J. H. FREY.

SHEARS.

APPLICATION FILED MAR. 11, 1908.

903,370. Patented Nov. 10, 1908.

Fig. 1.

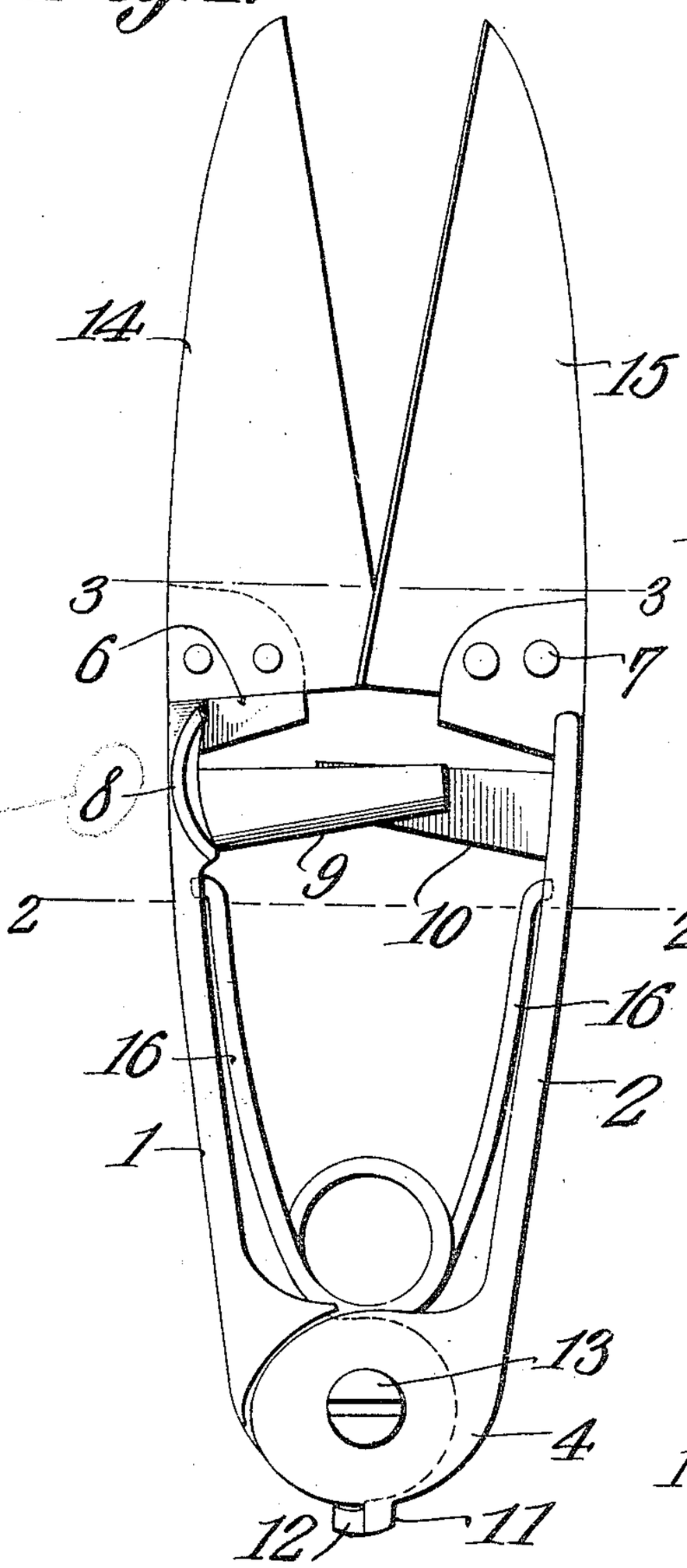


Fig. 2.

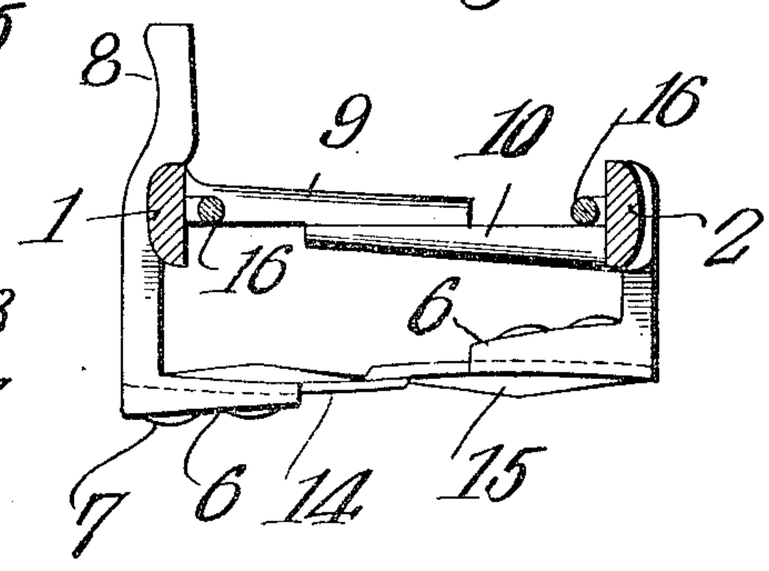


Fig. 3.

