No. 698,718. Patented Apr. 29, 1902.

W. G. LEAS.

NIPPLE CHUCK.

(Application filed Oct. 22, 1900.)

(No Model.)

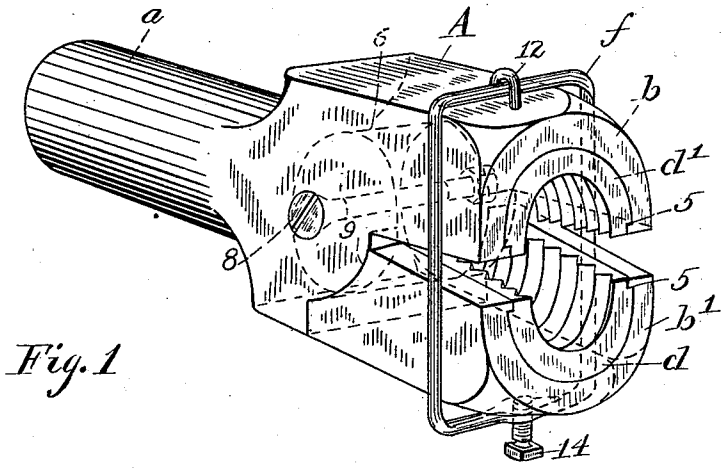


Fig. 1

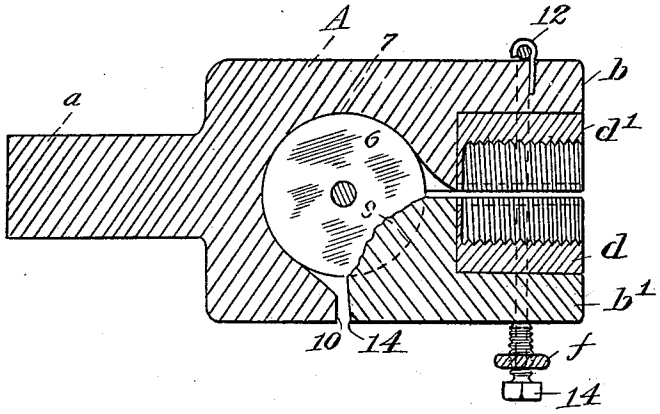


Fig. 2

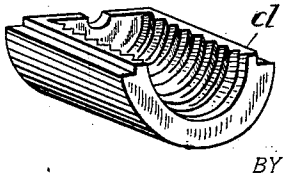


Fig. 3

WITNESSES:
Sam'l H. Richardson
Luke A. Miley

INVENTOR.
William G. Leas
BY Frank C. Adams,
ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM GEORG LEAS, OF SEATTLE, WASHINGTON, ASSIGNOR OF ONE-HALF TO JOHN HARTIG, OF SEATTLE, WASHINGTON.

NIPPLE-CHUCK.

SPECIFICATION forming part of Letters Patent No. 698,718, dated April 29, 1902.

Application filed October 22, 1900. Serial No. 33,904. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GEORG LEAS, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Nipple-Chucks, of which the following is a specification.

My invention relates to improvements in chucks, and has special reference to devices of this class which are adapted to hold sections of threaded bars or pipe.

The objects of my invention are to provide a chucking device of inexpensive and simple construction which shall embody essential features of durability, be positive in its grip, and avoid mutilating the threads on nipples, studs, or like work when gripped.

The above and other desirable objects I attain by the constructions, combinations, and arrangement of parts as disclosed on the accompanying drawings, set forth in the following specification, and especially pointed out in the appended claim.

In the drawings included with this specification, Figure 1 is a perspective view of the entire chuck. Fig. 2 is a vertical longitudinal section of Fig. 1, and Fig. 3 is a perspective view of one of the clamps detached from the jaw.

Like characters of reference designate corresponding parts throughout the several views of the drawings.

