

No. 755,174.

PATENTED MAR. 22, 1904.

A. SCHAEFFER.
SAFETY FASTENER.

APPLICATION FILED APR. 12, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

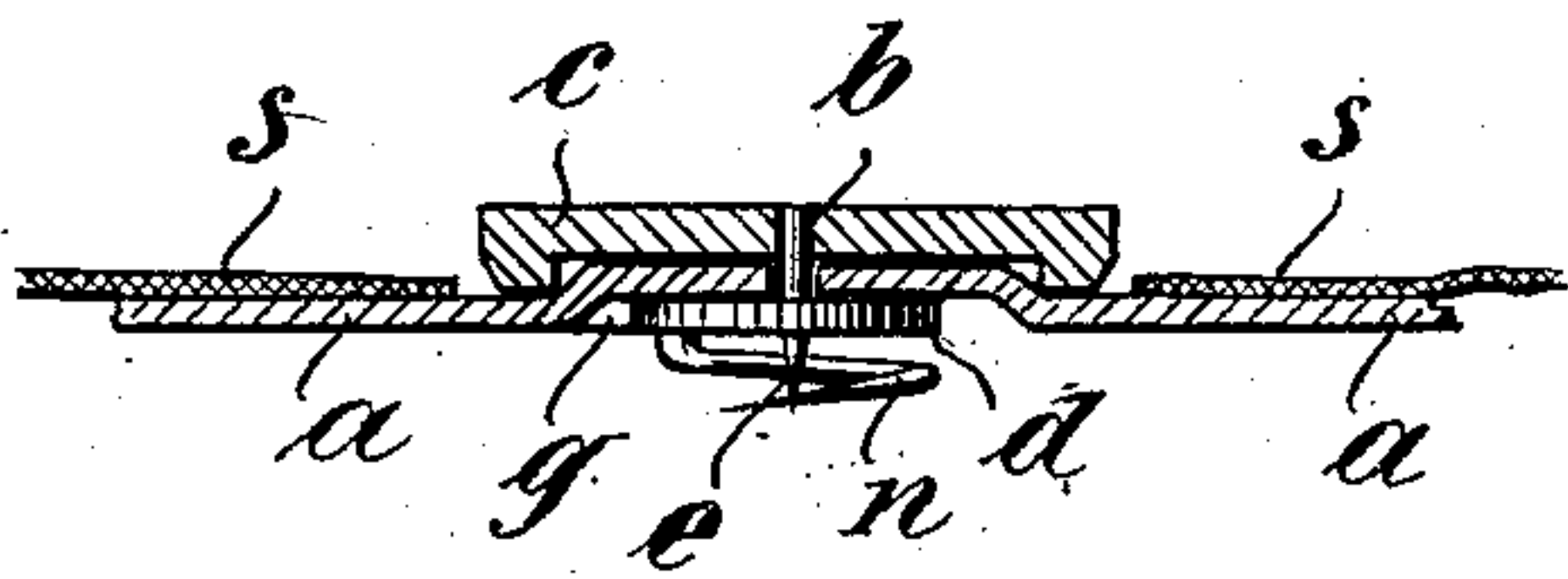


Fig. 3.

