W. F. RICE.

BUSH HAMMER.

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1,031,870.

Patented July 9, 1912.

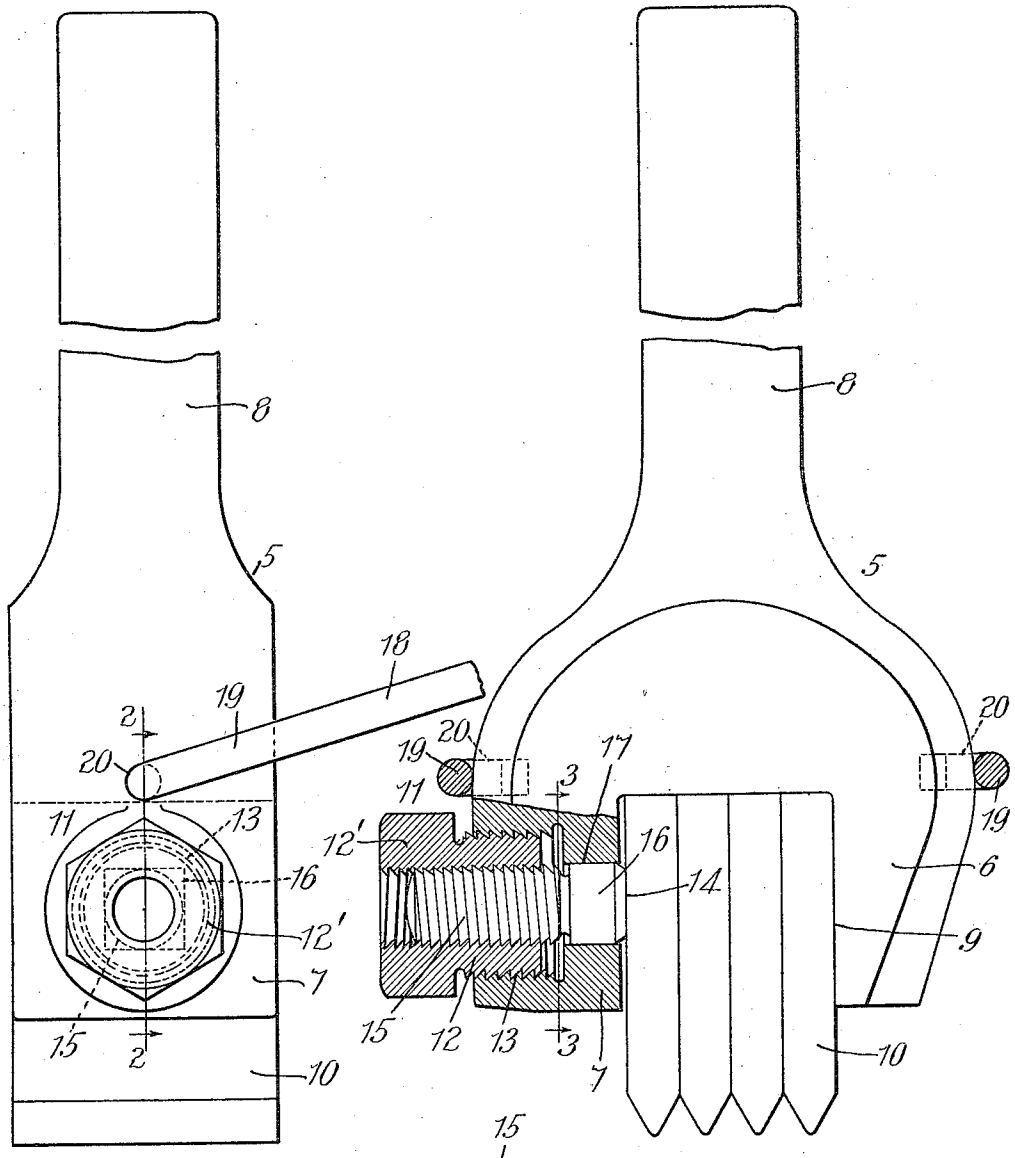

Fig. 1.

Fig. 2.

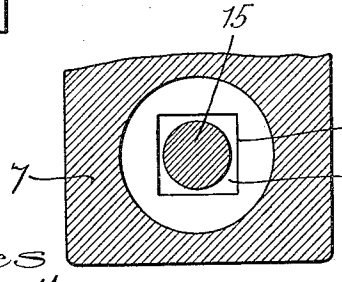

Fig. 3.

Witnesses
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Inventor:
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UNITED STATES PATENT OFFICE.

WALTER F. RICE, OF QUINCY, MASSACHUSETTS.

BUSH-HAMMER.

1,031,870. Specification of Letters Patent. Patented July 9, 1912.

Application filed April 1, 1912. Serial No. 687,582.

To all whom it may concern:

Be it known that I, WALTER F. RICE, a citizen of the United States, residing at Quincy, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Bush-Hammers, of which the following is a specification.

