

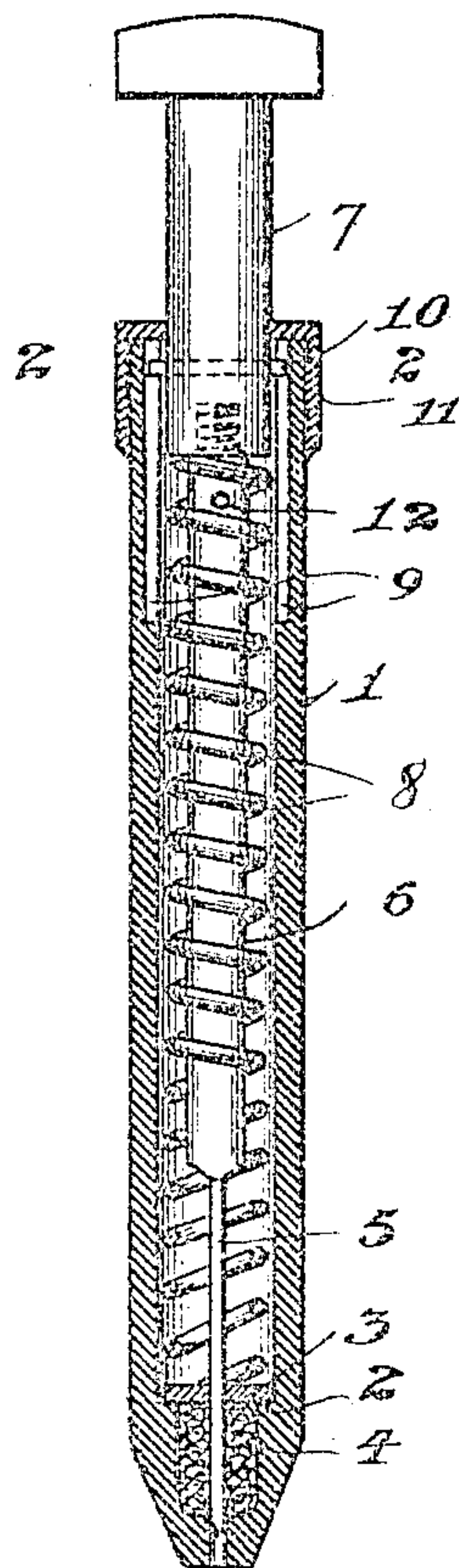
No. 787,064.

PATENTED APR. 11, 1905.

S. J. WELTER.  
HAND TOOL.

APPLICATION FILED JUNE 15, 1904.

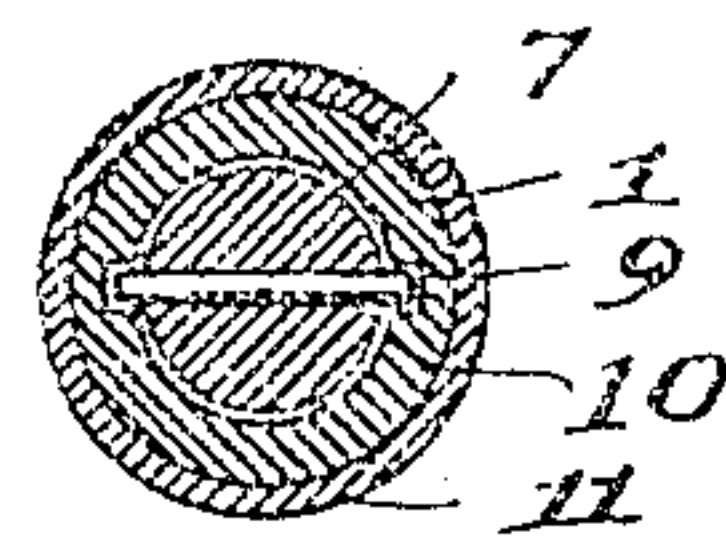
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

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## HAND-TOOL.

SPECIFICATION forming part of Letters Patent No. 787,064, dated April 11, 1905.

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*To all whom it may concern:*

Be it known that I, SEBASTIAN J. WELTER, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hand-Tools, of which the following is a specification.

This invention relates to hand-tools, and more particularly to punches, awls, drills, and the like, and has among its salient objects to provide a casing for the penetrating member of such tool, having a lubricating-chamber through which said penetrating member works, whereby it is thoroughly lubricated as it emerges from the casing each time to penetrate the object upon which it is used; to provide a spring within said casing operating to withdraw the penetrating member after it has been forced into the thing penetrated, and in general to provide improvements in the details of construction and arrangement tending to produce a durable, efficient, and practicable hand-tool of the character referred to. I am aware that centering-tools have been provided with a similar casing for the penetrating member; but in each instance the casing acts merely as a guide to center the penetrating member of the tool, and in none of them is there any suggestion of a lubricating-chamber for lubricating the penetrating member as it does its work. This feature makes a most desirable and effective improvement in the operation of tools adapted to be used in hardwood, the penetrating member of the tool being made capable of being withdrawn by a spring, whereas without the lubrication it sticks and is with more or less difficulty withdrawn manually. Again, the spring provided in my device is of such tension that when the tool is being driven with a hammer into hardwood finishing it acts as a cushion under the blow, thereby preventing the jarring which so often results in the loosening of the plastering and causing other damage.

