

Nov. 6, 1956

S. OXHANDLER

2,769,237

PRUNING SHEARS

Original Filed Oct. 29, 1952

Fig. 1.

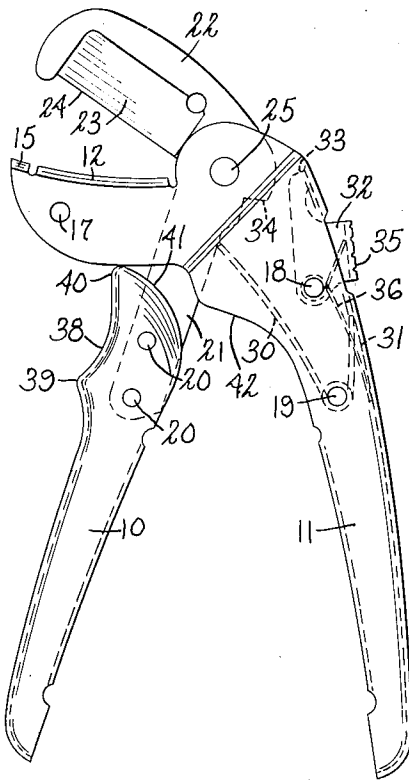


Fig. 3.

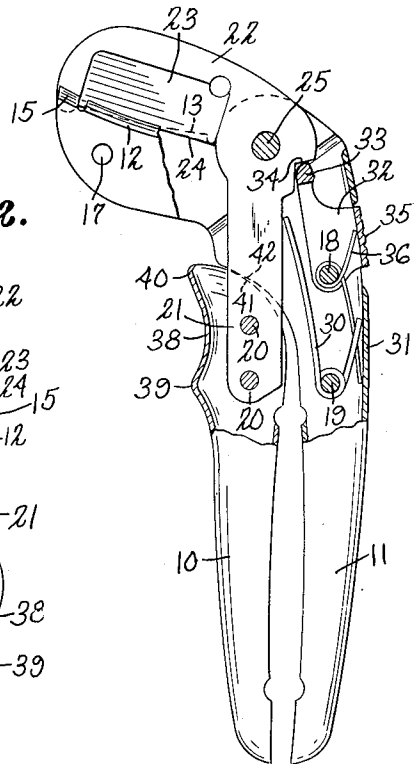


Fig. 2.

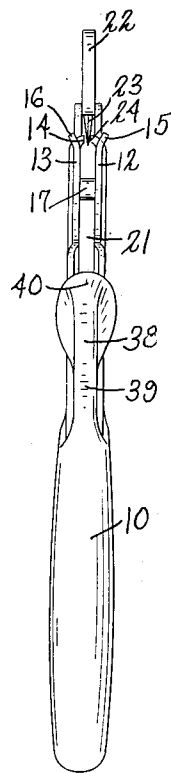
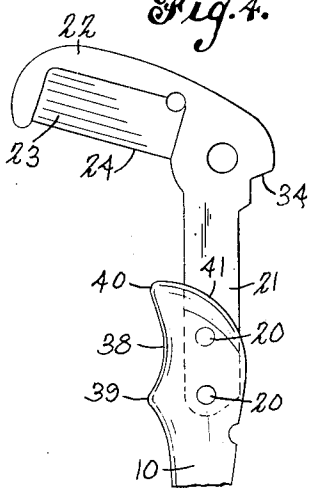


Fig. 4.



INVENTOR

Samuel Oxhandler

BY

Rockwell Buckton

ATTORNEYS

1

2,769,237

PRUNING SHEARS

Samuel Oxhandler, Hamden, Conn., assignor to Sargent & Company, New Haven, Conn., a corporation of Connecticut

Original application October 29, 1952, Serial No. 317,485, now Patent No. 2,715,270, dated August 16, 1955. Divided and this application June 6, 1955, Serial No. 513,315

2 Claims. (Cl. 30—254)

This invention relates to hand tools such as pruning shears, and more particularly to the construction of the handles of a tool of this character whereby the handles furnish a comfortable grip for the user, locate and orient the fingers of the user's hand thereon, and prevent any possibility of the fingers being pinched when the handles are closed in the operation of the tool. The present application is a division of my co-pending application Serial No. 317,485, filed October 29, 1952, now Patent No. 2,715,270, granted August 16, 1955.

