

No. 780,684.

PATENTED JAN. 24, 1905.

P. W. PRATT.

CHAIR TIP.

APPLICATION FILED MAR. 16, 1904,

FIG. 1\_

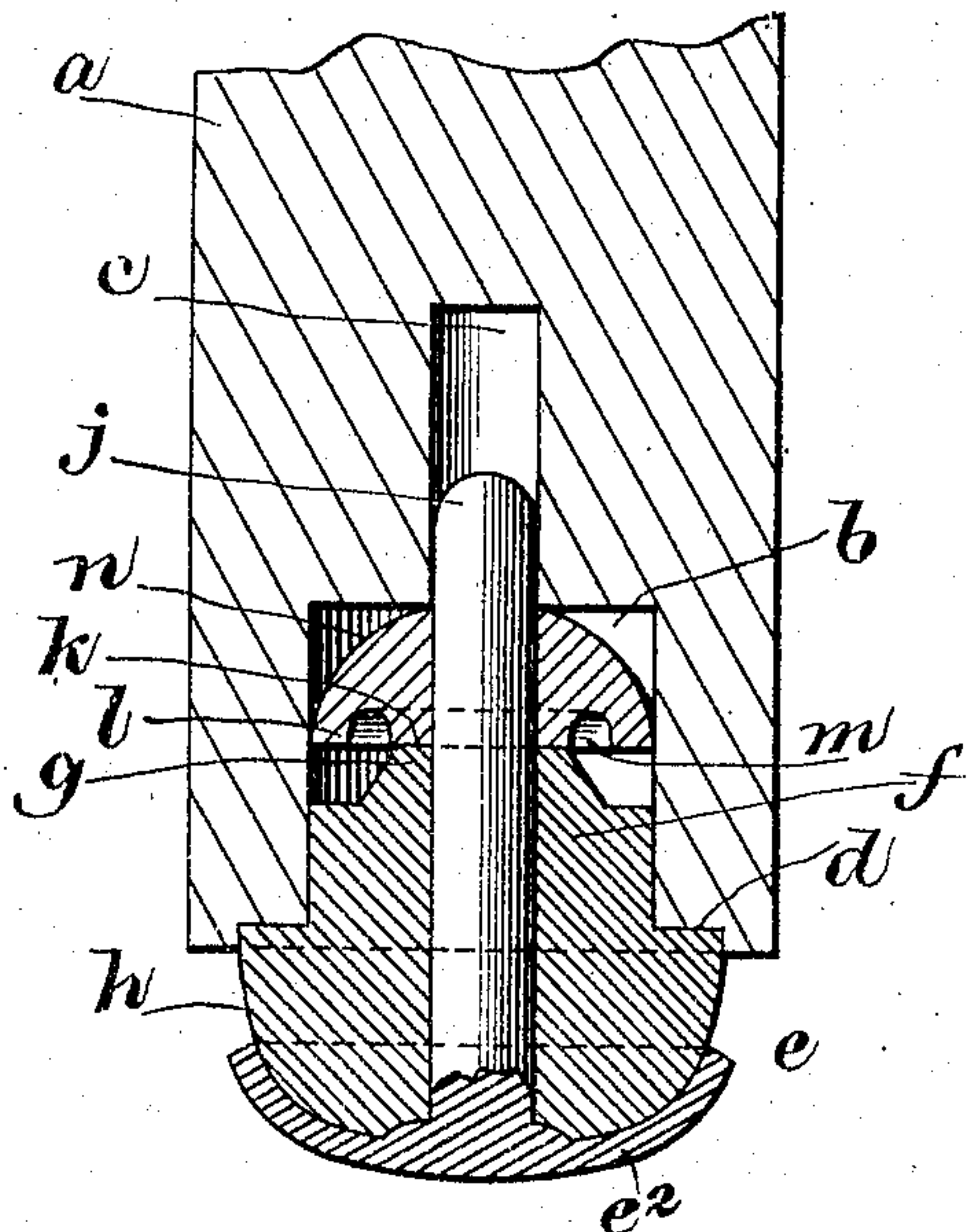