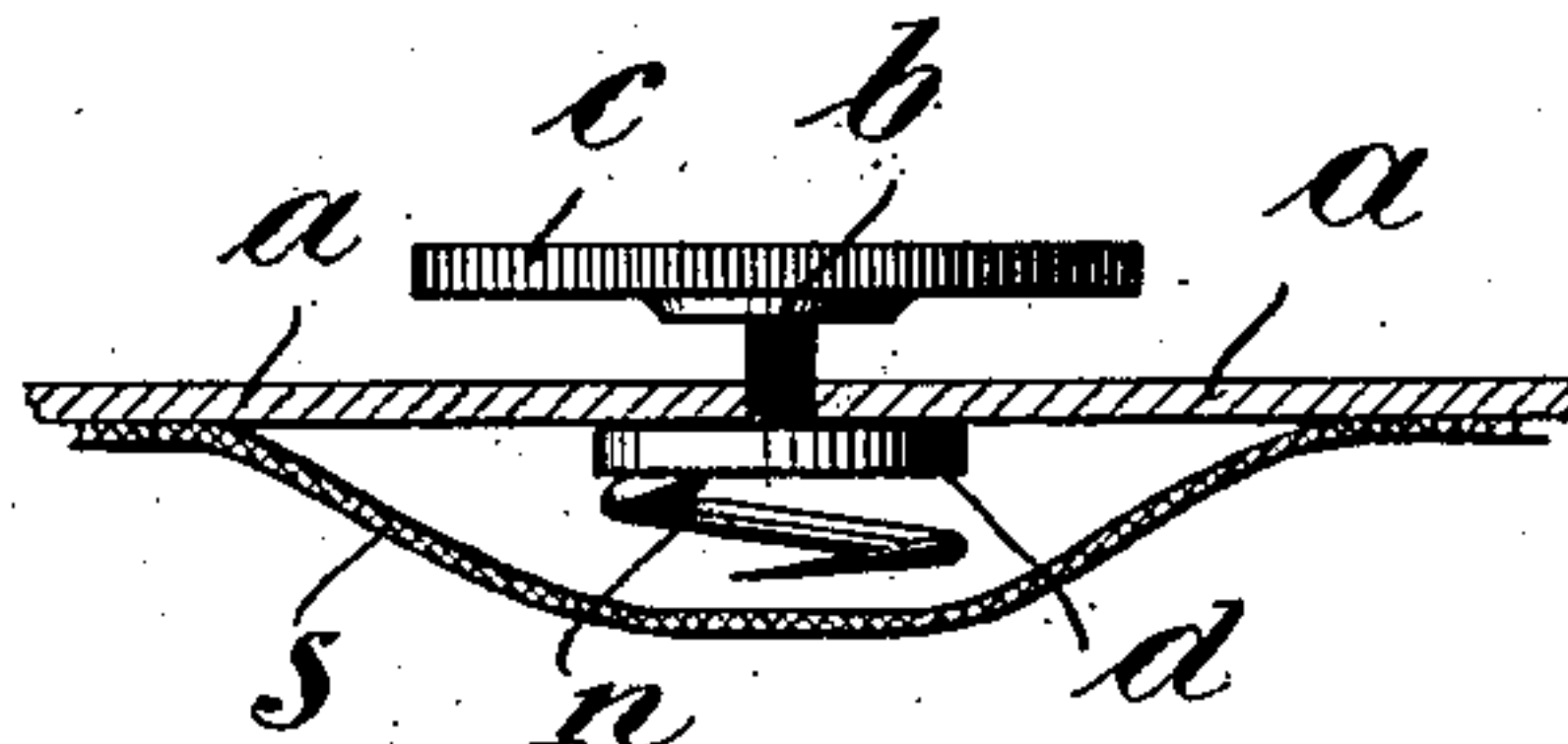


Fig. 2.