In the preferred embodiment of my invention as disclosed in the present instance the character A designates a head which is suitably formed to conveniently carry a plurality of suitable jaws and is also provided with a shank, as *a*, by which the chucking device is held for manipulation. At the opposite side of the head from the shank *a* are the jaws of the chuck, which in the preferred embodiment comprise a single pair, as *b* and *b'*, the former of which is preferably firmly fixed to the head by forming it integral therewith, and the face thereof is given the desired contour to receive a detachable clamp, as *d*. The lower jaw *b'* is conveniently rendered adjustable, so as to open and close with reference to the opposing jaw *b*, and the face thereof is formed similar to the face of said jaw to likewise receive a detachable clamp, as *d'*. Each of the clamps *d* and *d'* is preferably engaged with its respective jaw by means of suitable dovetail joints, as 5, conveniently formed by providing grooves longitudinally the outer surface of the body of the clamp and corresponding ribs on the face of the jaws, whereby the clamps are conveniently rendered detachable to effect an exchange to accommodate various sizes of work between the jaws.

A suitable hinge-joint is preferably used to connect the adjustable jaw *b'* to the head A, and consists in the present embodiment of a butt-joint conveniently formed by providing a flat circular lug 6 at the inner end of the jaw, which lug is made to fit snugly a corresponding recess, as 7, provided in the head, and a suitable removable pintle, as 8, in the form of a bolt, is placed through the head, concentric to the lug 6 and recess 7, to maintain the position of the jaw and increase the stability of the joint.

The face of the fixed jaw *b* is preferably set radial with the pintle or bolt 8, and the face of the adjustable jaw *b'* is likewise positioned, and the inner end of the latter has a shoulder, as 9, beyond each face of the lug 6 to present abutting surfaces to the edges of the side walls of the recess 7, at the mouth thereof, to more fully insure the jaw from end play as the work held is forced to the die.

A suitable stop in the form of a shoulder 10 is conveniently positioned on the head A to limit the opening movement of the adjustable jaw *b* by engaging a like shoulder, as 14, formed on the jaw and as indicated in Fig. 1.

A suitable device in the form of a screw-clamp *f* is preferably used to force the jaws together to clamp the work and in the present embodiment comprises an open rectangular frame normally embracing both jaws and hinged to the one fixed to the head by means of a staple, as 12, which is secured in the back of said jaw and embraces one side of the frame, and a suitable set-screw is conveniently engaged by a screw-thread in the opposite side of said frame, so that the end thereof is made to impinge the back of the adjustable jaw to force the jaws of the chuck together when the set-screw is properly turned.

In the construction of the device the detachable clamps *d* and *d'* are preferably composed of cast-steel, and suitable threads are provided on the gripping-surface thereof to engage the threads of the nipple, studs, or like work. These threads of the clamps are formed in casting, as I find castings of the above material come from the sand with the threads complete and uniform and ready for use. The clamps are made in pairs consisting of two halves, as shown, and the clamping-faces of each pair are varied in size and contour, while the outer form and dimensions of the body remain constant throughout the series used in each chuck, so as to adapt the device for various forms and sizes of work.

The head A of the chuck is preferably cast of iron, with the shank *a* and the jaw *b* integral and the recess 7 cored, and a piece of flexible wire to form the staple 12 is conveniently fastened in place in the jaw *b* by placing it in the mold, and after the casting is made the free end of the wire is bent upon itself to form the staple.

The chucking device is used to hold the work to or from rotation, as may be desired, the shank being secured to any ordinary rotatable or non-rotatable device adapted to carry the chuck to rotation or hold it from rotation, as required, to properly operate upon the work—as, for instance, cutting threads on the last end of a nipple—the threaded end is clamped by the chuck, and the unthreaded end is cut by either rotating the die while the chuck is held from rotation or by rotating the chuck while holding the die. In either instance the clamps of the chuck insure the threads of the nipple from mutilation and afford a firm grip, which permits a proper performance of the work of cutting the thread on the remaining end of the nipple.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A device of the nature indicated, comprising a head having an integral shank and a jaw with a longitudinally-concaved face, a recess in the head and ribs longitudinally of the face of the jaw, a second jaw having its face formed like the first said jaw and having a circular lug fitting snugly in the said recess and shoulders abutting against the edges of the mouth thereof, a pintle concentric with said lug and the recess, a clamp for each jaw-face consisting of a cast-steel body slidably fitting the said concave and grooved to receive the ribs and having screw-threads in the gripping-surface, a screw-clamp comprising an open rectangular frame embracing both jaws and hinged to the first said jaw and having a set-screw impinging the back of the second jaw.

Signed by me at Seattle, Washington, this 27th day of September, 1900.

WILLIAM GEORG LEAS.

Witnesses:
C. A. McKENZIE,
FRANK E. ADAMS.