March 17, 1931. O. V. OSBORNE 1,797,016

SCRATCH AWL

Filed Sept. 9, 1929

Fig. 1.

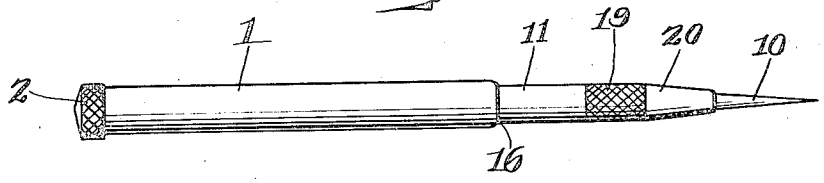


Fig. 2.

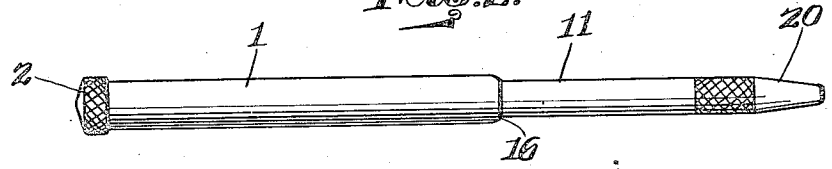


Fig. 3.

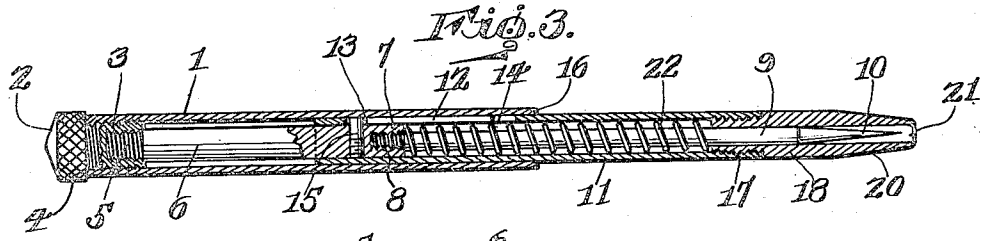


Fig. 4.

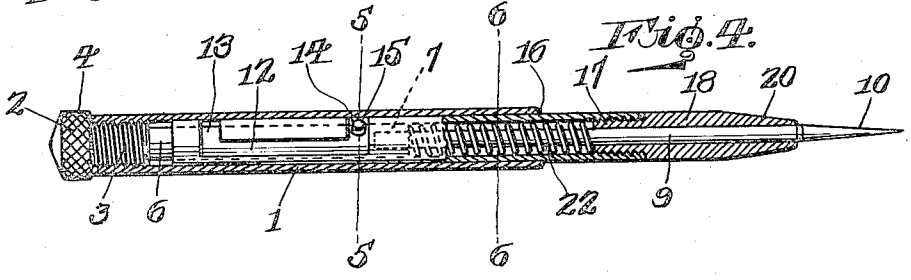


Fig. 5.

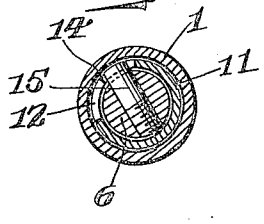
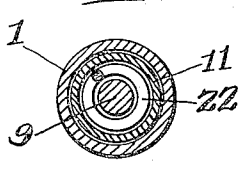


Fig. 6.



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UNITED STATES PATENT OFFICE

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SCRATCH AWL

Application filed September 9, 1929. Serial No. 391,351.

This invention relates to a scratch awl primarily designed for use by machinists and carpenters for marking metal, timbers, or the like, preparatory to cutting or sawing the same and has for its primary object to provide, in a manner as hereinafter set forth, a device of the above mentioned character in which the working point is normally maintained in inoperative position within the body portion of the awl whereby the latter may be conveniently carried in a pocket of one's clothing without likelihood of injury to the clothing or person of the user.

A further object of the invention is to provide a normally inoperative scratch awl as aforesaid in which the working point may be quickly and positively protruded from the body portion of the awl into operative position when desired, and which includes means for securely and automatically latching the working point in said operative position.

With the foregoing and other objects in view the invention consists of the novel construction, combination and arrangement of parts as hereinafter more particularly described and as illustrated in the accompanying drawings wherein is shown an embodiment of the invention, but it is to be understood that the description and drawings are to be taken as illustrative and that the invention is intended to be limited only by the scope of the claims hereunto appended.

In the drawings wherein like reference characters are employed to designate like parts throughout the same:—

Figure 1 is a longitudinal view of a scratch awl in accordance with this invention, showing the same with the working point in protruding or operative position.

Figure 2 is a similar view with the working point in inoperative position.

Figure 3 is a longitudinal section of the embodiment shown in Figure 2.

Figure 4 is a longitudinal section of the embodiment shown in Figure 1 taken at substantially a right angle to Figure 3.

Figure 5 is a section taken on the line 5—5 of Figure 4.

Figure 6 is a section taken on the line 6—6 of Figure 4.

Referring to the drawings in detail the numeral 1 indicates a cylindrical handle member which is closed at one end by a cap 2 having an externally threaded shank 3 engaging internal threads provided in the member 1 adjacent its closed end. The peripheral face of the cap 2 is preferably knurled as indicated at 4 whereby it may be more firmly gripped by the fingers for the purpose of screwing and unscrewing the shank 3 with respect to the member 1. The shank 3 is hollow for a portion of its length and such hollow portion is internally threaded for engagement with the externally threaded end 5 of an elongated guide member 6 extending longitudinally of the member 1. The guide member 6 is of materially less length than the handle member 1 whereby the inner end 7 of the guide member 6 is positioned intermediate the ends of the handle member 1. Formed in the inner end 7 of the guide member 6 is a socket 8 having a threaded wall for securing an awl 9 thereto at one end of the latter. The opposite end of the awl is tapered to a point as indicated at 10.