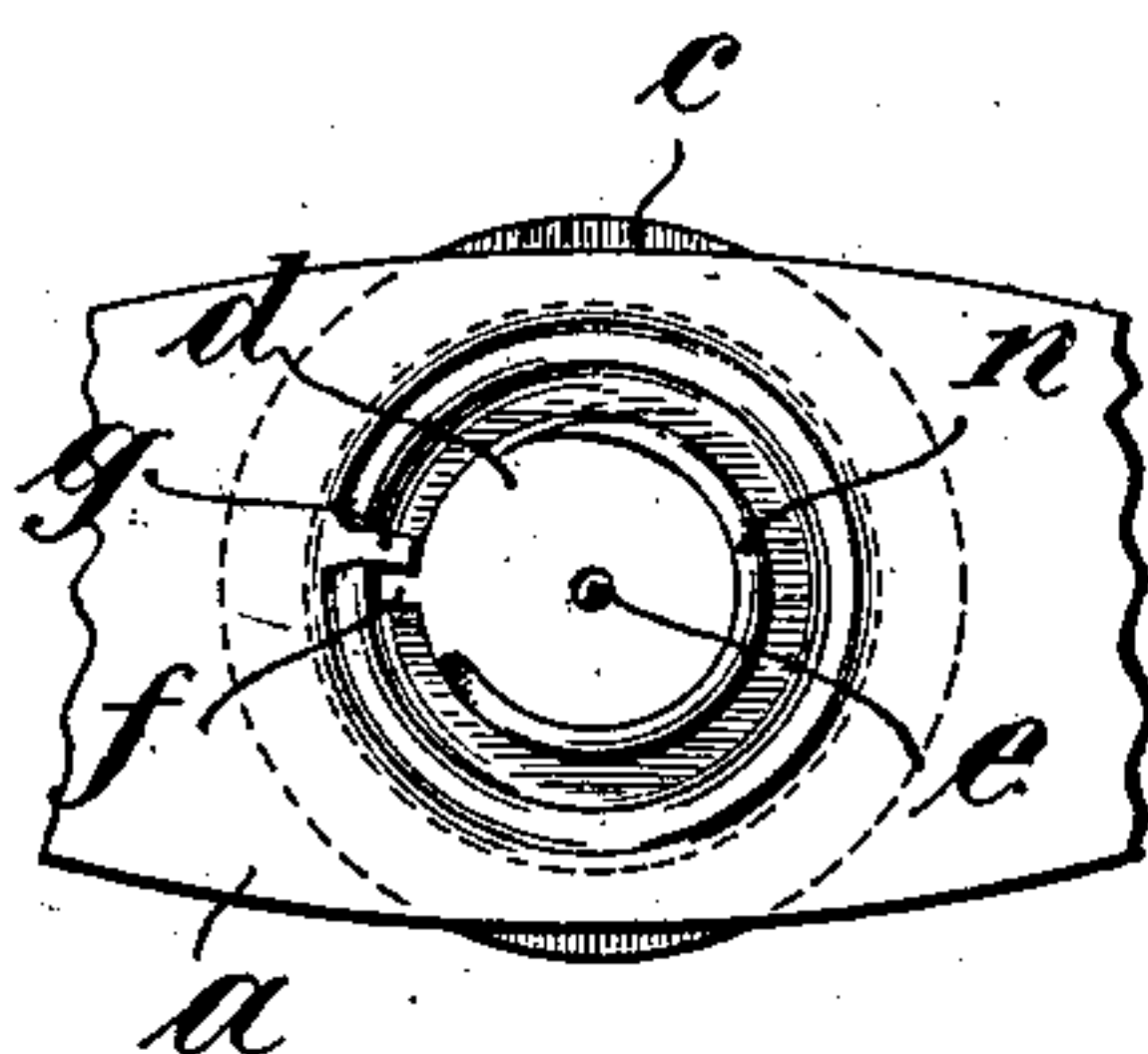


Fig. 4.

