G. A. SWINEFORD.

HAY KNIFE.

APPLICATION FILED JULY 6, 1908.

1,008,088. Patented Nov. 7, 1911.

Fig. 1

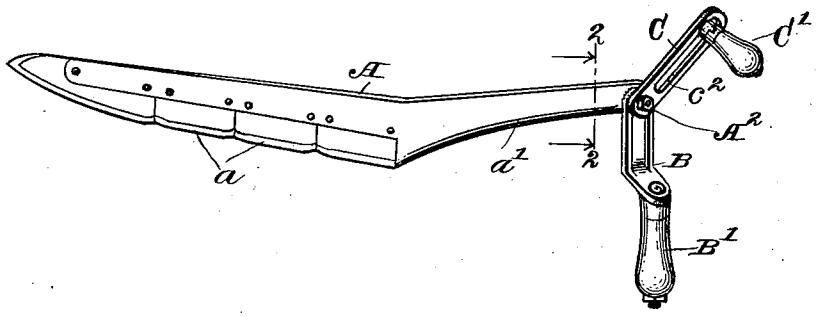


Fig. 2

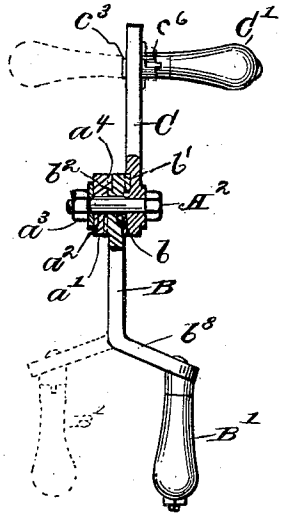


Fig. 3

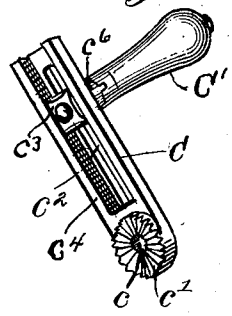


Fig. 4

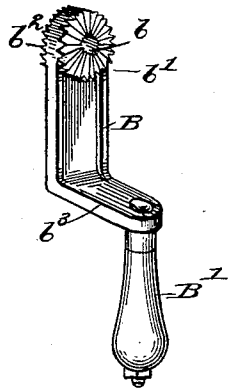
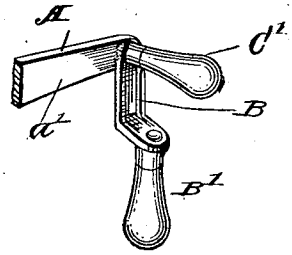


Fig. 5



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HAY-KNIFE.

1,008,088. Specification of Letters Patent. Patented Nov. 7, 1911.

Application filed July 6, 1908. Serial No. 442,161.

To all whom it may concern:

Be it known that I, GEORGE A. SWINEFORD, a citizen of the United States, resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Hay-Knives, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The present invention relates to hand tools and particularly to hand tools requiring a to-and-fro motion, such as hay-knives and the like. It is in fact in connection with hay knives that the construction constituting such invention is expected to find its chief field of usefulness.

The object of the invention is the provision of a handle-construction for tools of the character referred to that will much facilitate the operation of such tools and that will adapt the latter by easily and quickly made adjustments to use by either right or left-handed persons.

To the accomplishment of the above and related objects said invention then consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing: Figure 1 is a perspective view of a hay-knife embodying my invention in approved form; Fig. 2 is a sectional view of the same taken on the line 2—2, Fig. 1; Fig. 3 is a perspective view on a slightly larger scale of a handled element or member that constitutes a prime feature of the invention; Fig. 4 is a broken perspective view of another coöperative handled member; and Fig. 5 shows an old arrangement into which my construction may be converted, as will hereinafter appear.

As has been indicated the handle construction that forms my invention may be adapted to other tools than the particular one in connection with which it is illustrated. So, too, it will be readily understood that the details of the construction of the knife thus shown are of secondary importance. Such knife, then, is of the sickle edge type, comprising a body A to which are rigidly secured a plurality of sectional serrated blades a of tool steel. The rear end a' of such body runs to a taper and to an aperture a^2 in such end are secured two handled members B, C, to the latter C of which particular attention is directed. For the purpose of securing these members, which are of general elongated form, to the body, such body end a' of the tool is provided on its one face with projections in the form of radial serrations a^4 surrounding the aperture a^2, while member B has a corresponding aperture b and serrations b' b^2 surrounding the same on its respective faces, and member C has an aperture c and serrations c' surrounding the same on its one face only. By means of such serrations the members aforesaid are adapted to be secured to the body A in various angular positions with respect thereto and to each other, a bolt A^2 and nut a^3 together with suitable washers being employed to clamp them all together once they have been adjusted. It will of course be understood that in place of the several sets of serrations just referred to, any suitable interengaging means may be employed to prevent the parts from slipping upon each other, and if the parts be sufficiently tightly clamped together, such means can be omitted altogether.

