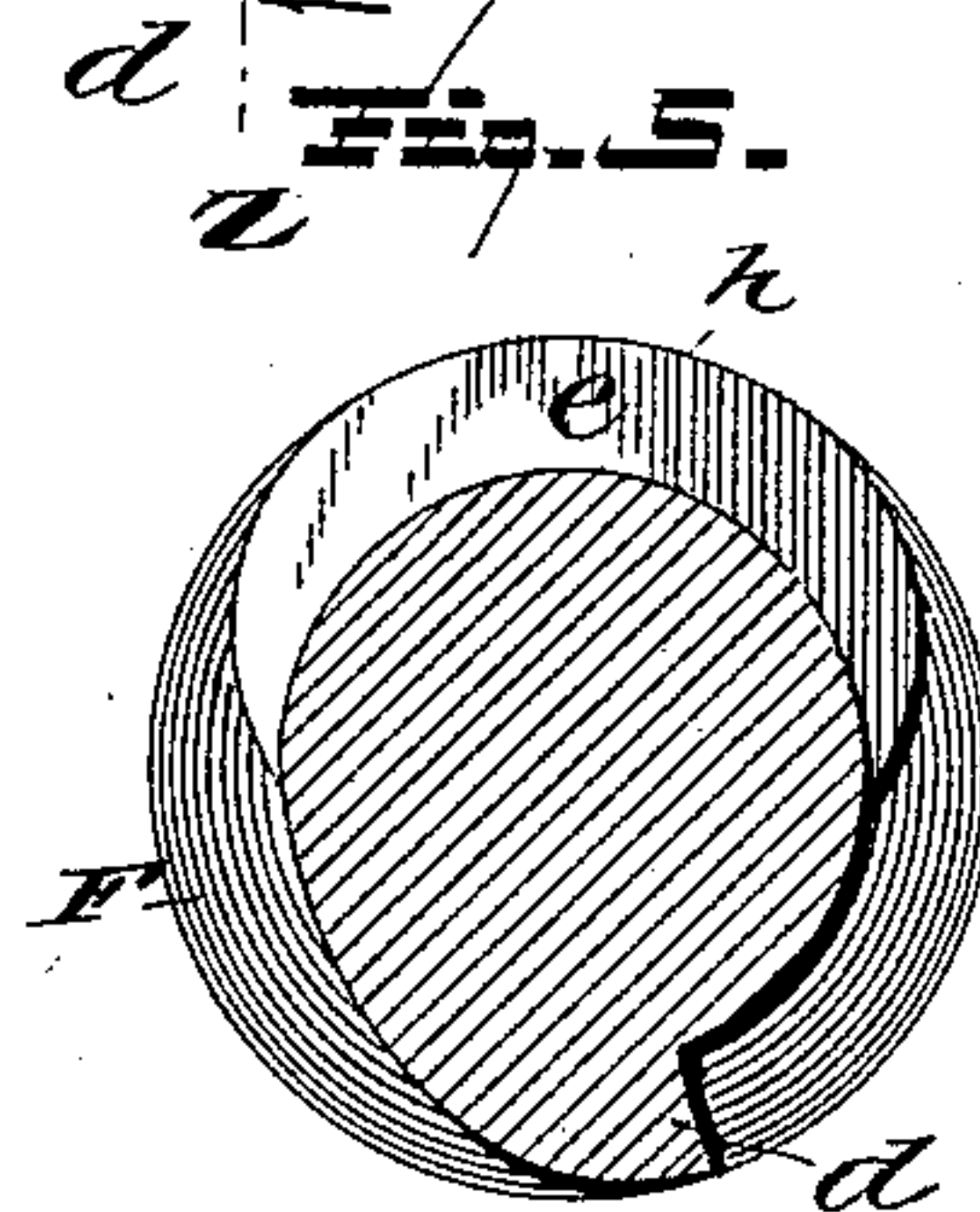