FIG. 3\_

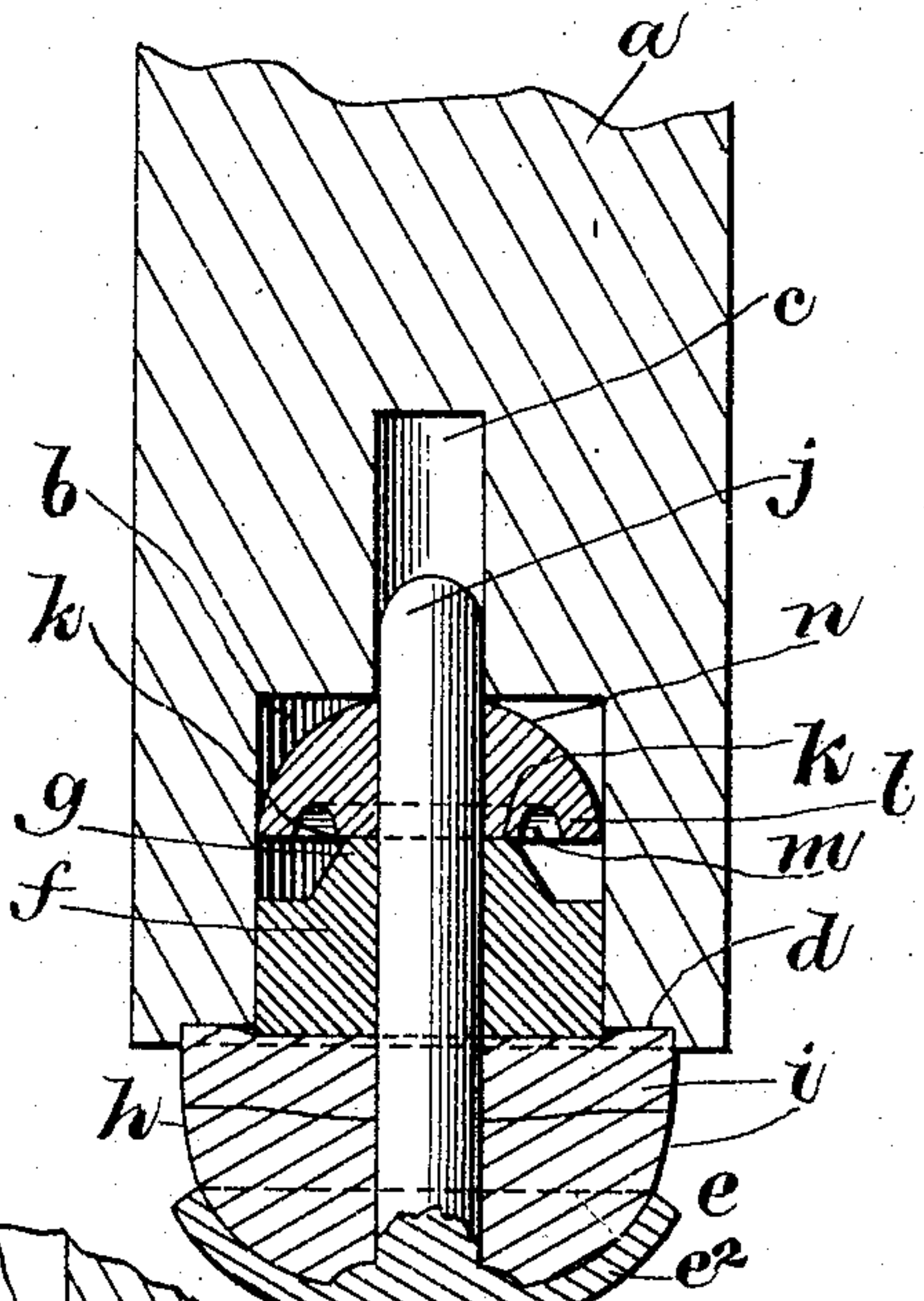
