

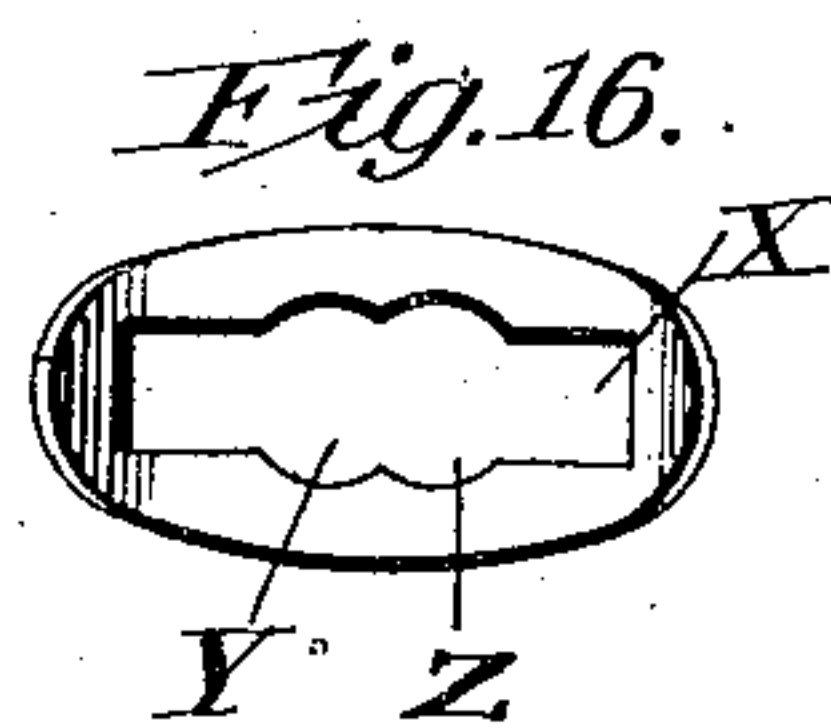
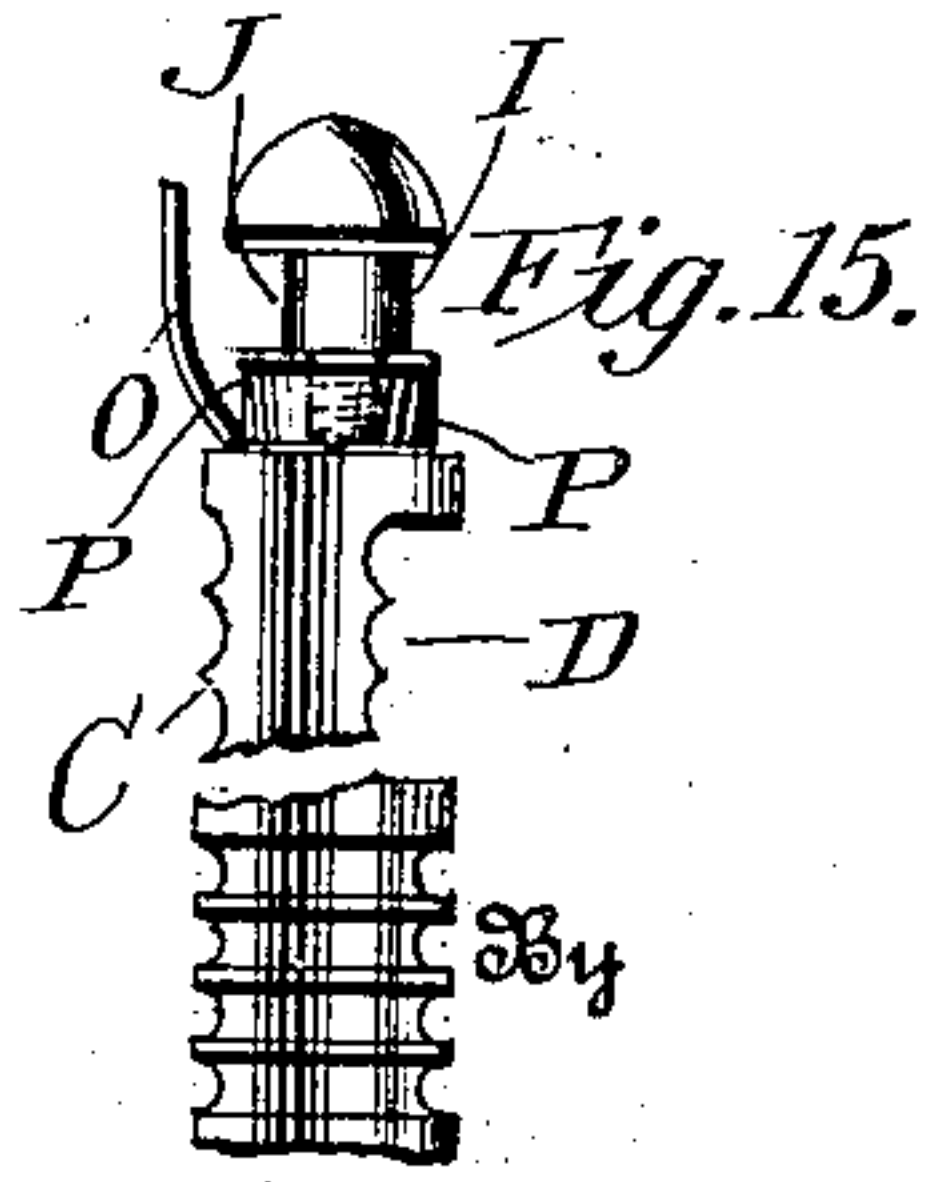