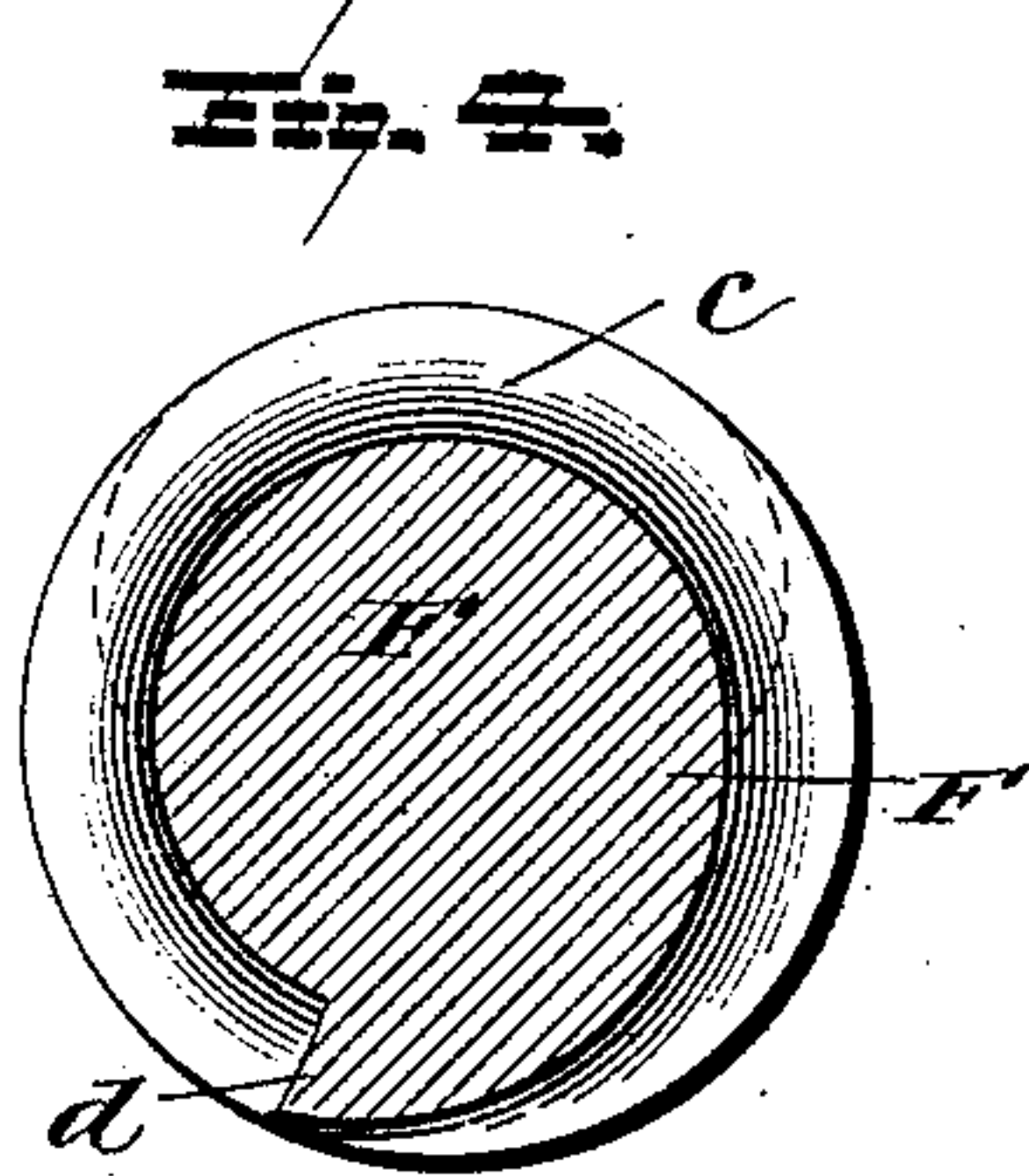