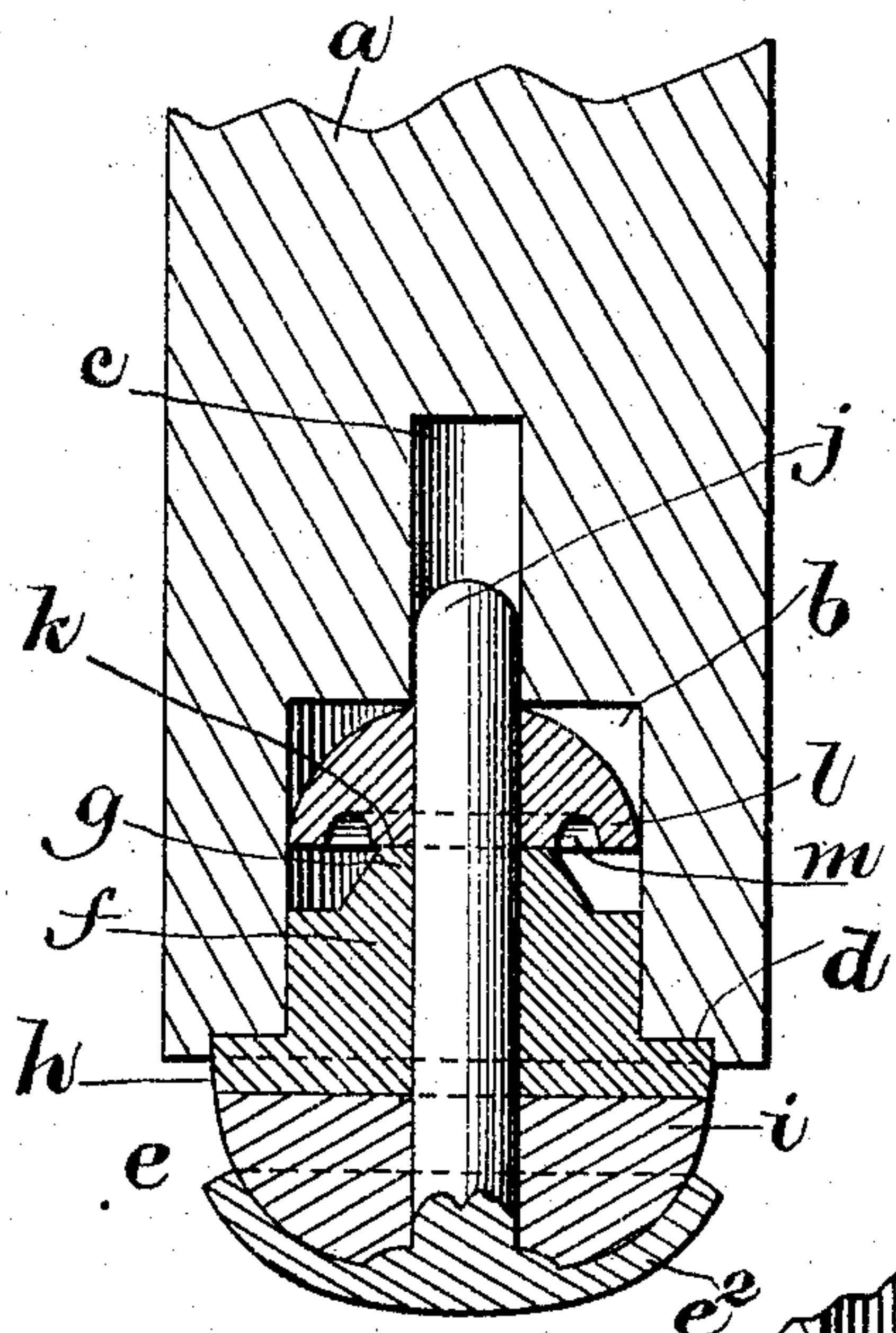
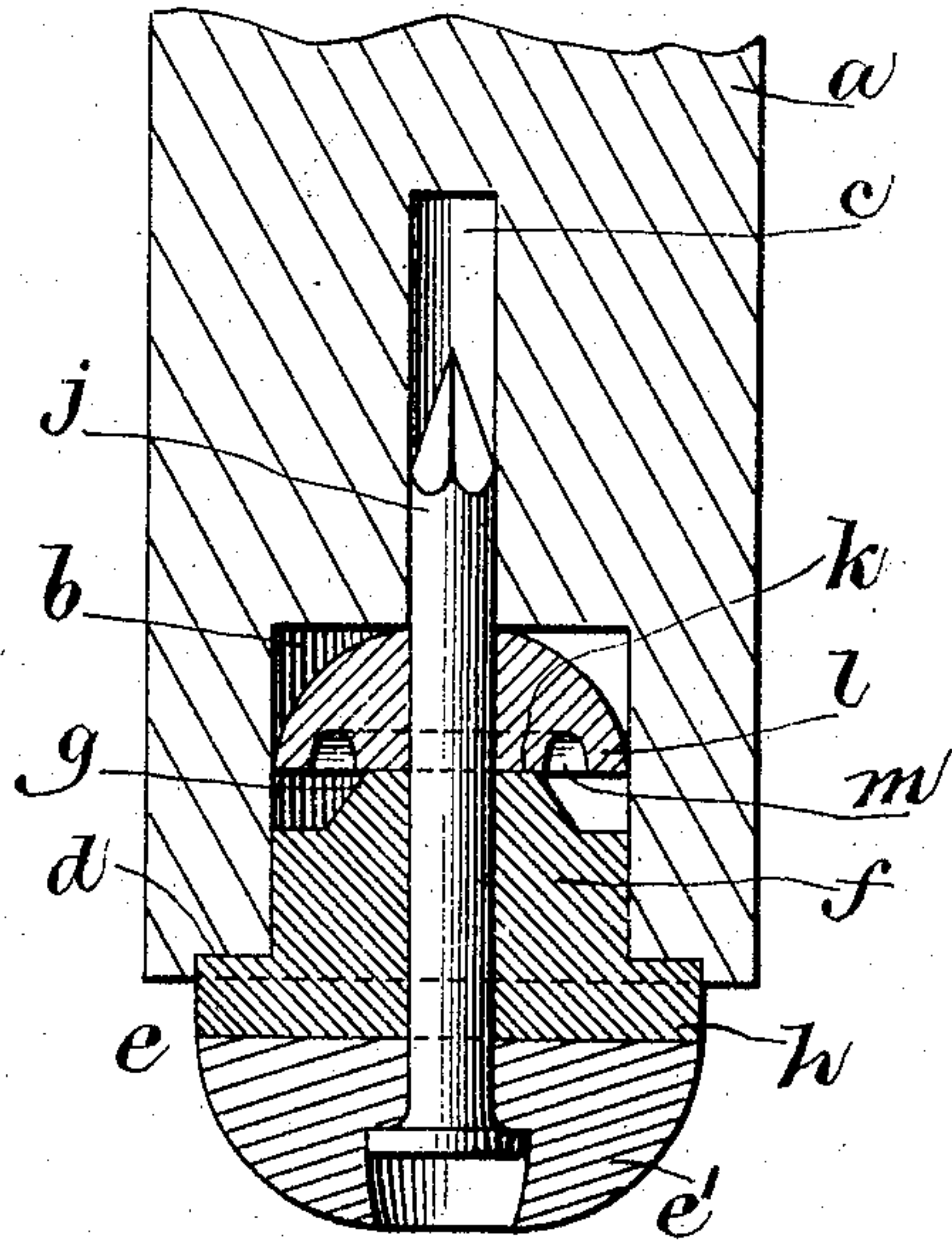


