J. CURTIS.

HANDLE AND IMPLEMENT COUPLING.

APPLICATION FILED MAR. 22, 1919.

1,331,806. Patented Feb. 24, 1920.

Fig. 1.

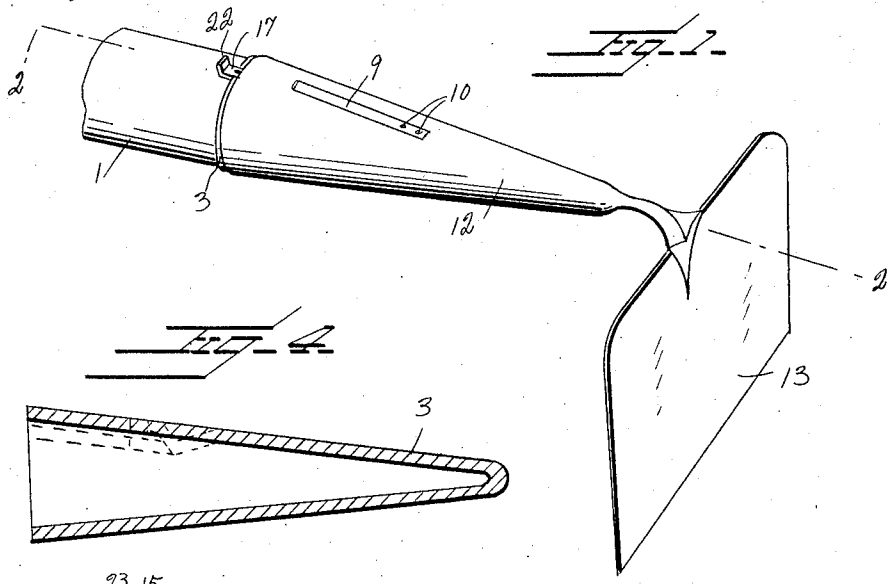


Fig. 4.

Fig. 2.

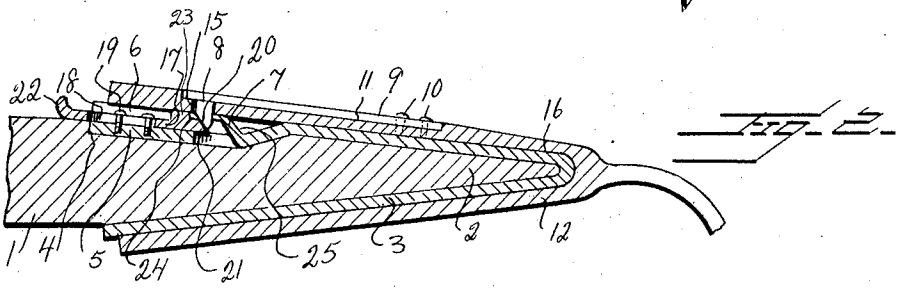


Fig. 3.

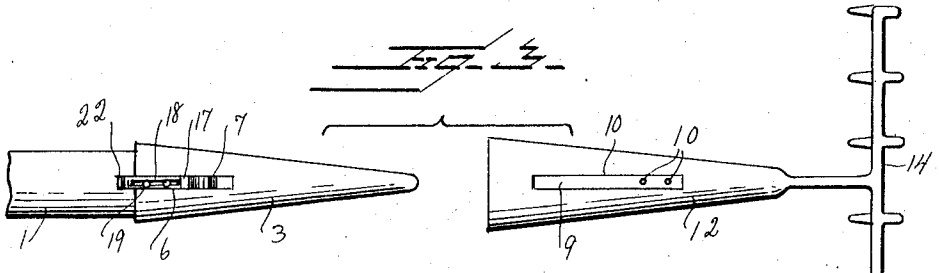
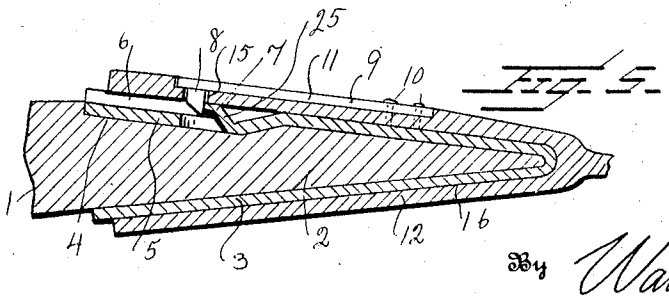


Fig. 5.



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HANDLE AND IMPLEMENT COUPLING.

1,331,806. Specification of Letters Patent. Patented Feb. 24, 1920.

Application filed March 22, 1919. Serial No. 284,275.