In the usual form of a tool of this kind a pair of pivoted handle members are provided, each having a cutting member secured thereto or formed integrally therewith, which members are opened and closed upon movement of the handles about their pivots. In the present instance a cutting blade is secured to one handle portion and the other carries an anvil member which cooperates with the blade to perform the shearing operation. The anvil consists of a pair of spaced members between which the blade is adapted to enter in the cutting operation, these members acting as shear members to cooperate with the blade and effect a sharp and clean cut.

One of the handles of the tool is normally gripped between the thumb and fingers of the user while the other handle member is usually embraced by the fingers. The present invention deals particularly with the formation of the latter handle in that means are provided on this handle to locate the upper or forefinger of the user so that not only will the tool be properly gripped but also this upper finger will be prevented from being pinched by the adjacent surfaces of the handles when they are closed.

One object of the present invention is to provide a pruning shear which will be more efficient in operation than devices of this kind presently available upon the market.

A further object of the invention is to provide a pruning shear having an improved hand grip so that it may be readily held in the hand of the user during operation even though a considerable force is necessary to operate the tool.

Still another object of the invention is to provide a pruning shear having an improved hand grip so that the fingers of the user will be properly located or oriented upon the handle of the tool and will be prevented from entering the space between the handles and being pinched within this space when the handles are closed.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawings:

Fig. 1 is a side elevational view of the shears embodying my invention showing the jaws in open position;

Fig. 2 is a front elevational view of the shears;

Fig. 3 is a view similar to Fig. 1 showing the jaws in closed position and some parts being broken away to show the interior structure; and

Fig. 4 is a detail view of the cutting blade and adjacent portion of the handle to which it is attached.

2

To illustrate a preferred embodiment of my invention, I have shown in the drawings pruning shears comprising a pair of hollow handle members 10 and 11, these members being conveniently formed of sheet metal so that they present a rounded outer surface to provide a convenient grip and at the same time are of relatively light weight.

The side walls of the handle member 11 at the upper end of the latter are flattened and pressed together to provide a pair of spaced shear or anvil members 12 and 13, these members, as shown more especially in Fig. 2, being displaced inwardly at their upper edges so as to provide between them a relatively narrow space 14. This space, as will be explained hereafter, is adapted to receive the cutting blade, and the opposing inner edges of these members on each side of the space 14 act as shear members to cooperate with the blade and perform the shearing operation.

At their outer or forward ends each of the members 12 and 13 is displaced outwardly so as to provide outwardly diverging lugs 15 and 16, these lugs, as will be hereinafter explained, serving as guide members to guide the blade into the space or opening 14 between the shear members. These lugs stand upwardly to a slight extent from the general level of the upper surfaces of the shear members 12 and 13 and serve to limit the opening between the cutting members.

The members 12 and 13 may be secured together by the rivet 17 and the walls of the handle member 11 may be similarly secured by the rivets 18 and 19, which latter rivets also serve to support certain of the mechanism of the shears, as will be hereinafter explained.

Secured to the upper portion of the handle member 10 by rivets 20 is a flat shank 21 shaped to form a blade head 22, the lower portion of which is sharpened to provide a cutting blade 23 having a sharp lower edge 24 designed to enter the space 14 between the shear members 12 and 13. At approximately the junction of the shank 21 and head 22 this member is pivoted by the pivot pin 25 to the members 12 and 13 of the handle 11. This provides the pivotal connection between the handles about which the cooperating cutting members move.

A spring 30 is coiled about the rivet 19 (Fig. 3), one end of the spring acting against the shank 21 of the blade head and the other end acting against the web 31 of the handle member 11, the spring being tensioned to maintain the handles in open position, as shown in Fig. 1.