Slidably mounted on the guide member 6 is a sleeve 11 which is provided with a longitudinally extending slot 12 formed at its ends with right angularly disposed portions which provide transversely extending recesses 13 and 14 in the sleeve 11. Projecting from the peripheral face of the guide member 6 is a removable stud 15 which extends through the slot 12 thereby locking the sleeve 11 and guide member 6 together. The sleeve 11 projects from the inner end 16 of the handle member 1 and threaded into such projecting end is the shank 17 of a grip member 18. A portion of the peripheral face of the grip member 18 is preferably knurled as indicated at 19 to provide a better gripping surface for the purpose of assembling and disassembling the grip member 18 with respect to the sleeve 11 and for the purpose of operating the awl. The knurled portion 19 of the grip member 18 extends in continuation of the sleeve 11 and the outer portion of the grip member 18 is tapered as indicated at 20.

Extending longitudinally through the grip

member 18 is an opening 21 for the passage of the awl 9 therethrough.

Disposed within the sleeve 11 and encircling the awl 9 is a coiled spring 22 which has its respective ends secured to the sleeve 11 and guide member 6. The respective ends of the spring 22 further abut the opposing end faces of the shank 17 and guide member 6. The spring 22 is under compression longitudinally and is further under torsional compression whereby the sleeve 11 is normally forced outwardly over the tapered end 10 of the awl and is further rotated to draw the recesses 13 and 14 into engagement with the stud 15 when brought into alignment therewith.

Due to the torsional and longitudinal compression of the spring 22, the instrument is normally maintained in the position indicated in Figures 2 and 3. When it is desired to protrude the tapered end 10 from the grip member 18 as indicated in Figures 1 and 4, in order that the point of the tapered end 10 may be drawn across any work upon which it is desired to make a mark, it is merely necessary to rotate the sleeve 11 sufficiently to disengage the recess 13 from the stud 15, and then force the sleeve 11 inwardly with respect to the handle member 1 against the longitudinal compression of the spring 22. When the recess 14 is brought into alignment with the stud 15, the torsional compression of the spring 22 will automatically rotate the sleeve 11 to bring the recess 14 into engagement with the stud 15 whereby the tapered point 10 will be latched in operative or protruding position.

It is thought that the many advantages of a scratch awl in accordance with this invention will be readily apparent and although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to, so long as such changes fall within the scope of the invention as defined in the appended claims.

What I claim is:

1. A scatch awl comprising, a tubular handle member, a guide member secured therein, a working member secured to the guide member and projecting from the handle member, a sleeve slidably and rotatably mounted on the guide member, a spring encircling the working member and having its respective ends anchored to the guide member and sleeve for exerting a continuous force on the sleeve tending to slide and rotate the same, and means carried by the guide member and sleeve for limiting relative movement therebetween.

2. A scratch awl comprising, a tubular handle member, a guide member secured therein, a working member secured to the guide member and projecting from the handle member, a sleeve slidably and rotatably mounted on the guide member, a spring encircling the working member and having its respective ends anchored to the guide member and sleeve, and means carried by the guide member and sleeve for limiting the sliding movement of the latter in both directions, said guide member and sleeve having coacting means for latching the latter against sliding movement, said spring being under longitudinal and torsional compression to normally force the sleeve in a direction away from the handle member and to continuously exert a rotating force on the sleeve to automatically latch the same at the terminii of its path of sliding movement.

3. A scratch awl comprising, a tubular handle member, a guide member secured therein, a working member secured to the guide member and projecting from the handle member, a sleeve slidably and rotatably mounted on the guide member, a spring encircling the working member and having its respective ends anchored to the guide member and sleeve for exerting a continuous force on the sleeve tending to slide and rotate the same, said sleeve having a longitudinally extending slot having right angularly disposed end portions to provide transversely extending recesses in the sleeve, and a stud carried by the guide member and extending through said slot for selective engagement with the end walls thereof to limit the sliding movement of the sleeve in both directions and for engagement with the walls of said recesses to latch the sleeve against sliding movement.

4. A scratch awl comprising, a tubular handle member, a guide member secured therein, a working member secured to the guide member and projecting from the handle member, a sleeve slidably mounted on the guide member, a spring encircling the working member and having its respective ends anchored to the guide member and sleeve, said sleeve having a longitudinally extending slot having right angularly disposed end portions to provide transversely extending recesses in the sleeve, and a stud carried by the guide member and extending through said slot for selective engagement with the end walls thereof to limit the sliding movement of the sleeve in both directions, said spring being under longitudinal compression to normally force the sleeve in a direction away from the handle member, said spring further being under torsional compression for engaging said stud with the walls of said recesses when brought into alignment with the latter to automatically latch the sleeve against sliding movement.

5. A scratch awl comprising, a tubular handle member, a working member immovable with respect thereto and projecting therefrom, a sleeve slidably and rotatably mounted with respect to the handle member

and working member, means normally forcing the sleeve in a direction away from the handle member, said sleeve having a longitudinally extending slot formed with right angularly disposed end portions to provide transversely extending recesses in the sleeve, a stud extending transversely of the handle member and being immovable with respect thereto, said stud projecting through said slot and coacting with the end walls thereof to limit sliding movement of the sleeve, and means for automatically rotating the sleeve to engage the stud with the walls of said recesses when brought into alignment with the latter to latch the sleeve against sliding movement.

In testimony whereof, I affix my signature hereto.

ORIEN V. OSBORNE.