The invention will be readily understood from the following description, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a

tool embodying the present invention. Fig. 2 is a transverse sectional view taken on line 2 2 of Fig. 1, and Fig. 3 is a fragmentary view showing side elevation of one form of punch used, the edge elevation being shown in Fig. 1.

Referring to the drawings, 1 designates a tubular metal casing slightly reduced in its interior diameter near the lower end thereof to provide shoulders 2, upon which is mounted a washer 3, whereby a chamber 4 is formed in the lower end of the casing, into which is placed an absorbent material saturated with oil or other lubricating matter for a purpose hereinafter referred to.

5 designates a punch or awl secured in the present instance to a shank 6, provided at its upper end with a head-piece 7, and the whole mounted within the casing 1 with the punch 5 extending through the washer 3 and the lubricating-chamber 4 in the manner shown.

8 designates a coiled spring mounted upon the shank 6 and resting at one end upon the washer 3 and against the head-piece 7 at its other end and tends to keep the punch withdrawn in the position shown in Fig. 1 of the drawings.

At diametrically opposite sides on the interior of the casing 1, near its upper end, are two longitudinally-extending grooves 9, within which are arranged to work the opposite ends of a through-pin 10, extending transversely through the head-piece 7, said pin being limited in its upward movement within said grooves by a cap 11, mounted upon the upper end of the casing 1 and through which the head-piece 7 works. It will thus be seen that the tool proper reciprocates within the casing, which may be of any desired and suitable material, and that its movement is confined to the length of the grooves in the construction shown, which is of course sufficient to permit the punch or awl 5 to be extended its full length out of the casing 1. If the casing is made entirely of metal, its surface may be roughened in any desired manner, as by milling or nurling, to facilitate the gripping thereof. It may be of wood with metal end pieces.

The punch or awl here shown is provided



with a chisel-like edge, which when driven into hardwood crosswise of the grain cuts its way and prevents splitting of the wood, as is so often the case with a round punch or nail. It is obvious that other forms of punches may be used as may be best adapted to the particular work.

12 designates a hole for a nail or pin to facilitate the unscrewing of the shank 6 from the head-piece when it is desired to change the form of punch.

It will be obvious from the above that as the penetrating member of the tool emerges from the lower end of the casing within which is the lubricating-chamber 4 it is freshly lubricated each time, whereupon it is more easily driven into the hardwood or other substance and is also more easily drawn out of said wood or other substance, the tension of the spring 8 being sufficient of itself to withdraw the tool from the substance penetrated when the penetrating member is lubricated in the manner described. One blow of the hammer is sufficient to send the punch into the hardwood or other substance the full length of the exposed head-piece 7, while the spring 8 is strong enough to withdraw it promptly after the blow.

It will be obvious that alterations and modifications can be made in the details of construction and arrangement without departing from the spirit of the invention, and I do not, therefore, limit the invention to the details shown and described, except in so far as they are made the subject-matter of specific claims.

I claim—

1. In a hand-tool, a penetrating member, a handpiece constituting a casing therefor and through which said penetrating member reciprocates, said casing being provided with a lubricating-chamber through which said penetrating member works, whereby it is lubricated as it emerges from said casing.

2. In a hand-tool, the combination with a handpiece, of a penetrating member mounted to reciprocate therethrough, a spring mounted within said handpiece upon said penetrating member and operating to draw said penetrating member into its normal position relative to said handpiece, and means forming a part of said hand-tool and automatically lubricating the penetrating point

as it enters the substance penetrated, for the purpose described.

3. In a hand-tool, the combination with the penetrating member thereof, of a casing therefor through which said penetrating member works, said casing having therein a lubricating-chamber through which said member reciprocates, and a coiled spring mounted within said casing and operating to withdraw said penetrating member.

4. A hand-tool, comprising in combination a handpiece, a penetrating member mounted to reciprocate through said handpiece, a coiled spring mounted within said handpiece upon said penetrating member and operating to draw the penetrating member out of the work and into the handpiece, and means for lubricating said penetrating member automatically as it reciprocates within said handpiece, for the purpose described.

5. A hand-tool, comprising in combination a handpiece, a penetrating member mounted to reciprocate within said handpiece, a head-piece to which said penetrating member is removably attached, a coiled spring mounted within said handpiece and upon said penetrating member and operating to draw the penetrating member from the work into the handpiece, and a lubricating-chamber within said handpiece through which said penetrating member reciprocates, for the purpose described.

6. In a hand-tool of the character described, a handpiece constituting a casing and provided on its interior with longitudinally-extending grooves, a head-piece mounted to reciprocate within said handpiece and provided with a through-pin working within said grooves, a penetrating member removably mounted upon said head-piece and reciprocating therewith, said casing having in its lower end a lubricating-chamber, lubricating matter within said chamber through which said penetrating member works as it emerges from said casing, and a spring mounted upon said penetrating member within said handpiece and operating to positively draw said penetrating member from the work and into the casing, substantially as described.

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