

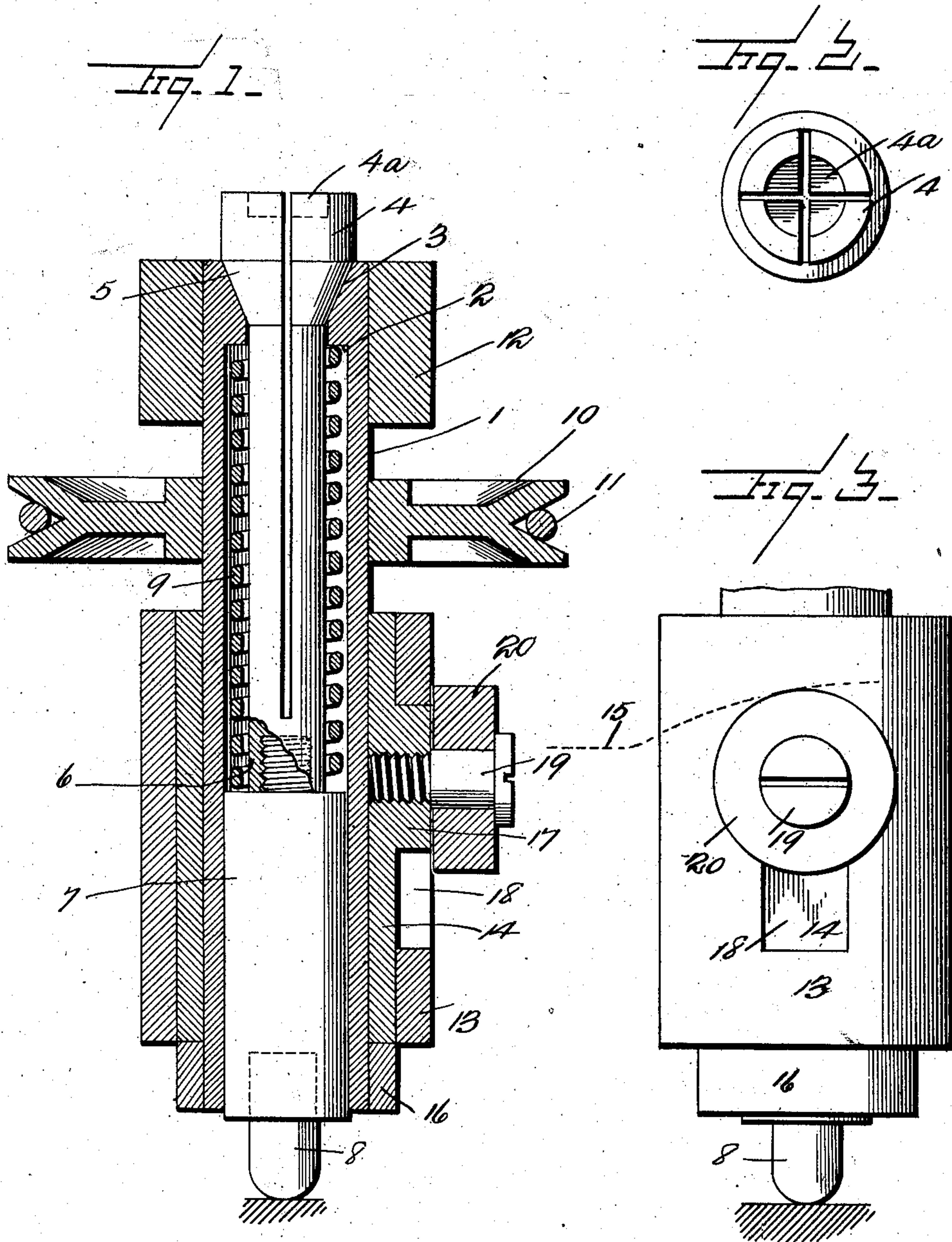
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L. W. HOLUB.

CHUCK FOR HOLDING PEARL BUTTONS, &c.

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WITNESSES:

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UNITED STATES PATENT OFFICE.

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CHUCK FOR HOLDING PEARL BUTTONS, &c.

No. 827,309.

Specification of Letters Patent.

Patented July 31, 1906.

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To all whom it may concern:

Be it known that I, LOUIS W. HOLUB, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented new and useful Improvements in Chucks for Holding Pearl Buttons, &c., of which the following is a specification.

My invention relates to certain new and useful improvements in chucks for holding pearl buttons and the like during the several steps of the operation incident to the manufacture thereof, and has more particular reference to the grinding and polishing steps, wherein the buttons mounted in a plurality of chucks are successively brought beneath and into engagement with a suitable abrading or rubbing tool.

The primary object of this improvement is to provide a chuck of this type which is comparatively simple in construction and capable of easy and quick manipulation when it is desired to free a button at the close of the finishing operation.

A further object of my improvement is to so construct the inclosing shell of the chuck as to accommodate a sheave and at the same time have the respective bearings so arranged as not to interfere with the sheave during the sliding movement of the shell.

Further objects and advantages will be made apparent as the description progresses and those features upon which I claim as new and novel defined in the appended claims.