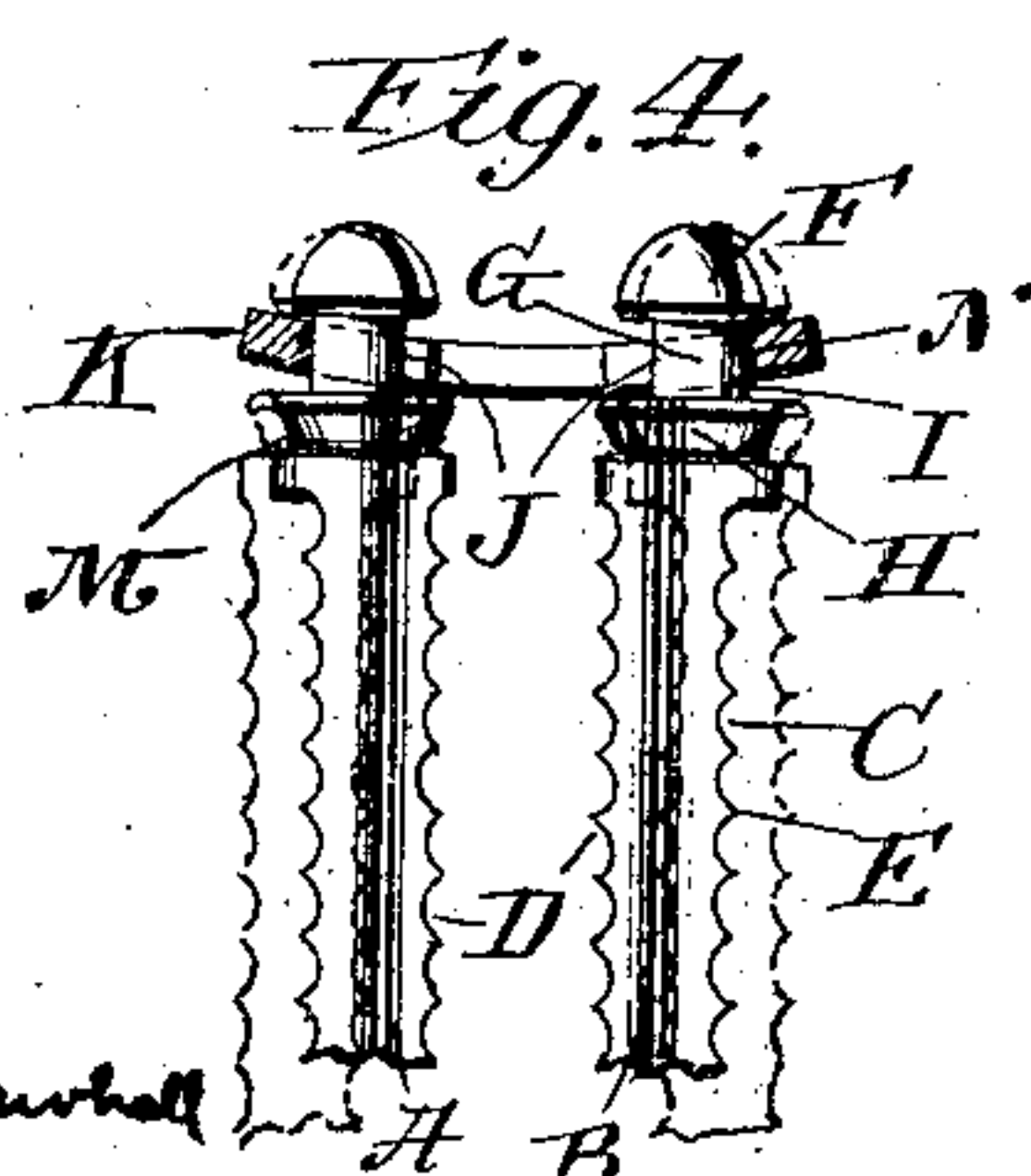
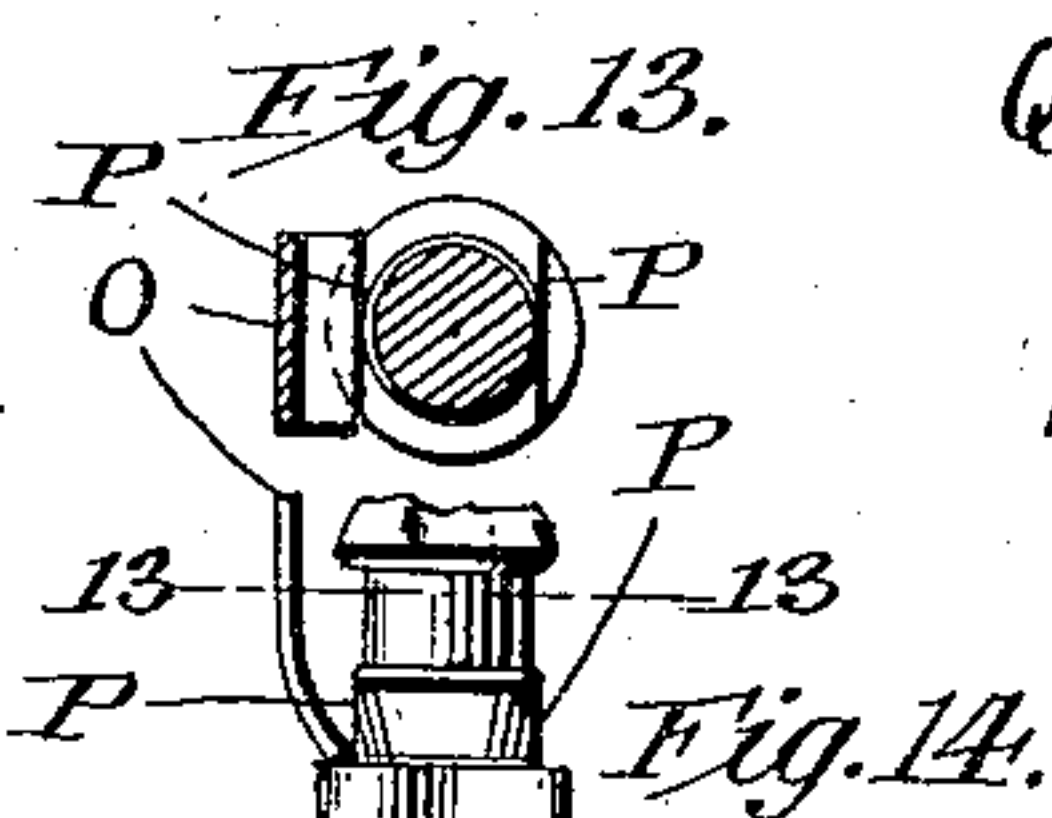
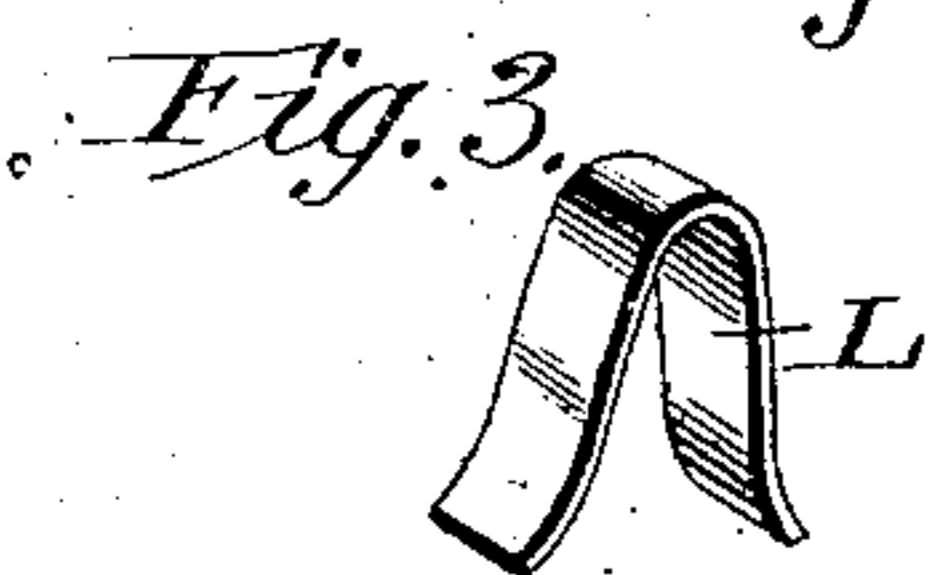