To all whom it may concern:

Be it known that I, JASPER CURTIS, a citizen of the United States, residing at Bonita, in the parish of Morehouse and State of Louisiana, have invented certain new and useful Improvements in Handle and Implement Couplings, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to the art of farming implements and particularly to a hoe or rake construction including an improved fastening device, for detachably connecting various farming tools or implements to a common handle, in other words, to provide a handle and means thereon common to various farming tools or implements, whereby a detachable connection may be afforded between the handle and any one of the tools or implements.

The invention aims to provide a device of this kind, which is simple, efficient and practical in construction, and may be manufactured for a small cost and sold at a reasonable profit.

The invention further aims to provide a fastening of this general character including sliding means carried by the handle, for actuating the spring fastening member, whereby the handle may be detached easily and quickly.

It is to be noted as a further aim of the invention that by simply inserting the metal incased tapered end of the handle into the correspondingly shaped socket of the extension of the hoe, the hoe may be easily and quickly connected, a lug carried by a spring member on the socketed extension of the hoe will readily engage a shoulder at one end of a depression in the casing covered extremity of the handle, to rigidly secure the hoe to the handle.

The invention further aims to provide means formed integral with the casing of the end of the handle, to be depressed into a recess of the wood handle, to hold the casing to the handle.

While the design and construction at present illustrated and set forth is deemed preferable, it is obvious that as a result of a reduction of the invention to a more practical form for commercial purposes, the invention may be susceptible to changes, and the right to these changes is claimed, provided they are comprehended within the scope of what is claimed.

The invention comprises further features and combination of parts, as will be hereinafter set forth, shown in the drawings and claimed.

In the drawings:

Figure 1 is a perspective view showing the extension of a hoe connected to a wood handle.

Fig. 2 is a longitudinal sectional view on line 2—2 of Fig. 1.

Fig. 3 illustrates plan views of the wood handle and a rake, showing the extension of the rake disconnected from the casing covered end of the handle.

Fig. 4 is a detail view of the casing to be carried by the wood handle, showing the wall of the casing before it is depressed in full lines and showing the depression in dotted lines, after the casing has been depressed.

Fig. 5 is a sectional view of the connection between the socket extension of a rake and a wood handle, illustrating the slide eliminated.

Referring to the drawings 1 designates the wood handle, which may be of any suitable length and constructed of any suitable material, preferably wood. One end of this handle is tapered as shown at 2, and 3 denotes a conical casing or shell telescopically fitting the tapered end 2 of the handle. The tapered end of the handle is provided with a depression 4, and this depression 4 is engaged by an elongated protuberance, which is caused to be constructed by depressing the wall of the casing 3. Owing to this protuberance 5 being formed in this manner a depression 6 is formed on the outer face of the casing 3. A lug 7 is struck up from the bottom of the depression or protuberance and is designed to be engaged by the projection 8, which is carried by a leaf spring 9. This leaf spring is riveted or otherwise secured at 10 in an elongated recess 11 of the conical hollow extension 12 of the hoe blade 13, or of a rake 14 as shown in Fig. 3. The projection 8 extends through an opening 15 in the wall of the hollow extension 12, and when the casing lined tapered extremity of a handle is inserted in the socket 16 of the extension 12, the projection 8 will cam over the lug 7, and so engage the lug as to prevent detachment of the extension of the hoe from the handle. By mounting the spring 9 in the depression 11 and thereby rendering the

outer face of the spring flush with the outer surface of the extension, weeds and the like or other foreign matter are prevented from becoming entangled between the spring and the outer wall of the extension 12. Furthermore, by so countersinking the leaf spring, it is prevented from engaging an obstacle, which would wrench or otherwise injure the spring. Mounted in the depression is a slide 17. This slide has an elongated slot 18, which receives screws 19, which are threaded into the bottom of the depression, thereby holding the silde in place. These screws act to limit the slide in its movements in either direction. One end of the slide has a beveled portion 20, which, when the slide is positioned as shown in Fig. 2, is adjacent the bevel 21 of the projection 8. The other end of the slide has a lateral projection constituting a hand piece 22 to be engaged by the fingers whereby the slide may be manipulated. In order to disconnect the extension of the hoe from the handle, the projection 22 is grasped and the slide moved in the direction of the projection 8. The two bevels 20 and 21 will coact, and it is obvious that the bevel 20 will cam under the projection 8, forcing the leaf spring outwardly, until the end of the lug 8 rides upon the surface of the enlargement 23 of the slide to a position as indicated at 24, after which the extension 12 as a whole may be removed. It is also to be noted that when connecting the extension 12 to the casing covered tapered end of the handle, the bevel 21 will cam over the surface 25 of the lug 7, until the projection 8 may engage behind the end of the lug 7. It is to be noted that by the protuberance engaging the elongated recess of the tapered end of the wood handle, the casing 3 is held in position on the handle, in such wise as to not only prevent longitudinal movement of the casing 3, but also to prevent lateral rotation thereof. As shown in Fig. 5 a rake is illustrated, disclosing the fact that most any kind of a farm implement or tool having a socket extension 12 of the general character as shown may be connected to the handle. It is obvious that the slide may be of any suitable length. For instance, the end carrying finger piece 22 may extend toward and be positioned adjacent the upper end of the handle, so that the user may easily manipulate the slide, without reaching the other end of the handle.