In the accompanying drawings, in which like numerals of reference indicate like parts throughout the several views, Figure 1 is a vertical sectional view of the present invention. Fig. 2 is a top plan view of the resilient clamping-jaws. Fig. 3 is a view in side elevation with the upper portion broken away.

1 indicates the chuck-casing or outer shell, which is preferably cylindrical and open throughout its length. The upper end, however, is contracted to form an internal shoulder 2 and a flared mouth-forming seat 3, the function of which will be hereinafter referred to.

4 indicates the clamping-jaws, which normally project without the shell and are formed with a depressed seat 4^a to receive the button or like article. The exterior of these jaws are tapered, as at 5, to engage the cam-faces

3 and then continue in uniform diameter to their inner ends, where they are united and continue in an internally-threaded thimble or end 6, in which a threaded extension of the block or core 7 is received. The core 7 is of approximately the same diameter as the interior of the shell or casing 1 and is loosely fitted therein. Thus by placing the abutment or stud 8 in its lower end and the same being normally in engagement with a stationary support no downward movement to the jaws will be permitted at any stage of the operation.

9 indicates a helical spring encircling the extended shank portion of the jaws and having its opposite ends abutting the shoulder 2 and core 7, respectively.

10 indicates a sheave fixed to the chuck-shell, whereby rotary movement is imparted thereto, as by cable 11.

12 indicates an upper bearing for supporting the upper portion of the chuck, so as to prevent any irregular movement thereof as the same is revolved, and 13 indicates another support for the lower portion of the chuck. This last-named support or bearing is, however, of an entirely different construction and while serving the same function ascribed to the first-named bearing also assists in holding an operating-sleeve 14 and the wheel, through the medium of which it is actuated, in proper relation to suitable cam-surfaces 15, arranged along the path of travel of the chuck. To accomplish this result, I rigidly secure to the lower end of the shell a band 16, upon which normally bears the sleeve 14, and at an intermediate point I form this sleeve with a projecting rib 17, which rides in the slot 18 of the bearing 13. To this rib is attached, by means of a suitable bearing, such as a screw 19, the roller 20.

While I have described in connection with my improvements a means 15 for engaging the roller 20, whereby the sleeve 14 is depressed and carries with it the shell 1, thereby releasing the jaws 4 from engagement with the cam-seats 3, yet I do not restrict myself to such means, the present invention relating entirely to the chuck proper.

In operation the chuck normally assumes a position as indicated in Fig. 1, and it will therefore be obvious that a rotary movement can readily be imparted to the shell without communicating its motion to the sleeve 14.

Thus when it is desired to release the jaws the shell is moved downward by an operation heretofore described, and as the roller passes from engagement with the cam-surface the
 5 spring 9 will immediately return the shell to its normal position, so as to force the jaws inwardly.

In the present illustration the resilient jaws are formed by longitudinally slitting a tubu-
 10 lar element. This, it will be noted, enables me to so construct the same with respect to the core that a rigid connection therebetween is effected.

During the entire operation of the chuck
 15 the gripping-jaws and the core while having a rotary movement have no vertical movement whatever, and it is this construction that enables me to more readily position the buttons or other articles between the jaws
 20 and also in a much more even manner.

While in the foregoing I have described a construction capable of performing the several functions assigned to it, yet it will be obvious that the minor details of construction
 25 can be altered without departing from the spirit of my invention, and I therefore reserve the right to make such alterations and changes as fall within the scope of the appended claims. I further desire it to be
 30 known that while I have stated that my improvement is especially adapted for use in connection with buttons and similar articles, yet I do not desire myself limited in this connection, as it will be obvious that the same
 35 can be employed to advantage in many other instances.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

40 1. In combination with a chuck rotatably mounted and having its shell at a point adjacent its lower end provided with a fixed ring,

a sleeve encircling the chuck-shell and bearing on said ring, and means for supporting said chuck comprising a plurality of fixed
 45 bearings the lower of which encircle said sleeve and being formed with a longitudinal slot, a rib formed integral with said sleeve and projecting through the slot of said last-named bearing, and a roller carried by said
 50 rib.

2. In a chuck, a rotatable shell, a slotted support encircling the same, jaws mounted in said shell, means for supporting the jaws, a sleeve loosely mounted on said shell and be-
 55 ing arranged in said support, means whereby the shell and sleeve can be moved together in a longitudinal direction, means for moving said sleeve including an element secured to said sleeve and passing through the slot of
 60 the support, and means for opening and closing the jaws during such movement.

3. In a chuck, a shell mounted for rotary and reciprocal movements, a slotted support therefor, jaws mounted in said shell, said
 65 shell moving independently of the jaws during its reciprocal movement, means whereby the jaws are opened and closed as the shell is reciprocated, a fixed means carried by the shell, a sleeve, loosely encircling the shell and
 70 bearing on said fixed means, a rigid means secured to said sleeve and projecting into the slot of said support whereby said sleeve is prevented from rotating, and means carried
 75 by said sleeve for engagement with a cooperating means whereby the sleeve is moved longitudinally of the shell.

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

LOUIS W. HOLUB.

Witnesses:

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 B. J. MADERT.