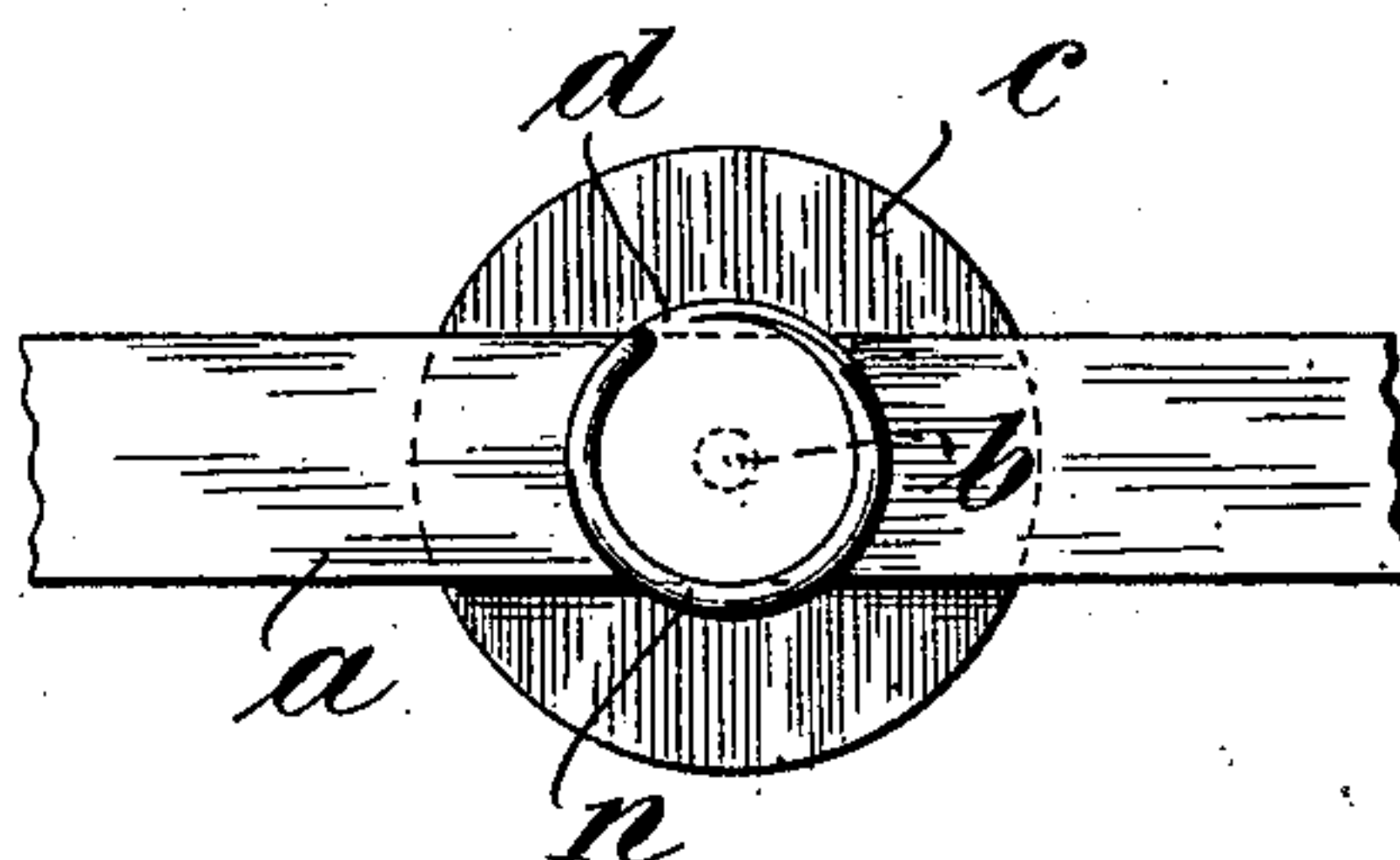


Fig. 5.