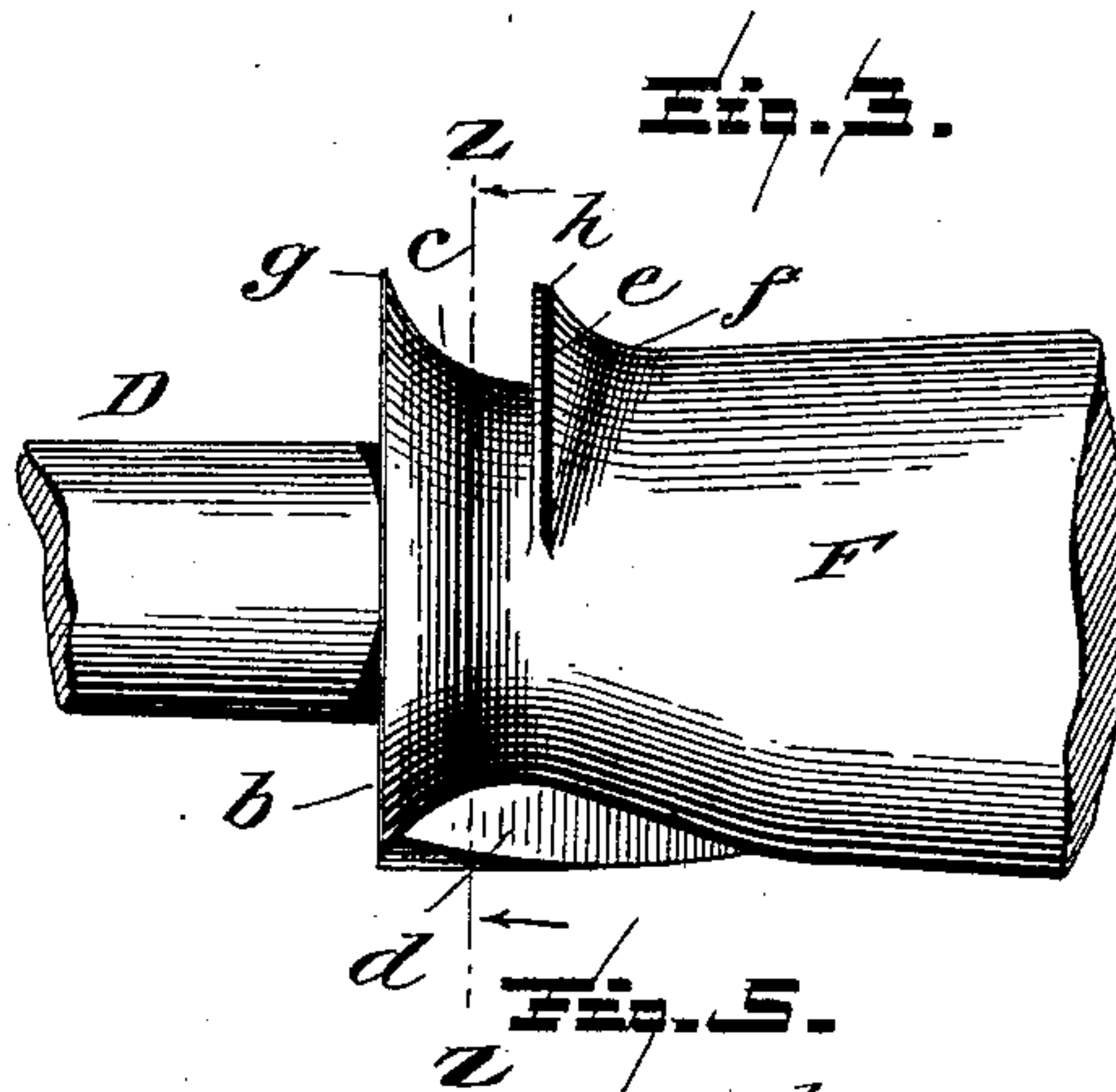