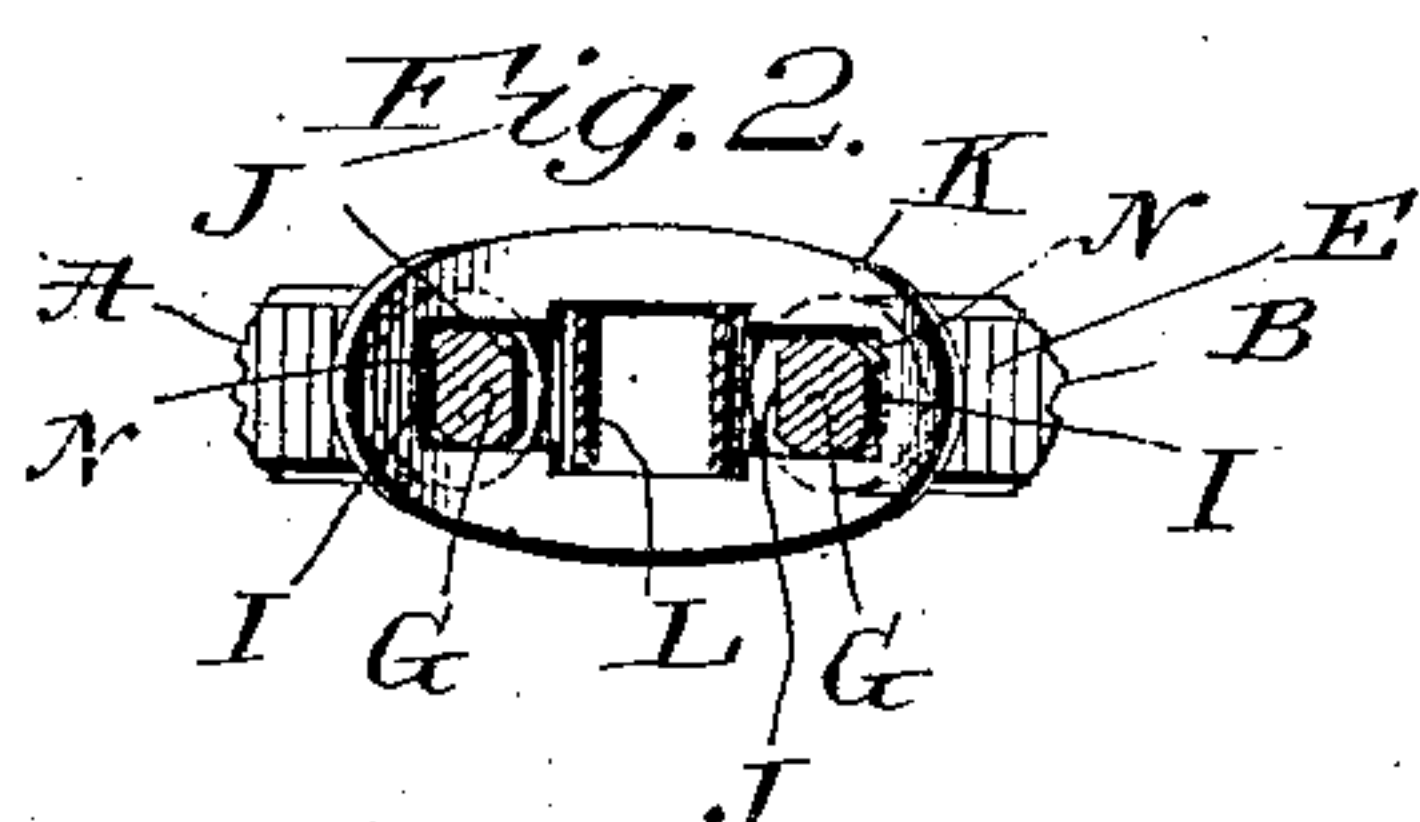
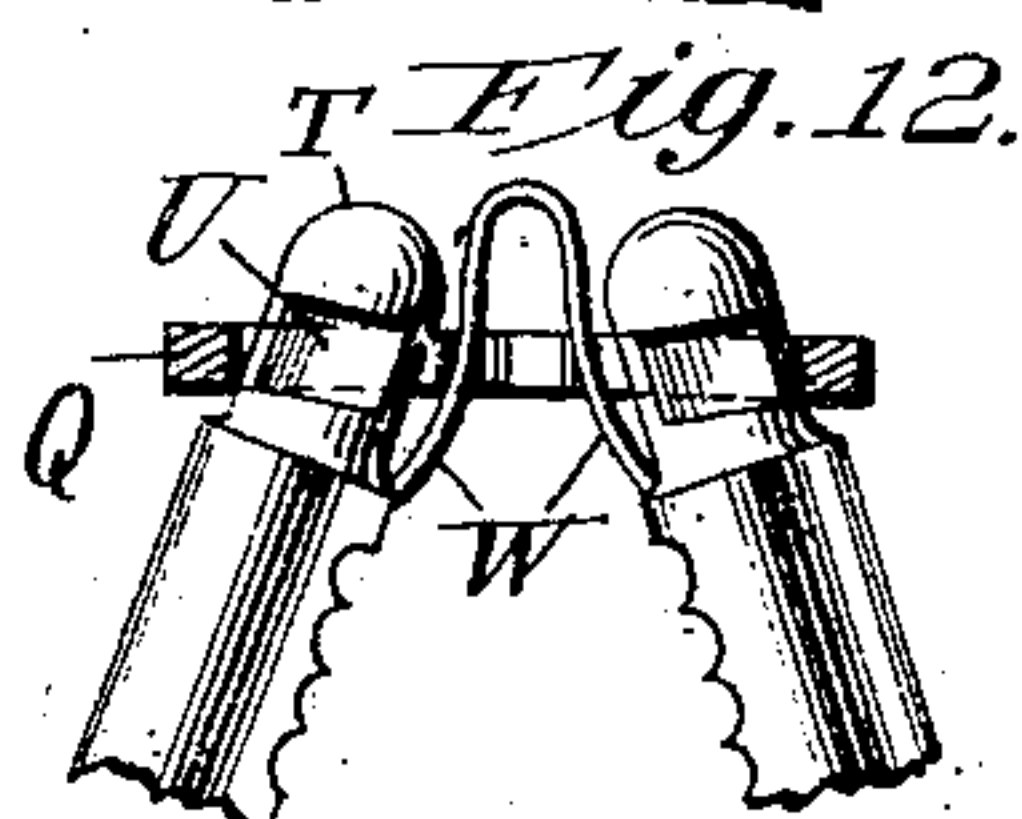
