No. 730,609. PATENTED JUNE 9, 1903.

H. BURGON.

SHEEP SHEARS.

APPLICATION FILED JUNE 17, 1902.

NO MODEL.

FIG. 1.

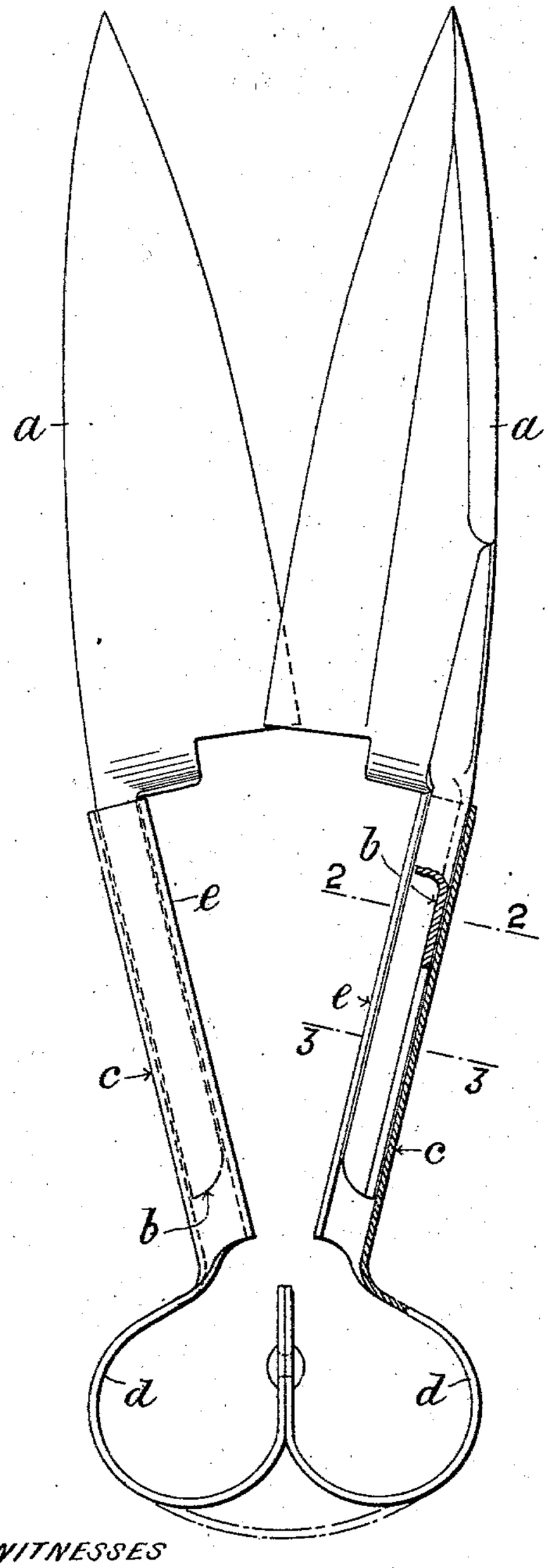


FIG. 4.

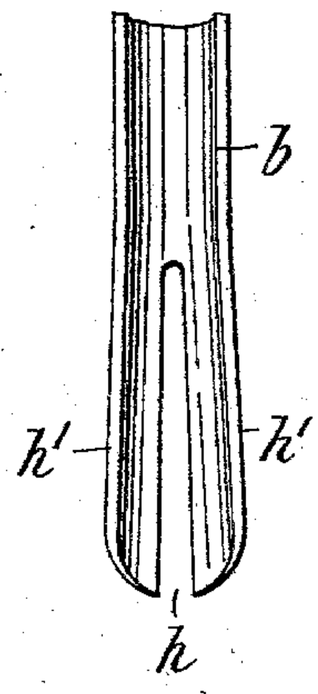


FIG. 2.

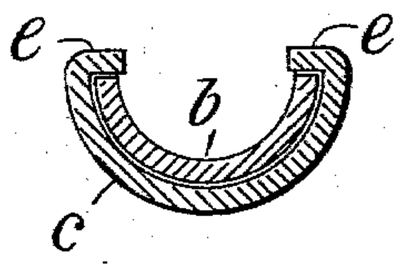
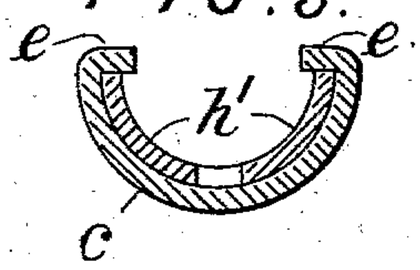


FIG. 3.



WITNESSES

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No. 730,609. Patented June 9, 1903.

UNITED STATES PATENT OFFICE.

HARRY BURGON, OF SHEFFIELD, ENGLAND.

SHEEP-SHEARS.

SPECIFICATION forming part of Letters Patent No. 730,609, dated June 9, 1903.

Application filed June 17, 1902. Serial No. 112,051. (No model.)