FIG. 2\_

FIG. 4\_

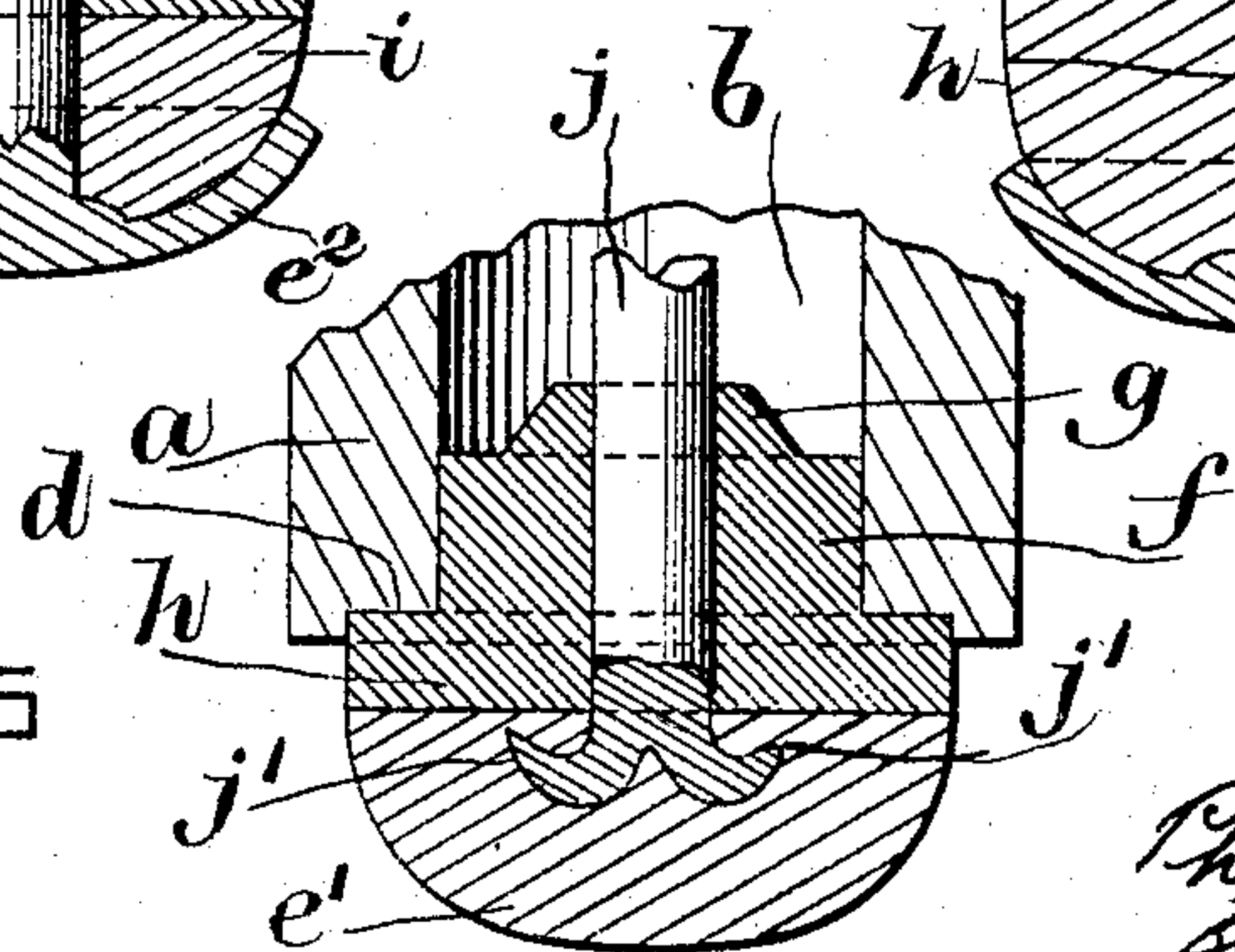


FIG. 5\_

WITNESSES

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# UNITED STATES PATENT OFFICE.

PHILIP W. PRATT, OF BOSTON, MASSACHUSETTS.

## CHAIR-TIP.

SPECIFICATION forming part of Letters Patent No. 780,684, dated January 24, 1905.

Application filed March 16, 1904. Serial No. 198,411.

*To all whom it may concern:*

Be it known that I, PHILIP W. PRATT, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Chair-Tips, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to chair-tips. The devices heretofore generally used for this purpose consist of a cushioned tip having a facing of leather or similar material or a cushioned tip with a metal facing having a rounded shape, so as to expose no angles or sharp projections that might scratch the surface of the floor. Such cushioned-tip facings have been fastened to the ends of the legs of chairs and other articles of furniture by various means, the patent to Scott, No. 698,288, showing a construction much used at the present time. It has been found, however, that the rough usage such articles receive may bend or loosen the fastening of the tip so it either does not cover the end of the chair-leg or perhaps may fall therefrom and also that as the leather facing becomes worn the head of the nail, which is at a fixed distance from the chair-leg, sometimes protrudes below the facing of the tip enough to injure the floor. Moreover, the space for the buffer or cushion to yield is insufficient for the best results.