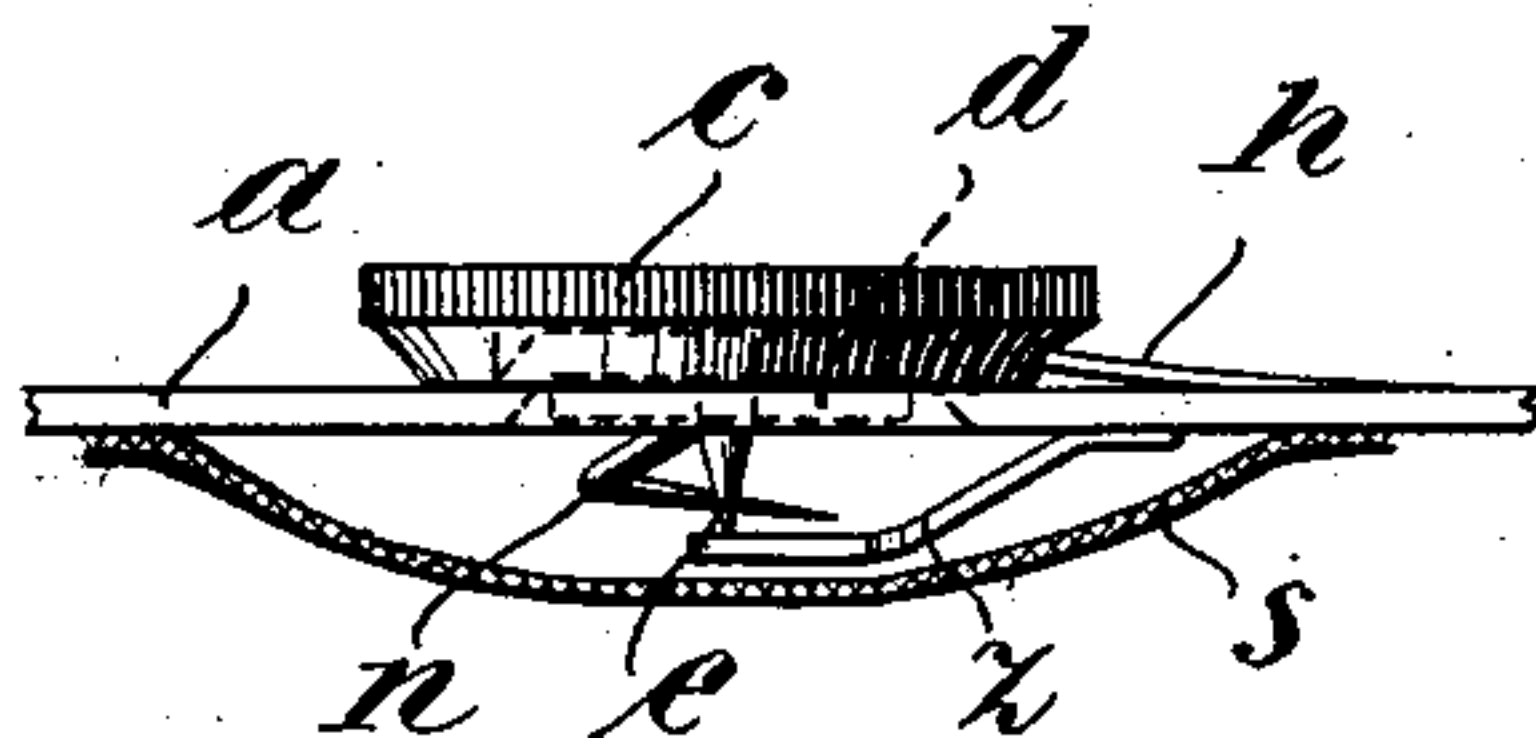
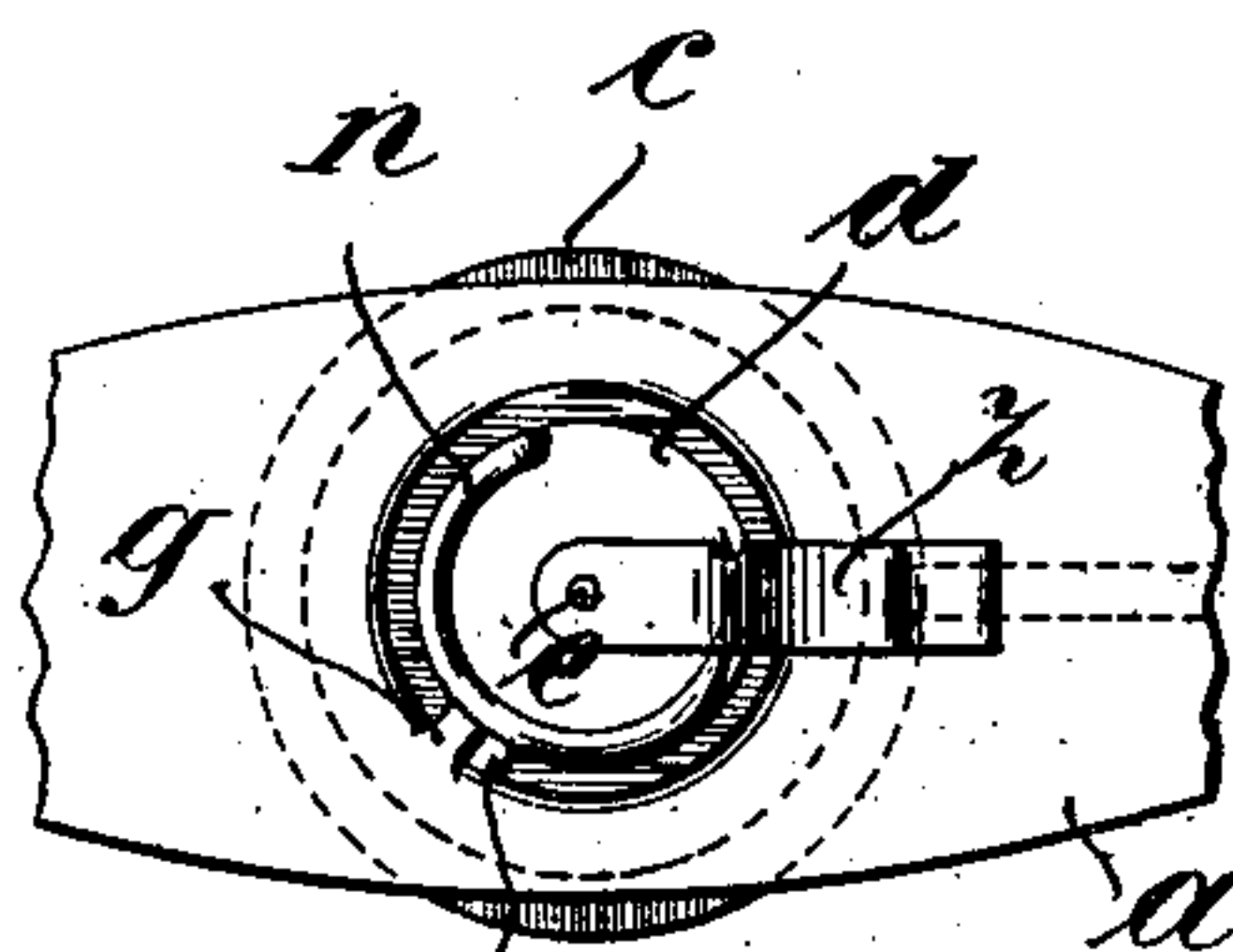


Fig. 6.