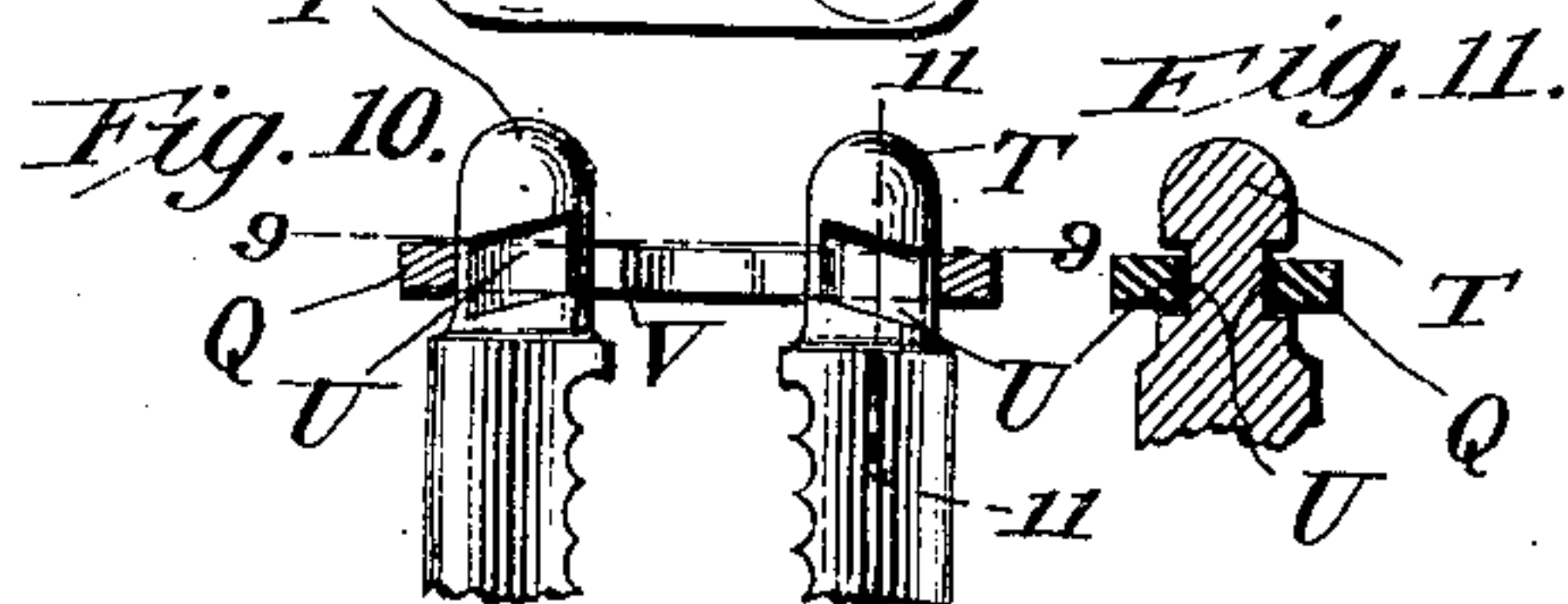
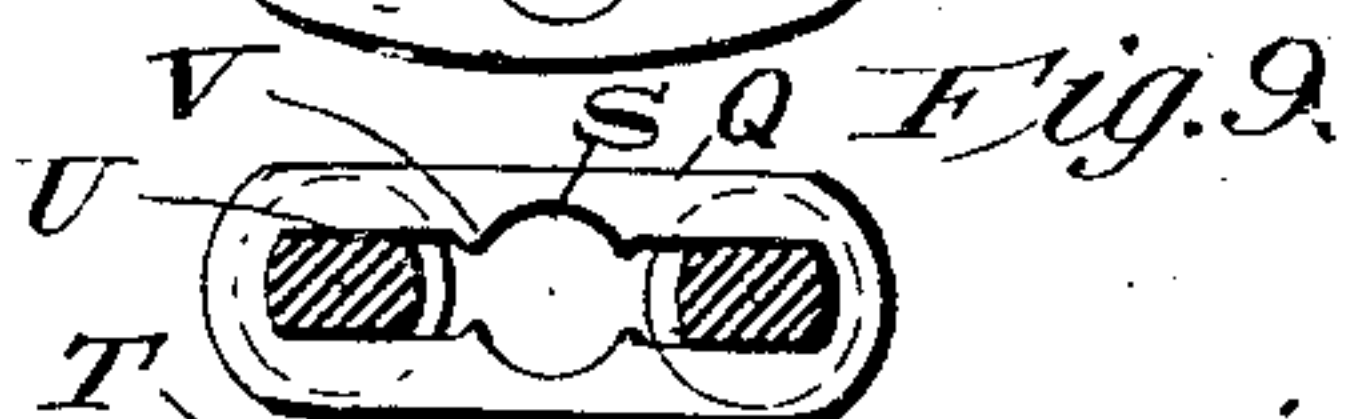
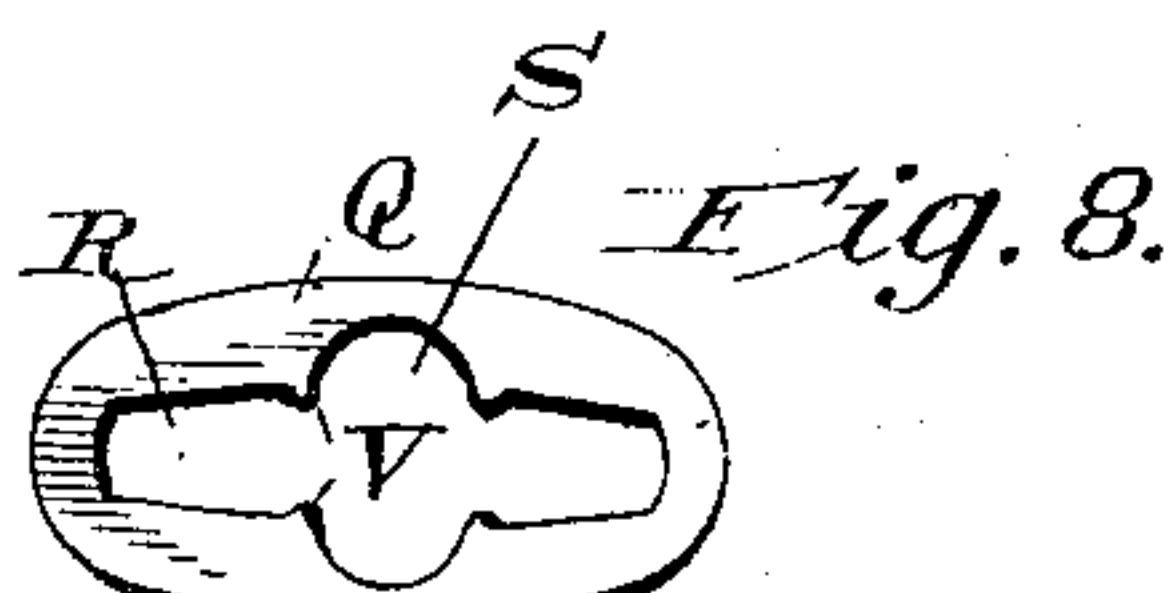