In order to lock the handles in closed position a locking member 32 is pivoted on the rivet 18. This member is provided at its upper end with a locking dog 33 designed to engage below a shoulder 34 provided on the blade head 22, as shown in Fig. 3. When the parts are in this position the engagement of the dog 33 with the shoulder 34 will prevent the opening of the handle members by the spring 30.

The locking member 32 is provided with a web portion having a roughened surface 35 which projects through an opening in the handle 11 so that it may be engaged by the thumb of the operator so as to move the locking member to its operative position. It will be seen that pressure of the thumb on the member 35 above the pivot 18 will result in moving this member in a counterclockwise direction so that the dogging member 33 will engage the shoulder 34. A spring 36 is wound about the rivet 18, and the lower end of this spring acts against the web 31 of the handle 11 while the upper end of the spring acts against the part 35 of the locking member 32 to normally urge the locking member to its inoperative position or the position shown in Fig. 1.

When the parts are in closed position, as shown in Fig. 3, the spring 30 being relatively strong will tend to urge the handles apart, but the engagement of the shoulder 34 with the locking dog 33 will hold the locking member 32 in

3

its locking position notwithstanding the action of the spring 36 tending to move the dog 33 outwardly.

It will be noted that in Fig. 3 the handles 10 and 11 are in slightly spaced position, and when they are pressed together by the operator the dog 33 will be released from engagement with the shoulder 34 and will be automatically moved outwardly to the position shown in Fig. 1 by the spring 36.

As will be understood, the fingers of the operator will normally be gripped around the handle member 10 with the handle 11 being gripped between the thumb and fingers. In order to orient and locate the fingers of the user and prevent them from slipping from the handle 10, this member is shaped to provide a grip in the form of a recess or depression 38 on the front face of the handle, this depression lying between projections 39 and 40, the latter being at the extreme upper end of the handle member. This grip or depression will normally receive the forefinger of the operator and prevent the fingers from slipping either upwardly or downwardly upon the tool during operation.

Also in the present tool the closing movement of the jaws will normally be limited by contact of the portion 41 of the handle member 10 with the portion 42 of the handle member 11. As these two parts of the handle members approach each other, there might be danger of the finger of the operator being pinched between them if the recess 38 were not provided to locate and prevent the slipping of this finger into the space between the handles.

While I have shown and described a preferred embodiment of my invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the claims.

What I claim is:

1. A pruning implement comprising a pair of pivoted, cooperating shearing members, a handle carrying each of said members, said members extending laterally at an

4

angle to the longitudinal dimension of the handles, and the upper end of one handle lying below a portion of the other handle to contact the latter and limit closing movement of the handles, one of said shearing members being a cutting blade having a shank member to which the upper end of said one handle is secured, and said last-named handle having a rounded outer face and spaced upper and lower projections on said face formed integrally with the handle to provide a finger seat therebetween, and the upper of said projections being located at the upper end of the handle adjacent the point of contact between the handles to guard against the finger of the operator being pinched between the handles.

2. A pruning implement comprising a pair of pivoted, cooperating shearing members, a handle carrying each of said members, said members projecting laterally from the handle members at an angle to the longitudinal dimension thereof, one of said members being a cutting blade having a shank member to which the upper end of its handle is secured, said last-named handle having an upper end portion lying below and adapted to contact a portion of the other handle member to limit closing movement of the handles, said handle having a recess in its outer face adjacent its upper end, which recess is provided by spaced upper and lower projections formed integrally with the handle, and the upper projection being at the upper edge of the handle to prevent the finger of the operator from slipping over such edge and being pinched between the handle members at the point of contact therebetween.

References Cited in the file of this patent

UNITED STATES PATENTS

2,370,026	Elia	Feb. 20, 1945
2,662,285	Yeomans	Dec. 15, 1953
2,662,286	Yeomans	Dec. 15, 1953
2,689,401	Kalish	Sept. 21, 1954