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2 SHEETS—SHEET 2.

Fig. 7

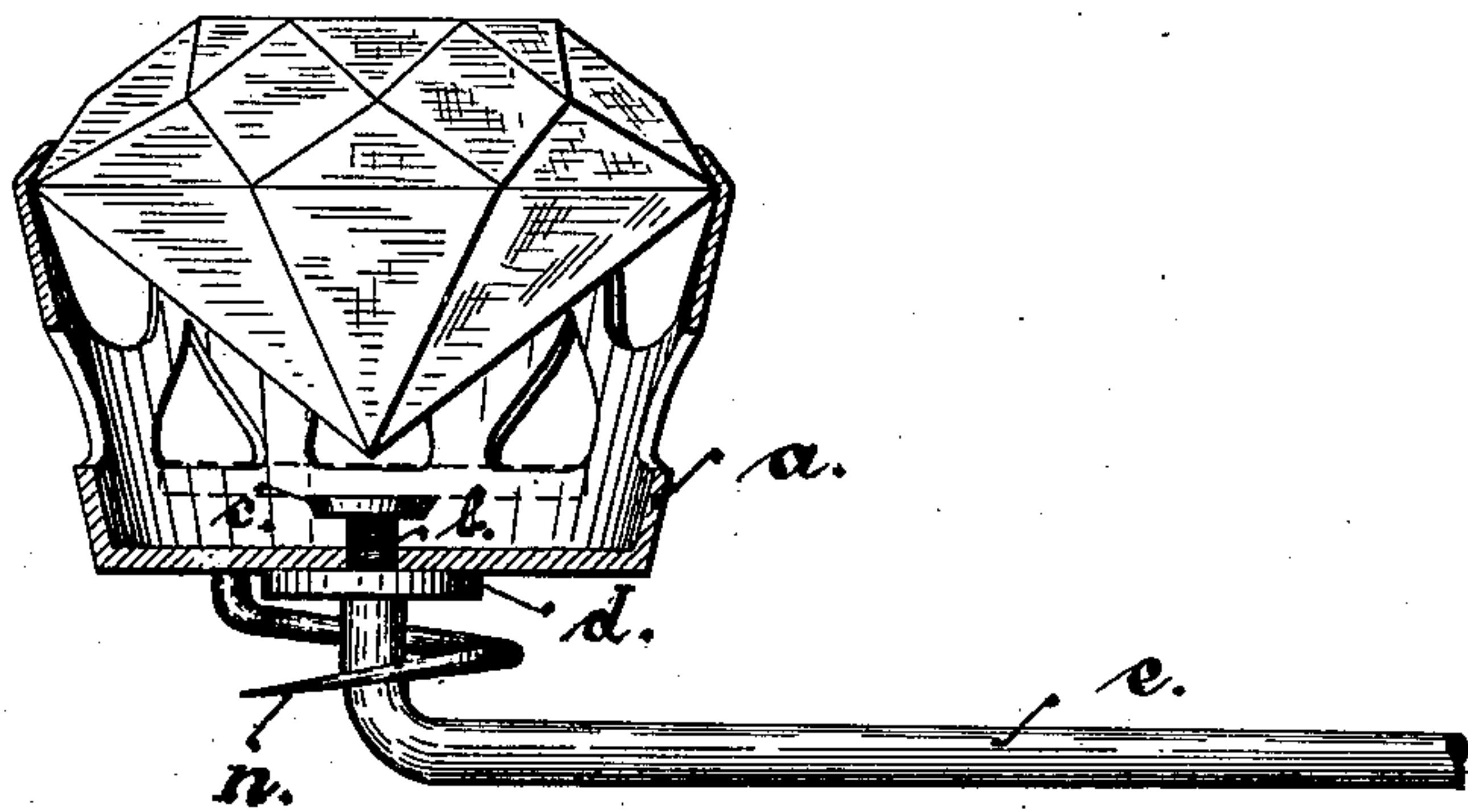
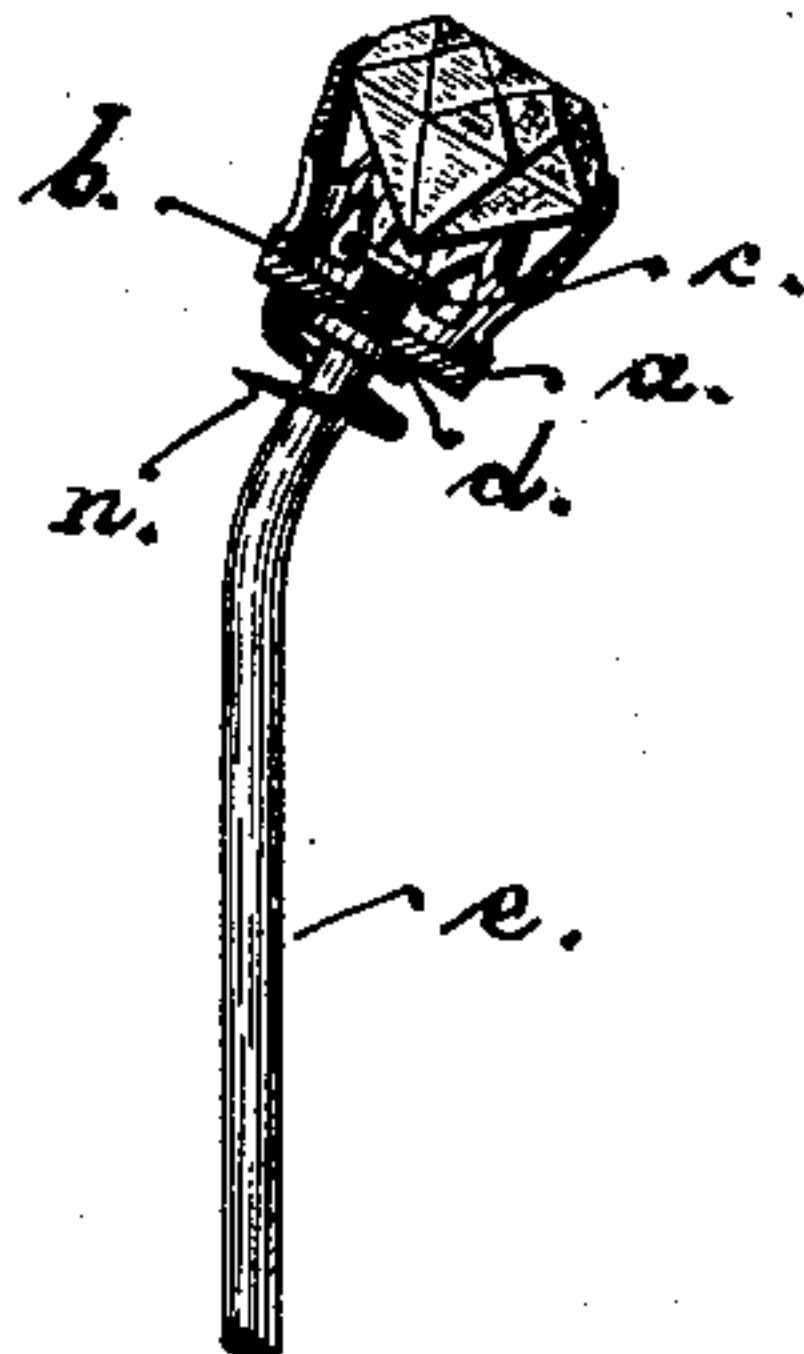