The invention having been set forth, what is claimed as new and useful is:

1. The combination with a handle member having a tapered end provided with an elongated recess, of a tapered hollow casing fitting said tapered end of the handle and provided with an elongated protuberance, which is formed by depressing the wall of the casing, to engage the elongated recess of the tapered end, thereby holding the casing, said casing having a depression, which is caused to be formed by depressing the wall of the casing to form the protuberance, and an implement having a tapered socket extension to engage the tapered casing telescopically, a spring device carried by the socket extension and having a projection protruding through the wall of the socket extension, and a lug struck up from the bottom of the depression of the casing and engaged by the projection of the spring device, thereby detachably connecting the socket extension to the casing.

2. The combination with a handle member having a tapered end provided with an elongated recess, of a tapered hollow casing fitting said tapered end of the handle and provided with an elongated protuberance, which is formed by depressing the wall of the casing, to engage the elongated recess of the tapered end, thereby holding the casing, said casing having a depression, which is caused to be formed by depressing the wall of the casing to form the protuberance, and an implement having a tapered socket extension to engage the tapered casing telescopically, and a spring device carried by the socket extension and having a projection protruding through the wall of the socket extension, and a lug struck up from the bottom of the depression of the casing and engaged by the projection of the spring device, thereby detachably connecting the socket extension to the casing, and means slidably mounted in the depression to be manually actuated to cam under the projection of the spring device, whereby the projection is disengaged from the lug, for detaching the extension of the implement.

3. The combination with a handle member having a casing covered end and an elongated depression formed in the casing covered end provided with an abutment, of an implement provided with a socket extension corresponding to and fitting the casing covered end of the handle member, a spring device carried by the socket extension provided with a projection engaging through the wall of the extension to coöperate with the abutment to hold the extension detachably connected to the casing covered end, and means for securing the casing firmly against rotation on the end of the handle member, and means slidably mounted in the depression and adapted to be manually manipulated for camming under said projection to lift it to allow the extension to be detached.

4. The combination with a handle member having a casing covered end and an elongated depression formed in the casing covered end provided with an abutment, of an implement provided with a socket extension corresponding to and fitting the casing cov-

ered end of the handle member, a spring device carried by the socket extension provided with a projection engaging through the wall of the extension to coöperate with the abutment to hold the extension detachably connected to the casing covered end, the projection of the spring device having a beveled end, a slide in said depression, slot and screw connections between the slide and the bottom of the depression whereby the slide is longitudinally movable manually, said slide having a beveled end to cam against the beveled end of the projection so as to ride under the projection and lift the same, whereby the extension of the implement may be disconnected from the casing covered end of the handle member, said slide having a portion on which the projection may engage to hold it raised to permit of such disconnection.

5. The combination with a handle member having a tapered end provided with a depression, of a casing fitting the tapered end, the wall of the casing being dished to correspond to and fit the depression to retain the casing on the tapered end, the dished part of the wall of the casing having an abutment, an implement provided with a socket extension corresponding to and fitting the casing of the tapered end, a spring device carried by the socket extension and provided with a projection engaging through the wall of the extension to coöperate with the abutment to hold the extension detachably connected to the casing or the handle member.

6. The combination with a handle member having a tapered end provided with a depression, of a casing corresponding to and fitting the tapered end of the handle member, the wall of the casing being dished correspondingly to and fitting the depression, thereby retaining the casing on the tapered end, the interior of the dish of said casing having an abutment, an implement provided with a socket extension fitting the casing of the handle member, and means carried by the socket extension and engaging through the wall of the extension, to hold the extension detachably connected to the casing.

7. The combination with a handle member having a tapered end provided with a depression, of a casing corresponding to and fitting the tapered end of the handle member, the wall of the casing being dished correspondingly to and fitting the depression, thereby retaining the casing on the tapered end, the interior of the dish of said casing having an abutment, an implement provided with a socket extension fitting the casing of the handle member, and means carried by the socket extension and engaging through the wall of the extension, to hold the extension detachably connected to the casing, and a device slidably mounted in the dish of the wall of the casing to coöperate with said means to disengage it from the abutment.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JASPER CURTIS.

Witnesses:
M. F. WILLIAMS,
F. F. CLAWSON.