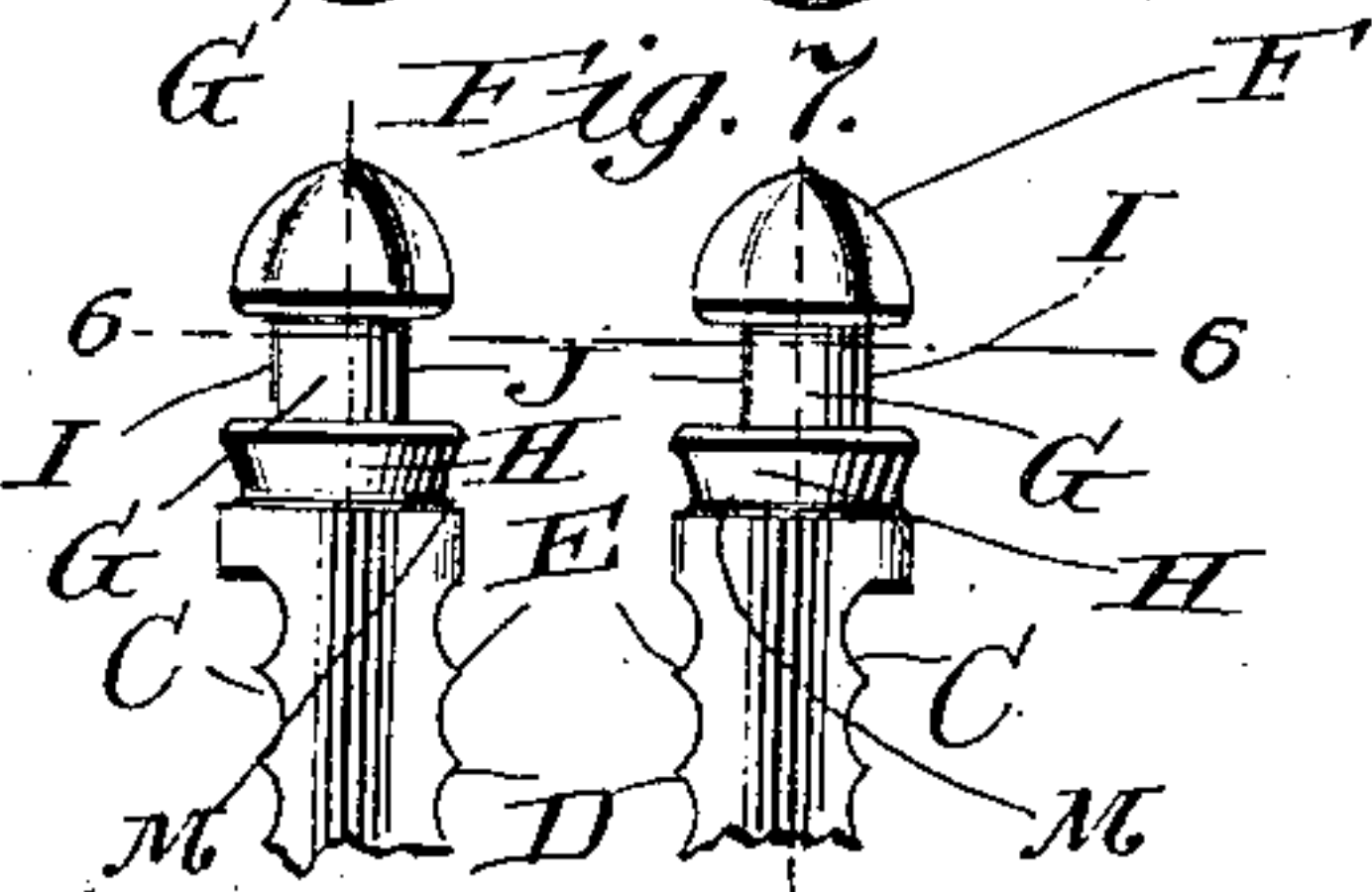
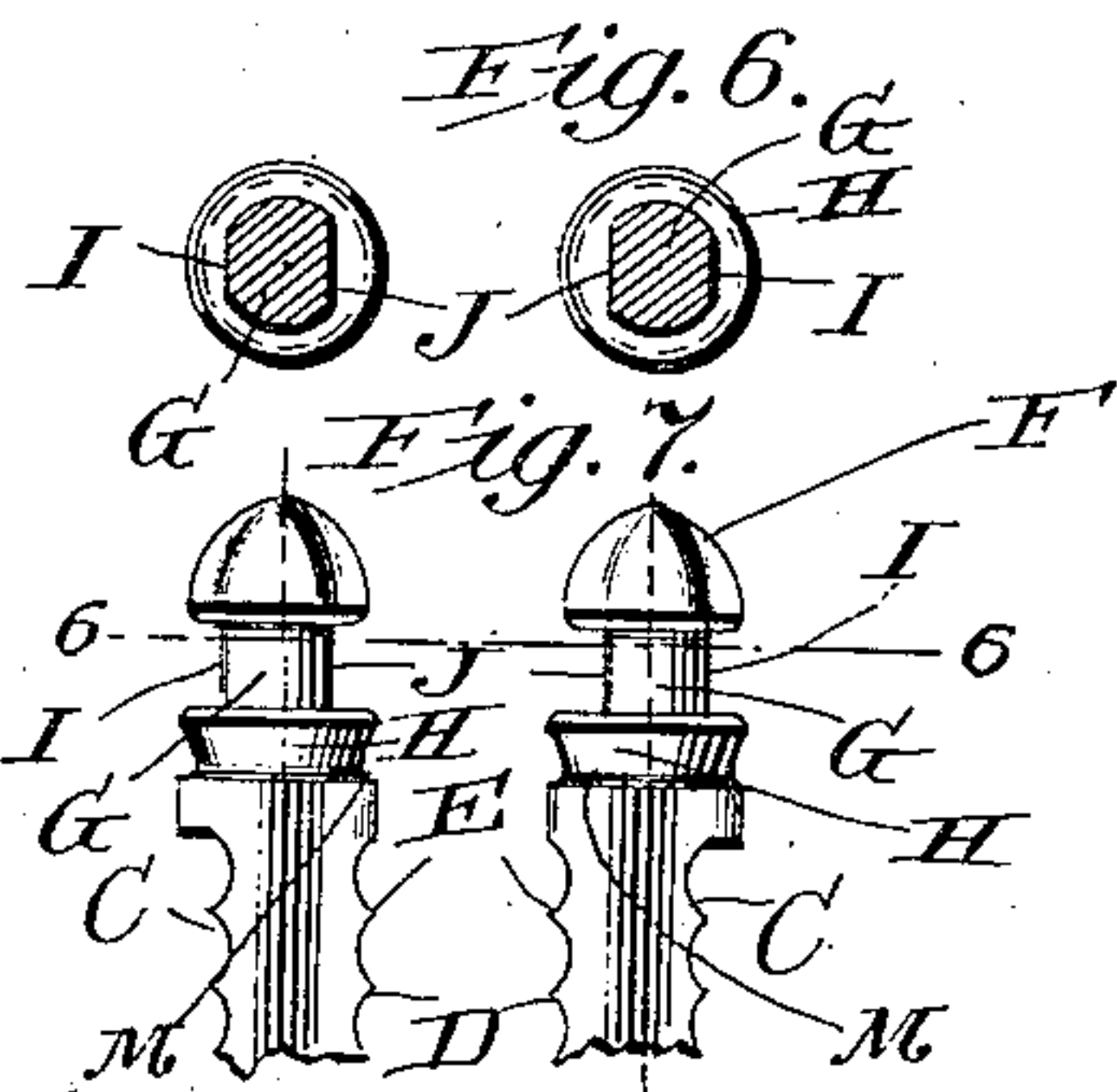