This invention relates to an improved bush hammer such as is used in finishing stone work, the object of the invention being to provide a bush hammer in which the cutters are firmly held in the holder without any danger of becoming accidentally loosened and becoming detached therefrom. Said bush hammers may be used for finishing the face of the stone by hand or they may be used in connection with power and the device hereinafter described is particularly adapted to be used in connection with a power machine.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a side elevation of a bush hammer constructed in accordance with my invention, the shank of the holder being broken away to save space in the drawings. Fig. 2 is a front elevation of the same, partly in section on line 2—2 of Fig. 1. Fig. 3 is a sectional elevation taken on line 3—3 of Fig. 2 looking in the direction of the arrows on said line.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 is a tool holder with a pair of jaws 6, 7 at one end thereof, the same having a shank 8 integral therewith and adapted to be inserted in the driver of a power machine. A slot 9 is provided between the two jaws 6, 7 and in this slot 9 the cutters 10 are inserted. The cutters 10 are locked in the slot 9 by a two-part clamping member 11, one of the parts of said clamp member consisting of a sleeve 12 screw-threaded exteriorly at 13 to engage a corresponding screw-thread provided in the jaw 7. Said part 12 extends transversely of the jaw 7 and part way through said jaw from its outer side. The other part of said two-part clamp consists of an auxiliary jaw 14, said auxiliary jaw being cylindrical for a portion of its length, and screw-threaded throughout said cylindrical portion as at 15 to engage a similar screw-thread formed upon the interior of the sleeve 12. Said sleeve 12 has a hexagonal head 12′ whereby it may be rotated by means of a wrench. Said auxiliary jaw projects from the sleeve 12 transversely of the jaw 7 into the slot 9 and has a square head 16 projecting through a similarly shaped hole 17 in the jaw 7 adjacent to the slot 9. This auxiliary jaw bears against one of the cutters 10.

The screw-threads 13 are of greater pitch than the screw-threads 15, as, for instance, the screw-threads 13 might be eight to an inch while the screw-threads 15 might be ten to an inch. The screw-threads 13 and 15 are also preferably formed with one face of each thread substantially at right angles to the median axial line of the sleeve 12, while the other face of said thread forms an acute angle thereto.

In order to move the bush hammer around to different locations, the same is controlled by means of a handle 18 forked at its front end at 19 to straddle the holder 5, the front ends of the forks 19, 19 being provided with bent ends 20, 20 which extend into holes provided in the holder 5 and thus the handle 18 is pivotally attached to said holder and by means of said handle, the holder, with the cutters thereon, can be moved about to different locations during the finishing operation of the stone.

The general operation of the device hereinbefore specifically described is as follows: The cutters 10 are placed within the slot 9 and are clamped within said slot against the jaw 6 by the two part clamp member 11. This is accomplished by rotating the sleeve 12 of the two part member by a suitable wrench applied to the head 12′, and as the head 16 of the auxiliary clamp 14 cannot turn, being located in the square hole 17, the result of rotating the outer member 12 in one direction will be to force the head 16 of the auxiliary clamp member against the adjacent cutter 10 and thus force said cutters 10, 10 against the opposite jaw 6. By reversing the rotation of the member 12, the head 16 will be withdrawn from contact with the adjacent cutter and the cutters can then be removed from the jaw.

By means of the clamping member described, great power can be obtained and it has also been demonstrated by the practical use of this tool that the jarring of the tool, which is very great and sustained for a long period of time, does not in the least

loosen or displace either of the members of the two-part clamp, so that the cutters are clamped between the jaws 6 and 7 with great power and do not become accidentally detached therefrom.

Assuming the screw-threads 13 and 15 to be of the pitch hereinbefore described, the screw 13 having eight threads to the inch and the screw 15 having ten threads to the inch, it will be seen that by a complete rotation of the sleeve 12 the auxiliary clamp will be moved forward one fortieth of an inch, so that the power of a screw having forty threads to an inch can be obtained with a strength against stripping of a screw-thread having ten threads to an inch, and the combination of the two makes a very powerful holder for the cutters.

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

1. A bush hammer having, in combination, a tool holder with a pair of jaws at one end thereof and having a slot between said jaws adapted to receive cutters, means to lock said cutters in said slot between said jaws comprising a two-part clamp member, one of said parts consisting of a sleeve screw-threaded exteriorly to engage one of said jaws and extending transversely of said jaw part way therethrough from the outer side of said jaw, said sleeve screw-threaded on its interior, the other of said parts consisting of an auxiliary jaw screw-threaded to engage the screw-threaded interior of said sleeve and projecting therefrom transversely of said holder jaw and into said slot and adapted to bear against one of said cutters and force said cutters toward the other of said holder jaws and means to prevent said auxiliary jaw from rotating in said holder jaw, the screw-threads on said auxiliary jaw and on the exterior of said sleeve being of different pitch.

2. A bush hammer having, in combination, a tool holder with a pair of jaws at one end thereof and having a slot between said jaws adapted to receive cutters, means to lock said cutters in said slot between said jaws comprising a two part clamp member, one of said parts consisting of a sleeve screw-threaded exteriorly to engage one of said jaws and extending transversely of said jaw part way therethrough from the outer side of said jaw, said sleeve screw-threaded on its interior, the other of said parts consisting of an auxiliary jaw screw-threaded to engage the screw-threaded interior of said sleeve and having a head with flattened sides projecting from the inner end of said sleeve transversely of said holder jaw and into said slot and fitting a similarly shaped hole in said holder jaw, said head adapted to bear against one of said cutters and force said cutters toward the other of said holder jaws, the screw-threads on said auxiliary jaw and on the exterior of said sleeve being of different pitch.

3. A bush hammer having, in combination, a tool holder with a pair of jaws at one end thereof and having a slot between said jaws adapted to receive cutters, means to lock said cutters in said slot between said jaws comprising a two part clamp member, one of said parts consisting of a sleeve screw-threaded exteriorly to engage one of said jaws and extending transversely of said jaw part way therethrough from the outer side of said jaw, said sleeve screw-threaded on its interior, the other of said parts consisting of an auxiliary jaw screw-threaded to engage the screw-threaded interior of said sleeve and projecting therefrom transversely of said holder jaw and into said slot and adapted to bear against one of said cutters and force said cutters toward the other of said holder jaws and means to prevent said auxiliary jaw from rotating in said holder jaw, the screw-thread on the exterior of said sleeve being of greater pitch than that on said auxiliary jaw.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WALTER F. RICE.

Witnesses:
CHARLES S. GOODING,
SYDNEY E. TAFT.