To all whom it may concern:

Be it known that I, HARRY BURGON, sheep-shear manufacturer, a subject of the King of Great Britain, residing at 136 Oakbrook road, Sheffield, in the county of York, England, have invented new and useful Improvements in Sheep-Shears, of which the following is a specification.

My improvements in the manufacture of sheep-shears relate to hand-operated shears whereof the blades are connected by shanks or handles to a spring-bow; and the improvements have for their object to provide means whereby the blades may be detachably or interchangeably connected to the bow, so as to admit of the blades being easily disconnected for sharpening or of being readily exchanged, either or both, for another or others in order to enable them to be suitably paired as regards temper or replaced when worn out, the same spring-bow being thus rendered available for any number of pairs of blades, so that the alteration of spring tension, which is a practical objection to the use of entirely new shears, is avoided. Furthermore, by my improvements I am enabled to use for the bow and the greater part of the shanks steel which is not only of a much less costly grade than that necessary for the blades, but is much better suited for the purpose of that part of the implement for which it is used.

Means of attaining the above-mentioned desiderta have long been sought; but no means of detachable connection of the blades to the bow have heretofore been devised which afforded the rigidity necessary to preserve the set or mutual relation of the cutting edges of the blades. Owing to the breadth of the blades the leverage (consequent on the perpendicular distance of the cutting edge from the axis of the shank) tending to twist the shanks and allow the cutting edges to move apart or away from the common cutting-plane is considerable, so that any weakness or slackness in the connection between the blades and the shanks of the bow would allow the wool to pass uncut between the blades and cause them to be forced apart, thus destroying the cutting action.

It is to obtain the desired advantages of interchangeability of the blades and avoid all torsional weakness of the connection consequent on the detachability of the blades which is the object of my invention.

The invention is illustrated in the accompanying drawings, forming part of this specification, wherein—

Figure 1 is a part-sectional side view of my improved shears. Fig. 2 is an enlarged cross-sectional view on the line 2 2 of Fig. 1. Fig. 3 is a similar view on the line 3 3 of Fig. 1, and Fig. 4 is an inner face view of the blade-shank shown in Fig. 1.

The blades *a* are cut or stamped out in the usual manner from sheet-steel, having integral therewith a strip from which the shank *b* is formed of the usual semicircular or other suitable form in cross-section. The strip of which the shank *b* is formed is, however, only sufficient to form a shank of the length required and does not include a portion of the bow, as usual in shears having the blade, shank, and bow in one piece, and to economize metal and lessen the weight the length of the strip as originally cut is less than that of the shank as finally formed, the desired length being obtained by drawing down the thickness of the metal forming the shank. The shank thus formed is fitted to slide tightly within an outer shank *c*, made integral with the half-bow *d* (or with the bow, according as the latter is made in two parts, as shown in full lines, or in one, as shown in dotted lines, in Fig. 1) and of internal hollow form, corresponding to the form of the inner or blade shank, but adapted to make therewith an interlocking connection, such as to prevent slackness and resist torsional strains transmitted from the blades.

Although I have described and shown the male member or shank as being formed on the blade and the female member or shank on the bow, it will be evident that these relative positions may be reversed and that either form is comprised within my invention.

In the example shown in Figs. 1 and 2 the outer or bow shank *c* is formed with inwardly-turned longitudinal flanges *e*, adapted to closely embrace and form rigid abutments for the edges of the inner or blade shank *b*.

To retain the blade and bow shank securely in connection, the blade-shank *b* is longitudinally slotted for a portion of its length from

the heel end, as shown at *h*, and this slotted part is initially sprung outward or expanded laterally to what may be termed a "reversely-tapered" form, so that in inserting the blade-shank *b* within the bow-shank *c* a certain amount of force is necessary to contract the divergent limbs *h' h'* of the slotted end, the elasticity of which insures a tight fit in the bow-shank.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In sheep-shears, the combination of a handle comprising bow-sections provided with hollow shanks, approximately circular or semicircular in cross-section, detachable cutting-blades having integrally-formed hollow shanks slitted at their ends, said shanks being adapted to slide under and be held by inwardly-turned flanges formed on the bow, whereby to prevent twisting or distortion of the parts, and tension means exerting spring-pressure for holding the shank of the blades within the shanks of the bow, substantially as set forth.

2. In sheep-shears, the combination of a handle having hollow shanks, detachable cutting-blades having integrally-formed shanks, adapted to slide within the shanks of the handle, the aforesaid blade-shanks having a slot therein, the slitted portions of said shank being outwardly splayed, the construction being such that when the blade-shanks are assembled within the handle-shanks a spring-pressure non-torsional engagement will be made between the parts, substantially as set forth.

3. In sheep-shears, the combination of a handle having semicircular hollow shanks, and detachable blades having similar hollow shanks, the ends of said blade-shanks being slitted, substantially as set forth.

HARRY BURGON.

Witnesses:
H. J. HAYNES,
H. CLARKE.