June 7, 1949. W. ANEST 2,472,184

SNAP CHUCK

Filed May 13, 1947

Fig. 1.

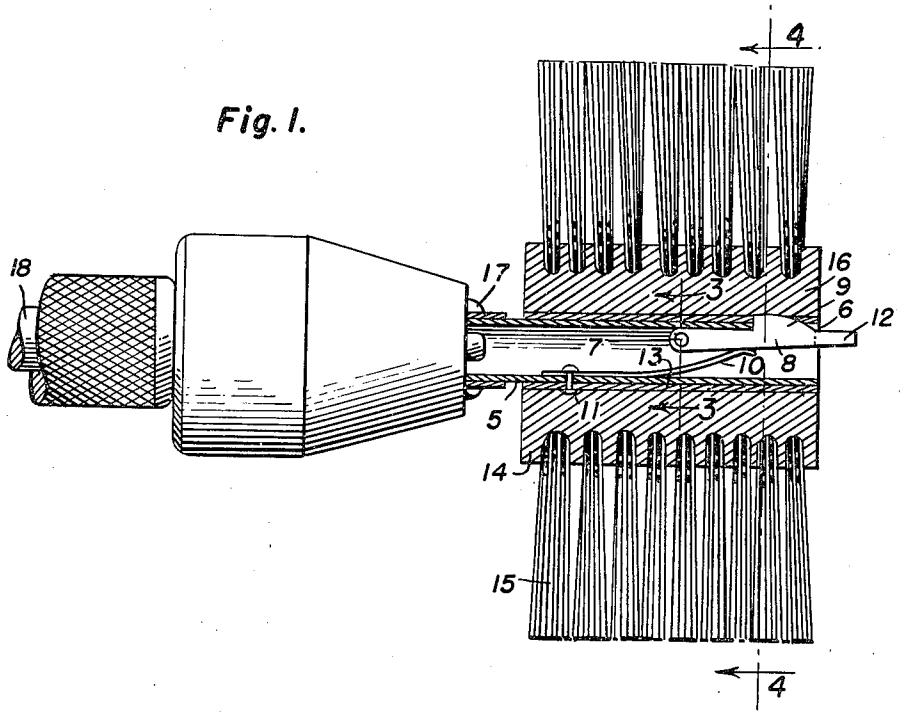
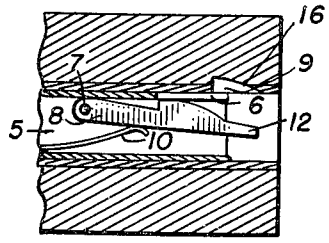


Fig. 2.



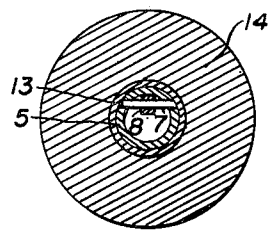


Fig. 3.

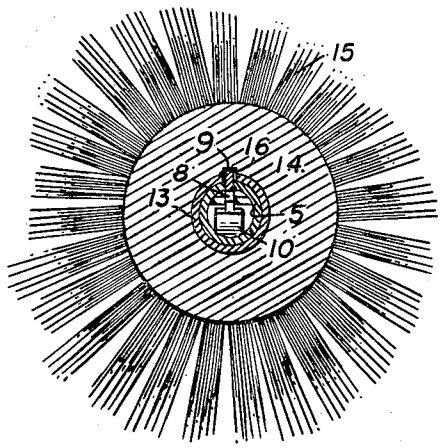


Fig. 4.

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2,472,184

SNAP CHUCK

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Application May 13, 1947, Serial No. 747,865

1 Claim. (Cl. 279—79)

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This invention relates to new and useful improvements in snap chucks and the primary purpose of the present invention is to provide improved securing means for fastening tools to a shaft or spindle.

Another important object of the present invention is to provide a device of the character referred to including key means for holding a wheel onto a shaft or spindle for like rotation of the wheel with the spindle.

A further object of the present invention is to provide a locking latch pivoted in a slot in the end of a spindle and spring means normally projecting the latch outwardly of the slot for engagement with a slot provided in the bore of a wheel.

A still further important purpose of the present invention is to provide a device of the class described that is simple and practical in construction, strong and reliable in use, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a longitudinal sectional view of the wheel, mounted on the spindle;

Figure 2 is an enlarged fragmentary view showing the wheel partially on the spindle;

Figure 3 is a sectional view taken on line 3—3 of Figure 1, and

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 1.

Referring now to the drawings in detail, wherein for the purpose of illustration, I have disclosed a preferred embodiment of the present invention, the numeral 5 represents a spindle or shaft hollow at one end and having a longitudinal slot 6 at this hollow end.

Pivoted within the spindle by a pin or the like 7 is one end of a locking latch 8 having an outwardly projecting lip 9 adapted for movement with the latch into and out of position in the said slot 6.

A resilient leaf spring 10 has one end secured by a rivet or the like 11 in the hollow end of the spindle and the free end of said spring bears against the latch for normally forcing the lip 9 of the latch outwardly through said slot.

The outer end 12 of the latch projects outwardly longitudinally of the end of said spindle to provide finger gripping means for retracting the latch into the slot so that the hollow end of the spindle may be inserted into the metal lined bore 13 extending through the core 14 having bristles 15, as shown in Figure 2 of the drawings.

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When the hub is positioned on the spindle correctly, the lip of the latch extends upwardly into a longitudinal groove 16 provided in the bore thereby locking the wheel to the spindle for rotation of the wheel with the spindle.

The end of the spindle is gripped by the usual clamping jaws 17 of an armature 18 of a conventional motor which furnishes the necessary power for rotating the spindle as shown in Figure 1.

As shown in the drawings, the core has bristles, however, any type of material may be mounted on the core such as buffing, polishing material without deviating from the present invention.

To remove the core from the spindle it is merely necessary to depress the latch in the slot and pull the core outwardly of the spindle.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in the art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

What I claim is:

In combination with a tool hub having an axial bore and a notch formed in the bore including a shoulder; means for securing a driving shaft in the axial bore of the tool hub, said means comprising a hollow shaft open at one end, a longitudinal slot provided in said shaft adjacent the open end thereof, a pivotal latch mounted within the shaft, an outwardly projecting lip integrally formed with said latch for sliding movement in said slot, said lip including a transverse bearing edge engaging the shoulder of the notch formed in the tool hub bore to prevent rotary movement of the tool hub relative to the shaft and to hold the tool hub against longitudinal movement on the shaft in one direction, spring means fixed within the shaft for normally urging the lip outwardly from the slot, and a finger engaging lever integrally formed with the latch and projecting outwardly from the open end of the shaft.

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