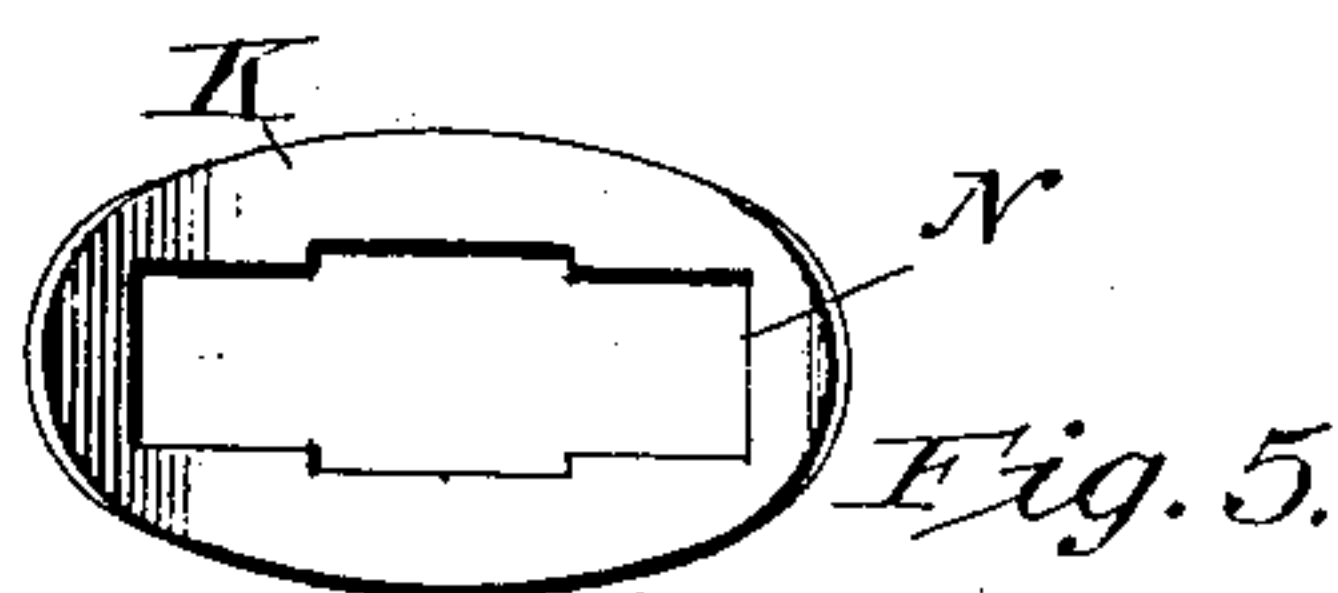
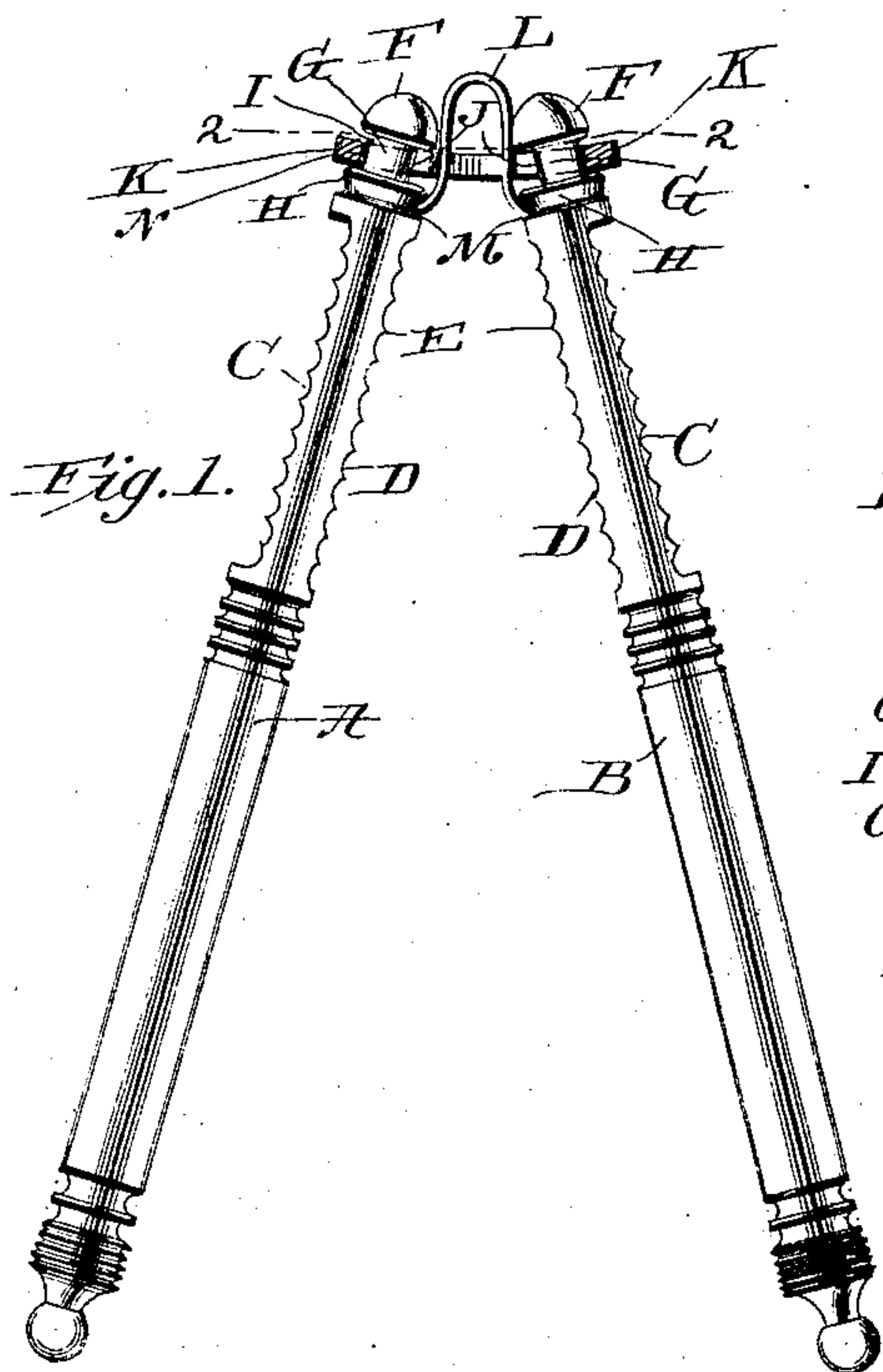
No. 896,044.