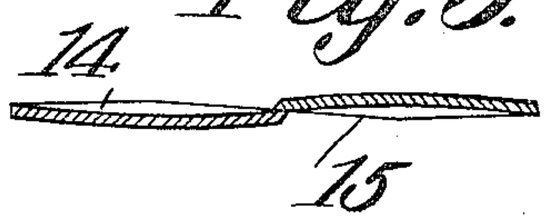
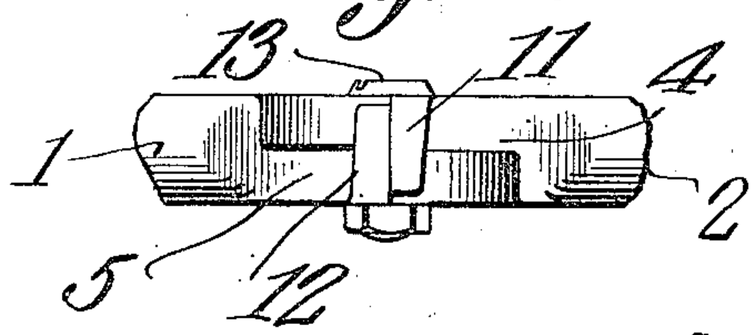


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES HENRY FREY, OF VINCENNES, INDIANA, ASSIGNOR OF ONE-HALF TO FRANK C. HARDACRE, OF VINCENNES, INDIANA.

SHEARS.

No. 903,370. Specification of Letters Patent. Patented Nov. 10, 1908.

Application filed March 11, 1908. Serial No. 420,456.

To all whom it may concern:

Be it known that I, JAMES H. FREY, a citizen of the United States, residing at Vincennes, in the county of Knox and State of Indiana, have invented a new and useful Shears, of which the following is a specification.

This device relates to shears, and particularly to the type used for cutting grass, sheep shearing, and the like.

It has for its object to provide a means for keeping the cutting edges of the blades in close contact during the cutting movement, and to provide a stop for limiting the spreading of the blades in the opposite direction.

It is well known that with most devices of this type now in use, there is a tendency of the cutting edges to spring apart when engaged in cutting heavy material, and unless this tendency is overcome, as it usually is, by a downward and upward pressure of the hand on the handles, the blades will not cut.

The present device aims to overcome this defect by employing a means which will at all times exert pressure sufficient to keep the blades from spreading.

Another object of this device is to prevent the rocking of the handles sufficiently apart in one direction so as to throw the blades out of contact.

Another feature of this device is to provide a novel form of blade. It is well known that with most devices of this type flat blades are used which have a tendency to spring transversely and even where means are employed to hold the blades in contact this springing cannot be prevented unless the blade is heavy.

The present invention aims to overcome this defect by slightly bowing or curving each blade.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a plan view of the device. Fig. 2 is a sectional elevation taken on the line 2—2 of Fig. 1. Fig. 3 is a sectional view of the blades taken on the line 3—3 of Fig. 1. Fig. 4 is a rear elevation showing the ends of the handles.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

A metallic handle is formed of two sections 1 and 2 provided at one end with flattened heads 4 and 5. The opposite end of each section is bent at right angles, and projecting therefrom are webs 6 and 7, the base or lower face of the web 7 lying in the same plane as the upper face of the web 6. The function of these webs and mounting them in parallel planes will be presently explained. A thumb support in the shape of a lug 8 is formed on the handle 1, projecting upward therefrom at right angles and lying in the same vertical plane as web 6. The upper face of this lug is rounded off to conform to the lower joint or base of the thumb thereby permitting the operator to work with greater ease to his hand than if the handle were resting on the fleshy portion between the thumb and index finger. Disposed on the inner faces of the handles and at their forward ends are arms or lugs 9 and 10. The latter are formed integral with their respective handles and of a length sufficient to permit the entire cutting edges of the blades to be brought parallel to each other when the handles are forced together. The opposed faces of the lugs are flat and are in close contact. The function of these lugs is to limit the rocking movement of the handles when the same are forced together during the cutting movement, and at the same time to prevent springing apart of the blades should the latter come in contact with any hard substance. It is clear that this is accomplished without any additional strain on the hand of the operator. The flattened ends of the sections are of approximately one-half the diameter of each section, and are provided on their exterior faces with lugs 11 and 12 projecting therefrom at right angles, with their opposed faces abutting, as shown in Fig. 4, when the blades are open. These lugs are so arranged as to keep the cutting edges at the heel of the blades in close contact, thereby retaining the blades in constant operative position. The advantage of this construction can be readily seen when

compared with most devices of this kind which permit the blades to spring back to the full extent of the actuating spring, so that when the blades are brought together again their positions are generally reversed and much time lost in readjusting. The handles are pivotally connected by the bolt and nut 13 which can be adjusted to keep the opposed faces of the lugs 9 and 10 in close contact. The blades 14 and 15 are secured to the platforms 6 and 7. The blades are of the usual shape, with the exception that each blade is slightly bowed or curved, the bow or curve extending from the heel to the toe of each blade and tapering accordingly. This construction, while taking from the strength of the blade in the direction of its length, adds materially to the strength in cross section, or the direction in which the blade will spring under strain.

Disposed between the handle sections is the spring 16, the ends of which are anchored in or otherwise secured to the inner faces of the sections. This spring normally tends to force the blades apart, as shown in Fig. 1.

What is claimed is:—

Shears embodying a pair of pivotally connected handles provided at their free ends with right angular supports and at their connected ends with approximately circular heads, a pair of blades secured to said supports, inwardly projecting arms on the inner faces of said handles serving to limit the inward and lateral movements of said handles and blades, outwardly projecting lugs on the connected ends of said handles having opposed flat faces yieldingly held in contact and bearing perpendicular to the bearing faces of said arms.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES HENRY FREY.

Witnesses:
WILL DAWALT,
W. F. GURIE.