Fig. 8



Witnesses:
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UNITED STATES PATENT OFFICE.

ARTHUR SCHAEFFER, OF BERLIN, GERMANY.

SAFETY-FASTENER.

SPECIFICATION forming part of Letters Patent No. 755,174, dated March 22, 1904.

Application filed April 12, 1902. Serial No. 102,580. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR SCHAEFFER, a citizen of the Kingdom of Prussia, Empire of Germany, and a resident of Berlin, Germany, (whose post-office address is Prinzessinnenstrasse 10,) have invented certain new and useful Improvements in Safety-Fasteners, of which the following is a specification.

My invention consists in the features and combination and arrangement of parts hereinafter described, and particularly pointed out in the claims.

In the annexed drawings, Figures 1 and 2 are respectively a vertical section and plan view from below of the new fastener, having stops to limit rotation in both directions. Figs. 3 and 4 are side and bottom views illustrating a slight modification of the same device. Figs. 5 and 6 illustrate a device in which when unscrewed the point of the helical pin lies underneath a spring-tongue, so that injury to the user in handling the fastener is avoided. Fig. 7 shows a further modification of the invention—viz., the new safety-fastener being constructed as a tie-pin with the pin-shaft being bent in a rectangular knee, while Fig. 8 shows my invention again constructed as a tie-pin, the needle being only bent in an obtuse angle.