PATENTED AUG. 11, 1908.

P. H. QUACKENBUSH.

NUT CRACKER.

APPLICATION FILED MAR. 17, 1908.



Witnesses
Katherine Churchill
H. E. Montague

Inventor,
Paul H. Quackenbush,
by Dodge and Sons,
Attorneys.

UNITED STATES PATENT OFFICE.

PAUL H. QUACKENBUSH, OF HERKIMER, NEW YORK.

NUT-CRACKER.

No. 896,044.

Specification of Letters Patent.

Patented Aug. 11, 1908.

Application filed March 17, 1908. Serial No. 421,642.

To all whom it may concern:

Be it known that I, PAUL H. QUACKENBUSH, a citizen of the United States, residing at Herkimer, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Nut-Crackers, of which the following is a specification.

My present invention pertains to improvements in nut-crackers, the construction and advantages of which will be hereinafter set forth, reference being had to the annexed drawing, wherein:

Figure 1 is a sectional elevation of the device; Fig. 2 a transverse sectional view, taken on the line 2—2 of Fig. 1; Fig. 3 a perspective view of the spring preferably employed in conjunction with the levers or jaws; Fig. 4 an elevation of the upper portion of the cracker, the link being shown in section; Fig. 5 a top plan view on a somewhat enlarged scale of the link; Fig. 6 a transverse sectional view taken through the reduced portions or necks of the levers, on the line 6—6 of Fig. 7; Fig. 7 a side elevation of the upper portion of the levers; Fig. 8 a top plan view of a modified form of link; Fig. 9 a transverse sectional view taken on the line 9—9 of Fig. 10, showing the link illustrated in Fig. 8 as applied to the levers and closed so as to prevent the withdrawal of the levers therefrom; Fig. 10 a sectional elevation illustrating the upper portion of the levers, the link being shown in section in its modified arrangement; Fig. 11 a sectional view taken on the line 11—11 of Fig. 10; Fig. 12 a view similar to Fig. 10, showing a still further modification; Fig. 13 a transverse sectional view taken on the line 13—13 of Fig. 14; Fig. 14 a side elevation of the upper portion of the lever and a portion of the spring; Fig. 15 an elevation of a still further modification; and Fig. 16 a top plan view of a modified form of link.

The main object of the present invention is to provide a nut-cracker in which the use of pivot-pins or similar connecting devices is rendered unnecessary.

A further object of the invention is to so construct the levers that they may be reversed and a wider or narrower space thus afforded between the proximate faces thereof, in order that the cracker may be adjusted for the reception of a larger or smaller nut.

A still further object of the invention is to provide means for preventing the handles from turning when once positioned.

Another object of the invention is to provide a spring for normally spreading the levers and throwing the lower or handle-ends thereof apart.

With these and other objects in view a description of the preferred form of cracker will now be given, reference being had more particularly to Figs. 1 to 7 inclusive.

The two levers, designated by A and B, are similar in form and are each provided with a handle portion at the lower end and with oppositely-disposed bearing faces C and D against which the nuts rest when they are being cracked. The face C, as will be clearly seen upon reference to Figs. 1 and 7, is formed nearer the axial line of the lever than is the face D, the latter being in fact substantially in alinement with the outer face of the lever and merely roughened or cut away by a suitable milling tool or the like for the purpose of forming teeth, as E, for holding a round nut and to assist in cracking the same.

The upper end of each lever is provided with a head F, connected to the body of the lever by a reduced neck G. An outwardly-flaring collar H is located at the base of the neck, and the under face of the head and upper face of the collar are substantially parallel or formed at right angles to the longitudinal axis of the lever.

As will be seen upon reference to Figs. 2 and 6, the neck is provided with two flattened faces I and J, the face J being formed nearer to the axial line of the lever than is the face I. As will be noted upon reference to Fig. 1, the face I is formed upon the opposite side of the lever from the face D. The purpose of this will presently appear.

To connect the upper ends of the levers a link K, shown in Fig. 5, is employed. Said link is elliptical in contour and provided with a substantially oblong slot or opening, the central portion of which is cut away so as to form a somewhat wider space to permit the threading therethrough of the heads F. The widest portion of this opening will preferably be made slightly narrower than the extreme width of the base of the heads, but by rounding the heads as shown the levers may be readily threaded through the link and then moved endwise in the slot to the position shown in Figs. 1, 2 and 4. The width of the narrower portions of the slot or opening in the link is substantially slightly greater than the extreme width or thickness of the neck, so that while the heads will pre-

vent the levers from being withdrawn from the link when the handles are properly positioned, the levers may be rotated within the link. The link will likewise preferably be
 5 curved or dished, as shown in Figs. 1 and 4, and the distance between the under face of the head and the upper face of the collar will be made slightly greater than the thickness of the link, in order that there may be a cer-
 10 tain play between the parts, so that the lower end of the handle portions of the levers may be drawn together in the act of cracking the nut interposed between the levers.

In order to spread the levers and to main-
 15 tain the necks at the opposite ends of the slot or opening in the link, an inverted U-shaped spring L, shown in detail in Fig. 3, will preferably be employed. The spring occupies the position best illustrated in Fig. 2,
 20 with the ends thereof given a slight spread and bearing against the inclined face of the collars H and against a shoulder M formed at the junction of the base of the collar and the body of the lever. As just noted, the spring
 25 tends to hold the levers in their outermost position, with the flat face I or J of each lever against the corresponding flat face N formed at the end of the opening in the link. The spring thus normally prevents the axial
 30 rotation of the levers, and such rotation will not take place except when the levers are grasped and forcibly rotated to bring the faces C opposite each other and the faces D opposite each other.

By forming the bearing faces I and J of the neck at different distances from the axial center of the levers and placing the face I upon the opposite side of the center from the face D and the innermost face J opposite the
 40 deep face C, the levers may be adjusted to fit either large or small nuts. When the faces I of the levers bear against the end walls N of the slot in the link, the faces D will stand opposite to each other and a rela-
 45 tively narrow space will be afforded between such faces. Thus a small nut may be accommodated. By giving the levers a half turn the faces J will be brought against the ends of the walls N of the link, and the faces
 50 C will be oppositely disposed, thus affording a wide space between the levers for the reception of a large nut. This arrangement permits the nut to be placed well up between the levers, or adjacent to the fulcrum, and
 55 better leverage for the cracking of the nut is thereby afforded.

The positions of the parts in their various adjustments is shown in Fig. 4. It is conceivable, of course, that the flattened faces
 60 formed upon the neck may be dispensed with and the faces C and D, placed at different distances from the axial line of the levers, depended upon to give the varying adjustments. It will be readily appreciated, how-
 65 ever, that this will diminish the margin of

adjustment. Under such construction the spring, as shown in Figs. 13 and 14, may be employed to prevent the rotation of the levers under normal conditions. The spring, designated by O, will then bear against the
 70 flattened faces P formed upon each side of the collar portion of the lever, the flattened faces standing in planes parallel with the toothed faces C and D. It is likewise conceivable that the neck portion might be
 75 formed eccentric to the body portion of the lever under such construction which, of course, would afford the same range of adjustment as is obtained under the construction hereinbefore described. Such an ar-
 80 rangement is shown in Fig. 15.