The purpose of this invention is to obviate the faults above mentioned; and to this end the invention consists in attaching the cushion or buffer of the tip by a connection having a sliding or other variable union with the clutch-button, which is sunk into the chair-leg and adapted to resist forces acting to remove the button from the cavity of the chair-leg. The buffer being arranged to enter the cavity, loosely fitting the same, so it may guide and position the buffer on the end of the chair-leg and to provide greater resiliency for the tip, and in certain devices and their combinations to be referred to more particularly.

The drawings show in Figure 1 by a sectional view part of a chair-leg with my improvements applied thereto, and in Figs. 2, 3, 4, and 5 by similar views modified forms of the same.

The chair-leg *a* is bored to form the cavity

*b*, the small hole *c*, and the bearing-surface *d*. The tip consists of a buffer *e*, preferably made of india-rubber, which has an elongated body portion *f*, terminating in the apex *g*, and integral therewith is usually formed the head *h*, although sometimes the head is formed wholly or in part of felt *i*, as in Figs. 2 and 4. To protect the buffer at the floor-line, a wear-resisting facing of leather *e'* or metal *e''* is formed about the buffer and connected therewith by a stem *j*, passing through a hole in the buffer. The metal facing *e''* may be formed integrally with the stem *j*. The stem *j* may be an ordinary nail, as in the Scott device, or the stem may have prongs, as *j'*, which will spread when pushed into the facing, as appears in Fig. 5, and thus hold the facing to the stem. The tip thus formed is held to the chair-leg by a clutch-button, preferably made of india-rubber, very tightly fitted to the stem *j* of the buffer. A seat *k* is provided on the face of the button, against which the apex *g* of the buffer may rest, and a rim *l* is formed on the button by grooving the button at *m* or projecting the rim otherwise from the seat *k*. I have shown the button with a rounded portion *n* opposite the seat *k*. This is not, however, essential to the device, but merely a good form.

The chair-tip as above made is inserted in the cavity *b* of the chair-leg, the rim *l* bending backward as it enters sufficiently to allow this, and the parts may rest with the apex *g* on the seat *k*, the body *f* loosely fitting the cavity *b* and head *h* resting on the surface *d*. When pressure is applied to the chair-leg, the buffer *e* is compressed, and the stem *j* slides through the hole in the button farther up into the small hole *c*, in which it is a loose fit. Upon removal of the pressure the stem may slide backward through the button as the buffer recovers at intervals its shape. It will be noticed that this construction greatly increases the part of the cushion or buffer available for compression and that the body portion *f*, while preventing the buffer being pushed off the end of the chair-leg, acts to cushion all lateral stresses on the chair-leg.

Although the button offers little resistance to insertion in the cavity *b* of the chair-leg, it resists an attempt at removal, because such



action bends the rim *l* backward, and as the rim tightly fits the sides of the cavity at all times this bending of the rim clutches the button to the sides of the cavity, and as the stem  
5 *j* is frictionally fitted tightly to the hole of the button all parts of the buffer are secured to the button which is fast in the chair-leg.

Having described my invention, I claim and desire to secure by Letters Patent of the United  
10 States—

1. In a chair-tip, a clutch-button located in the cavity of a chair-leg, and a rim on the bottom resisting outward motion of the button, combined with a buffer loosely fitting the cavity of the chair-leg with its apex resting on  
15 the said button and its head protruding below the chair-leg, a facing for the buffer, and a stem connecting the buffer frictionally with the button to permit the buffer to yield to  
20 pressure on the chair-leg while retaining the buffer in position thereon, substantially as described.

2. In a chair-tip, a buffer resting on the chair-leg, a button in a cavity of the chair-leg, means to retain the button in the cavity, and  
25 a sliding connection between the button and buffer, permitting the buffer to respond to varying pressures on the chair-leg, but not to fall therefrom, substantially as described.

3. The combination of a chair-leg having  
30 in its lower end a cavity of uniform diameter and a similar cavity of smaller diameter at the end of the first-named cavity with an elastic button fitted tightly in the larger cavity, an elastic buffer abutting said button and a stem  
35 carried by said buffer and projecting through the button into the smaller cavity.

In testimony whereof I have hereunto subscribed my name this 26th day of February, A. D. 1904.

PHILIP W. PRATT.

Witnesses:

W. D. STEVENS,  
C. F. HOWE.