Member B, which has been described as having serrations on both its faces, may obviously be indifferently clamped between the tool body and member C with either face outermost. Its outer end accordingly, which is provided with a lateral off-set b^3, to which is affixed the handle B′, extending in a direction parallel with the member itself, may be turned to thus project to either side of the body A as desired. In the position in which it appears in Figs. 1 and 2 it is adapted for use by a right-handed person, it being contemplated that this handle will be seized in the right hand. For use by a left-handed operator said member will be turned as shown in dotted lines in Fig. 2.

Member C secured to the first member and the tool body as has been described, is provided with a longitudinally extending slot c^2 wherein is adjustably secured the handle proper C′ by means of a nut c^3, Fig. 2. A recess c^4 co-extensive with slot c^2 is designed to receive nut c^3 to hold the same against ro-

tation. Handle C′ is furthermore provided at its inner end with a washer c^6 that, pressing against the arm, protects such handle end, which is usually of wood, as will be readily understood. Such handle obviously may not only be positioned as desired lengthwise of member C, but may also be attached so as to project in the substantially right-angled fashion shown from either side of said member to correspond with the manner in which handled member B has been turned. Such optional position is illustrated in dotted outline in Fig. 2, it being readily understood that to change handle C′ to this position, all that is necessary is to remove the nut c^3, reverse the position of the handle from that shown in full lines in said Fig. 2, and then re-apply the nut to the bolt in the handle which now projects on the other side of the member C.

From the foregoing description of the construction of my improved hay-knife it will be seen that not only can the handles be adjusted to any angle for either a right or left-handed operator, but also that the handle grips in either case stand out from the knife so as to clear the operator's hands from the stack. At the same time an increased leverage is afforded. The mode of attachment of handle C′, it may also be remarked, lends itself to yet another adjustment, shown in Fig. 5. In other words, should it become desirable for any reason, such as breakage, to omit arm C, the handle C′ borne thereby may be employed together with its nut c^3 to clamp arm B to the knife body, in place of the bolt A^2 regularly serving for this purpose. This arrangement of handles thus provided is not presented as having in itself any novelty, since it is well known, having been in use for a number of years. The advantage, however, of being able to return to this arrangement in case of emergency should be fully apparent and is an obvious result of the construction of my handled-member C.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any one of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In a tool of the character described, the combination with the tool body; of a member pivotally secured to said body at one end of the same so as to be movable in a plane parallel therewith; a handle for said member; means adapted to secure said handle thereto at substantially right angles and on either side of said member as desired; and a second handle separate from said first handle, secured to said tool-body.

2. In a tool of the character described, the combination with the tool body, having an aperture at one end; of an elongated member likewise provided at one end with an aperture and having a longitudinal slot; a handle for said member; a bolt and nut adapted adjustably to secure said handle to the slot in said member and on either side of the latter as desired, said handle being disposed at substantially right angles to said member; and a second handle, separate from said first handle, secured to said tool body.

3. In a tool of the character described, the combination with the tool body, of two separate handled members; and means adapted to secure said members to one end of said body in varied angular relation to the same and to each other, the handle of one of said members being angularly disposed thereto and adjustable longitudinally therealong, and the handle on the other member extending in a direction substantially parallel with said member.

4. In a tool of the character described, the combination with the tool body, of two separate, elongated members; means adapted to secure said members to one end of said body in varied angular relation to the same and to each other, one of said members being formed with an offset at its outer end and the other having a longitudinal slot; a handle secured to the off-set end of said first member so as to be disposed substantially parallel with said member; and a handle angularly disposed to said second member, said handle being adjustably secured to the slot in said member.

5. In a tool of the character described, the combination with the tool body; of two members secured to one end of said body in angular relation to the same; handles for said members respectively, the handle on one member being laterally off-set therefrom but extending in a direction substantially parallel therewith; and means adapted to secure the other handle to the other member at substantially right angles thereto, and on either side of said member as desired.

6. In a tool of the character described, the combination with the tool body, of two members; means adapted to secure said members to one end of said body in varied angular relation to the same and to each other; handles for said members respectively, the handle on one member being laterally offset therefrom but extending in a direction substantially parallel therewith, and said last named member being attachable to said tool body with said handle thus off-set to either side as desired; and means adapted to secure the other handle to the other member at substantially right angles thereto and on either side of said member as desired.

7. In a tool of the character described, the combination with the tool body having an

aperture at one end surrounded with projections; of an elongated member provided at one end with an aperture surrounded, on both faces of said member, with projections variously complementary to those of said body, the other end of said member being laterally off-set; a handle secured to such off-set end and substantially parallel with said member; a second elongated member provided at one end with an aperture surrounded on one face of said member with projections similar to the foregoing, said member also having a longitudinal slot; a handle for said second member; and means adapted to adjustably secure said handle to the slot in said member on either side of the latter, as desired, and at substantially right angles to said member.

Signed by me this 1st day of July, 1908.

GEORGE A. SWINEFORD.

Attested by:
THOS. J. MADDRELL,
GRACE MURRAY.