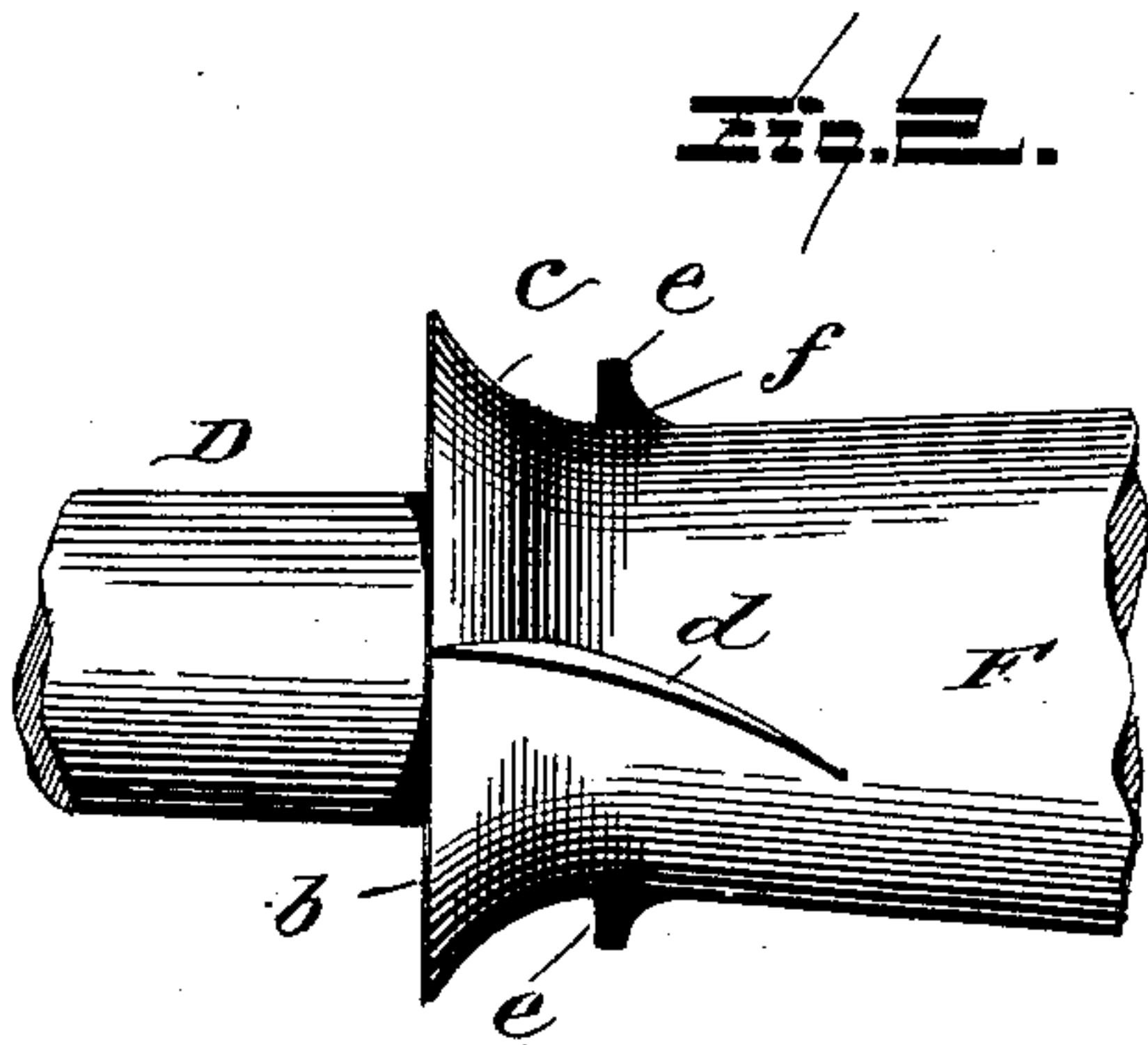