Referring to Figs. 1 and 2, *a* is a plate sewed or otherwise fastened to the material *s*, and in which plate is rotatably mounted a shank *b*, fixed at its upper end in a rotatable milled head *c* and at its lower end to a plate *d*. Projecting from the under face of the plate-like part *d* is a central guide-pin *e* and a helically-curved pin *n*, all points of which are equidistant from the axial line of the shank *b*, though I do not wish to limit myself to this particular form of spiral or to having the needle or pin *e* centrally arranged. This pin *e* is pointed to enter the fabric.

In order to limit the rotary movement of the helically-curved pin *n* around the axis of the shank *b*, the plate *d* is provided with a tooth *f* to engage a catch or projection *g* on the under side of the plate *a*. By this the rotation of this curved pin *n* will be limited in both directions. Referring to Figs. 3 and 4, the base-plate is indicated at *a* and the rotary pin at *b*. The latter is screw-threaded

and works through the plate *a* until the rotary movement is limited by either the head *c* or the plate *d* coming against the plate *a*. By turning the head *c* hard against the plate *a* the parts will remain under strong frictional contact.

By referring to Figs. 5 and 6 another means of limiting the rotary movement of the head will be seen, consisting of a spring *h*, adapted to snap into an indent or notch in the side of the rotary head *c*. The spring is supported by the plate *a*. The plate carrying the helical pin is marked *d* in this figure.

In order to avoid pricking the fingers by the pointed pins, I provide a shield or spring-tongue *z*, attached to the plate *a* and arranged with its end over the points of the straight pin *e* and of the helical pin *n*, Figs. 5 and 6. The point of the helical pin lies shielded by this tongue when the head is turned all the way in one direction to unscrew the helical pin from the fabric. When being screwed into the fabric, the point of the helical pin will move from under the said tongue.

The helical pin-fastener above described can be used in various situations for attaching articles to fabrics, for fastening ornaments and the like, also in place of the ordinary press-button fasteners made up of separate parts.

What I claim is—

1. In combination a plate *a* head *c* having a pivot *b* rotatably mounted in said plate a plate-like part *d* carried by said pivot *b* on one side of said plate *a*, a helical pin *n* and means for limiting the amount of rotation of said parts, substantially as described.

2. In combination a plate *a*, head *c* having a pivot *b* rotatably mounted in said plate, a plate-like part *d* carried by said pivot *b* on one side of said plate *a*, a helical pin *n* and a catch *g* on the plate *a* arresting a tooth *f* on the part *d* for limiting the amount of rotation of the parts *c* and *d*, shank *b* and pin *n*, substantially as described.

3. In combination a plate *a*, a head *c* having a pivot *b* rotatably mounted in said plate, a plate-like part *d* carried by said pivot *b* on one side of said plate *a*, a helical pin *n* and a spring *h* catching a notch on the head *c* for

limiting the amount of rotation of said parts, substantially as described.

4. In combination a plate *a*, a head *c* having a pivot *b*, a plate-like part *d* fixed to pivot *b* on one side of said plate *a*, a helical pin *n* the pivot *b* being provided with a screw-thread engaging a thread in the plate *a* for the purpose of limiting the amount of rotation of the pin *n* by the abutment of the parts *c* and *d* against the upper and under surface of plate *a* respectively, substantially as described.

5. In combination a plate *a*, a head *c* on one side thereof having a pivot *b* projecting through an opening in said plate *a*, a plate-like part *d* carried by said shank *b* on one side of plate *a*, a helical pin *n* carried by the plate *a* a suitable bent pin *e* carried by the part *d* centrally of the helical pin *n*, and means for limiting the amount of rotation of said movable parts, substantially as described.

6. In combination a plate *a*, a head *c* hav-

ing a pivot *b* rotatably mounted in said plate, a plate-like part *d* carried by said pivot *b* on one side of said plate *a*, a helical pin *n* means for limiting the amount of rotation and means for preventing injury to the user of said parts, substantially as described.

7. In combination a plate *a*, a head *c* having a pivot *b* rotatably mounted in said plate, a plate-like part *d* carried by said pivot *b* on one side of said plate *a*, a helical pin *n*, a spring-tongue *z* fastened to the plate *a*, and covering the point of the unscrewed helical pin *n* and means for limiting the amount of rotation of said parts, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR SCHAEFFER.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.