In Figs. 8 to 11 inclusive a still further modification is shown. Under this construction the levers are not reversible, but the arrangement is such that the link is em-
 85 ployed to form the pivotal connection between the upper ends of the levers, as in the constructions hereinbefore set forth. The link Q shown in Fig. 8 is provided with a slot R extending lengthwise thereof, the central
 90 portion S of which is made so as to form a substantially circular opening in the center of the link, through which the heads T of the levers may be freely passed. The head of each lever is provided with oppositely-dis-
 95 posed channels or recesses U, which occupy a slightly upwardly-inclined position and are of a width slightly in excess of the thickness of the link. After the levers are passed through the centrally-disposed opening S in
 100 the link and are moved endwise therein, the link is squeezed or forced together at the central portion so as to bring the side walls of the slot in which the levers stand in sub-
 105 stantial parallelism and to carry the projections V formed at the junction of the smaller portions of the slot and the large central portion inwardly to a point beyond the side walls, so that each lever will be confined in
 110 that portion of the slot adjacent to the end of the link. As will be noted upon reference to Fig. 9, that portion of the slot in which the lever is confined is somewhat longer than the width of the neck of the lever, so that the
 115 lever may have a slight play in order that they may be tilted with reference to the link so as to be opened and closed upon a nut inserted between them.

In Fig. 12 substantially the same structure as that illustrated in the figures just referred to is shown, but in addition thereto a
 120 spring W is employed to normally hold the levers in their spread or open position.

In Fig. 16 a modified form of link is shown. Instead of providing the link with a large
 125 central aperture, as in Fig. 5, it is formed with a slot having a square portion X at each end and with two intersecting circular openings Y and Z through which the heads of the levers may be passed.
 130

It is conceivable that the head or the head and neck of each lever might be formed independently of the body thereof. Such a construction is shown in Fig. 15, in which the neck is provided with a screw-threaded stem extending down into a threaded socket formed in the body of the lever. This construction is not as cheap to manufacture nor as stable as the others heretofore shown and described.

Having thus described my invention, what I claim is:

1. In a nut-cracker, the combination of a link; and a pair of axially rotatable levers having different bearing faces, said levers being fulcrumed upon the link.
2. A nut-cracker comprising a pair of hinged and axially rotatable levers, said levers having different bearing faces.
3. A nut-cracker comprising a pair of hinged and axially rotatable levers, said levers having bearing faces at varying distances from their axes.
4. In a nut-cracker, the combination of a link provided with a slot; and a pair of levers extending through the slot, the link forming the fulcrum for the levers.
5. In a nut-cracker, the combination of a pair of levers; and a link connecting and forming the fulcrum of said levers, whereby the use of pivot-pins and the like is avoided.
6. In a nut-cracker, the combination of a link; and a pair of levers formed to interlock with the link, the link forming the fulcrum for the levers.
7. In a nut-cracker, the combination of a link provided with a slot; a pair of levers passing through the slot and bearing respectively at opposite ends thereof; and means for holding the parts in their assembled positions.
8. In a nut-cracker, the combination of a link provided with a slot; a pair of levers having one end of each passing through the slot and forming an interlocking connection therewith to prevent longitudinal movement of the levers; and means for holding the levers at the ends of the slot.
9. A nut-cracker comprising a pair of hinged and axially rotatable levers, said levers having bearing faces at varying distances from their axes; and means for holding the levers in their axially adjusted position.
10. In a nut-cracker, the combination of a link; a pair of levers having one end of each passed through a slot or opening formed in the link; eccentric bearings formed upon that portion of each of the levers which is seated within the slot or opening; and bearing faces formed upon each lever at varying distances from their axes.
11. In a nut-cracker, the combination of a link; a pair of axially rotatable levers having one end of each passed through a slot formed

in the link, said levers having bearing faces at varying distances from their axes; and means for holding the levers in their axially adjusted position.

12. In a nut-cracker, the combination of a link provided with a longitudinally-disposed slot; and a pair of levers adapted to cooperate with said link, each lever having fulcrum points or faces located at different distances from the axial center of the lever, and bearing faces for the article to be operated upon likewise spaced at different distances from the axial center of the lever.

13. In a nut-cracker, the combination of a link; and a pair of levers fulcrumed upon the link, each of said levers being provided with a head, a neck having flattened bearing faces arranged at varying distances from the axis of the lever, said faces cooperating with complementary faces at the ends of a slot formed in the link, and bearing faces for the article to be operated upon formed upon each of said levers, said faces being at varying distances from the axis of the lever and arranged in opposition to the fulcrum-faces formed upon the neck of the lever.

14. In a nut-cracker, the combination of a link; a pair of axially rotatable levers fulcrumed upon the link, each of said levers being provided with bearing faces complementary in shape to the ends of a slot formed in the link, said faces being at different distances from the axis of the lever, and bearing faces for the article to be operated upon likewise formed upon the lever and at different distances from the central line of the lever, that bearing face for the article which is farthest from the axial line being formed upon the side of the lever on which the fulcrum face is nearest to the axial line of the lever; and means for holding the levers in their adjusted positions with reference to the link.

15. In a nut-cracker, the combination of a link provided with a slot extending longitudinally thereof; a pair of levers, each lever having a neck portion extending through the slot and formed with fulcrum faces complementary in shape to the end of the slot and at different distances from the axis of the lever; and a spring interposed between the levers and serving to hold one or another of said faces in contact with the end wall of the slot.

16. In a nut-cracker, the combination of a curved link; and a pair of levers, each of said levers having a reduced portion, said portions being seated within and bearing against the end walls of a slot formed in the link.

17. In a nut-cracker, the combination of a curved link provided with a longitudinally-disposed slot; and a pair of levers, each having a reduced portion seated within the ends of the slot, the distance between the shoulders produced in the formation of said reduced portions being greater than the thickness of the link.

18. In a nut-cracker, the combination of a link provided with a longitudinally-disposed slot having an enlarged portion; a pair of levers, each lever being provided with a reduced portion adjacent to one end of substantially the same size as the end portions of the slot; and means for confining the reduced portions of the levers to the ends of the slot.

19. In a nut-cracker, the combination of a link provided with a longitudinally-disposed slot; a pair of levers, each lever being provided with a head adjacent to one end, a neck extending downwardly from the head and provided with flattened faces at different distances from the axial line of the lever, an outwardly-flaring collar located below the neck, and bearing faces for the article to be operated upon arranged at different distances from the axial line of the lever; and an inverted U-shaped spring passing through the slot and having its ends resting against the collars and the shoulders formed adjacent thereto.

20. In a nut-cracker, the combination of a link provided with a slot extending longitudi-

nally thereof, the central portion of the slot being larger than the ends; a pair of levers, each lever being provided with a reduced neck adapted to be seated in one end portion of the slot; and an inverted U-shaped spring of a width substantially equal to the width of the enlarged portion of the slot in the link, and having its ends bearing upon the levers below the link and serving to spread them apart.

21. A nut-cracker, comprising a pair of hinged levers; and means for securing rotatable axial adjustment of said levers with relation to each other, whereby the space between the bearing faces for the reception of the nut may be varied.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PAUL H. QUACKENBUSH.

Witnesses:

A. G. BECKINGHAM,
EDWARD A. BROWN.