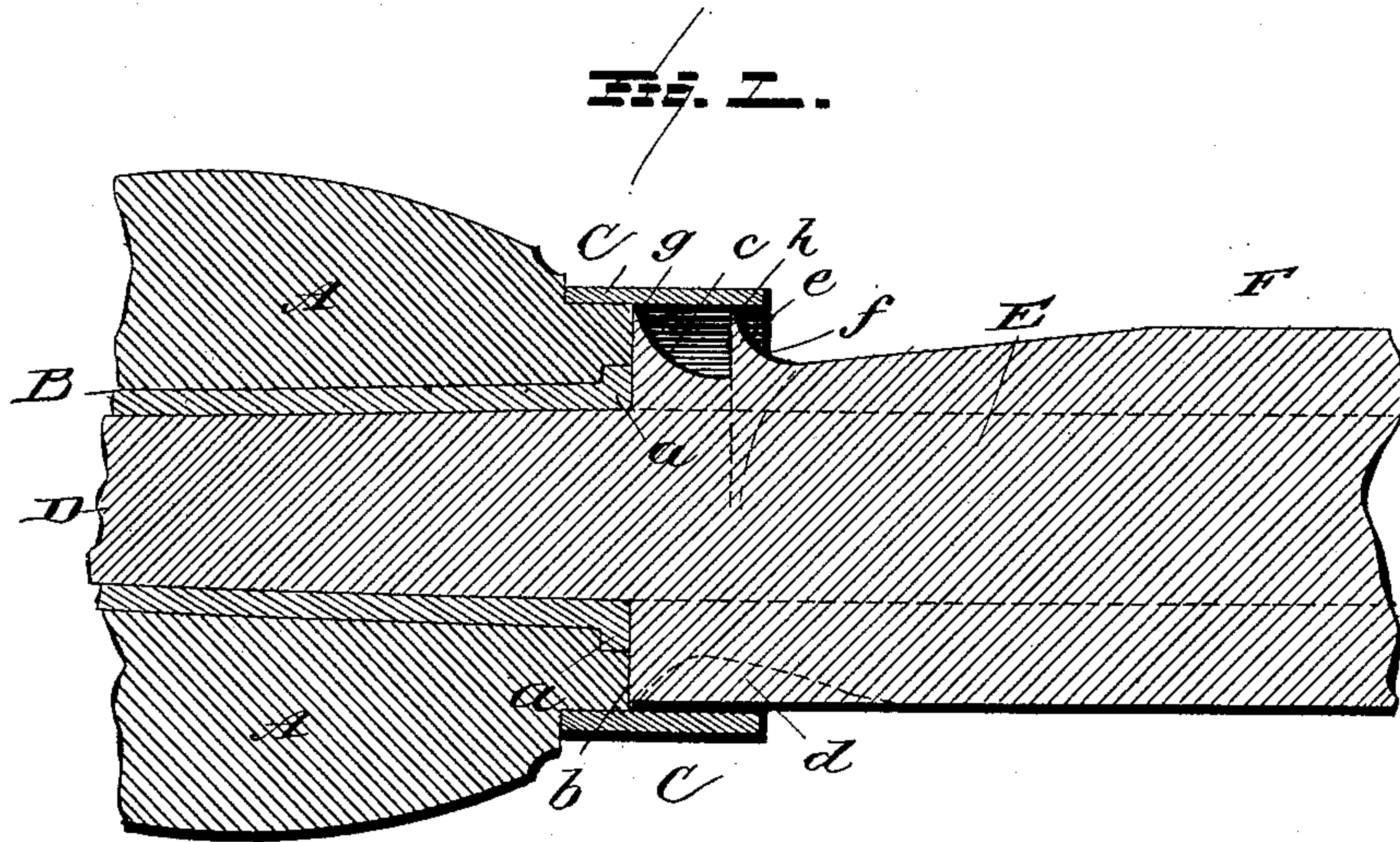


(No Model.)

J. P. WRIGHT.
SAND BAND FOR VEHICLES.

No. 435,472.

Patented Sept. 2, 1890.



Witnesses
L. C. Hills,
E. H. Bond.

Inventor
James P. Wright.
per Cha. N. Fowler,
Attorney

UNITED STATES PATENT OFFICE.

JAMES P. WRIGHT, OF REYNOLDS, INDIANA.

SAND-BAND FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 435,472, dated September 2, 1890.

Application filed June 28, 1890. Serial No. 357,052. (No model.)

To all whom it may concern:

Be it known that I, JAMES P. WRIGHT, a citizen of the United States, residing at Reynolds, in the county of White and State of Indiana, have invented certain new and useful Improvements in Vehicle Wheels and Axles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in vehicle wheels and axles; and it has for its object to provide a simple, cheap, and durable attachment which will serve to keep dirt and grit from contact with the spindle and remove any dirt or foreign substance from the hub-band.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a longitudinal section through a portion of a wheel hub and axle, showing my invention. Fig. 2 is a side elevation of a portion of the axle and attachment removed. Fig. 3 is a like view looking from the other side. Fig. 4 is a cross-section through the line *z z* of Fig. 3, looking in the direction of the arrow on the latter figure. Fig. 5 is a like view looking in the opposite direction.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a portion of a vehicle-hub of known construction; B, the sleeve formed at its inner end with an annular shoulder and flange *a*, seated in a correspondingly-shaped recess in the inner end of the hub, as shown in Fig. 1.

C is the metal band on the inner end of the hub, as shown in the same figure.

D is the spindle on the axle E and working in the sleeve in the usual manner, as shown.

F is a sleeve either integral with the axle or separate therefrom and having a bore through which the axle passes, as indicated

by dotted lines in Fig. 1. This sleeve fits within the band C, as shown in Fig. 1, and at its inner end is formed with a flat surface *b*, which bears against the inner end of the hub, as shown, and from this square shoulder or flat surface the sleeve is hollowed out on curved lines to form a recess or chamber *c*, which extends nearly around the sleeve, terminating at one end in a spiral or inclined lug *d*, which tapers toward the inner portion of the axle and extends across the said recess or channel, as shown best in Fig. 3. At the base of this channel or recess—that is, the inner side—the sleeve is formed with a square shoulder *e*, which extends for about one-half the circumference of the sleeve, as seen from Fig. 2, and the inner face thereof is hollowed out on curved lines, as shown at *f*, thus leaving two sharp points *g* and *h*, as seen from Figs. 1 and 3.

In practice the parts are arranged, as shown in Fig. 1, with the square shoulder *e* uppermost and the inclined lug *d* lowermost, and in the revolution of the wheel any dirt or foreign substance that may fall upon the sleeve is prevented from getting to the spindle by the peripheral projections, the curved surfaces serving to prevent accumulation of dirt on the sleeve and to throw the dirt outward from the band. Should any dirt perchance get past the first shoulder *e*, it will be scraped off by the inclined lug *d*, the point of which is sharp and inclined away from the band, so that as the dirt is scraped off it is at the same time conducted away from the band and spindle.

What I claim as new is—

1. An axle having a surrounding portion extending within the hub-band and formed with a peripheral channel terminating at an inclined lug which extends across said channel, substantially as specified.

2. An axle provided with a surrounding portion adapted to extend within the hub-band and formed upon its upper side with two separated projections and upon its under side with an inclined lug extending across the space between said projections, substantially as and for the purpose specified.

3. An axle provided with a surrounding portion adapted to extend within the hub-band

and formed at the end which is to extend within the band with two sharp-pointed projections, one of which extends nearly around the said portion and the other upon the upper half only, both projections being curved upon their inner faces, and an inclined spiral sharpened lug upon the under side extending across the space between the two projections, substantially as and for the purpose specified.

10 4. The combination, with the hub, its sleeve, and the hub-band, of the axle and the surrounding portion on the axle with one end extended within the hub-band and formed with a surrounding sharp projection at its outer end bearing against the inner end of the hub, and a sharp projection upon its upper face, and a sharpened inclined lug upon its under side extending across the space between the two projections and extending outside the hub-band, substantially as specified.

15 In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

20 JAMES P. WRIGHT.

Witnesses:
ALEX. S. STEUART,
G. M. COPENHAVER.