

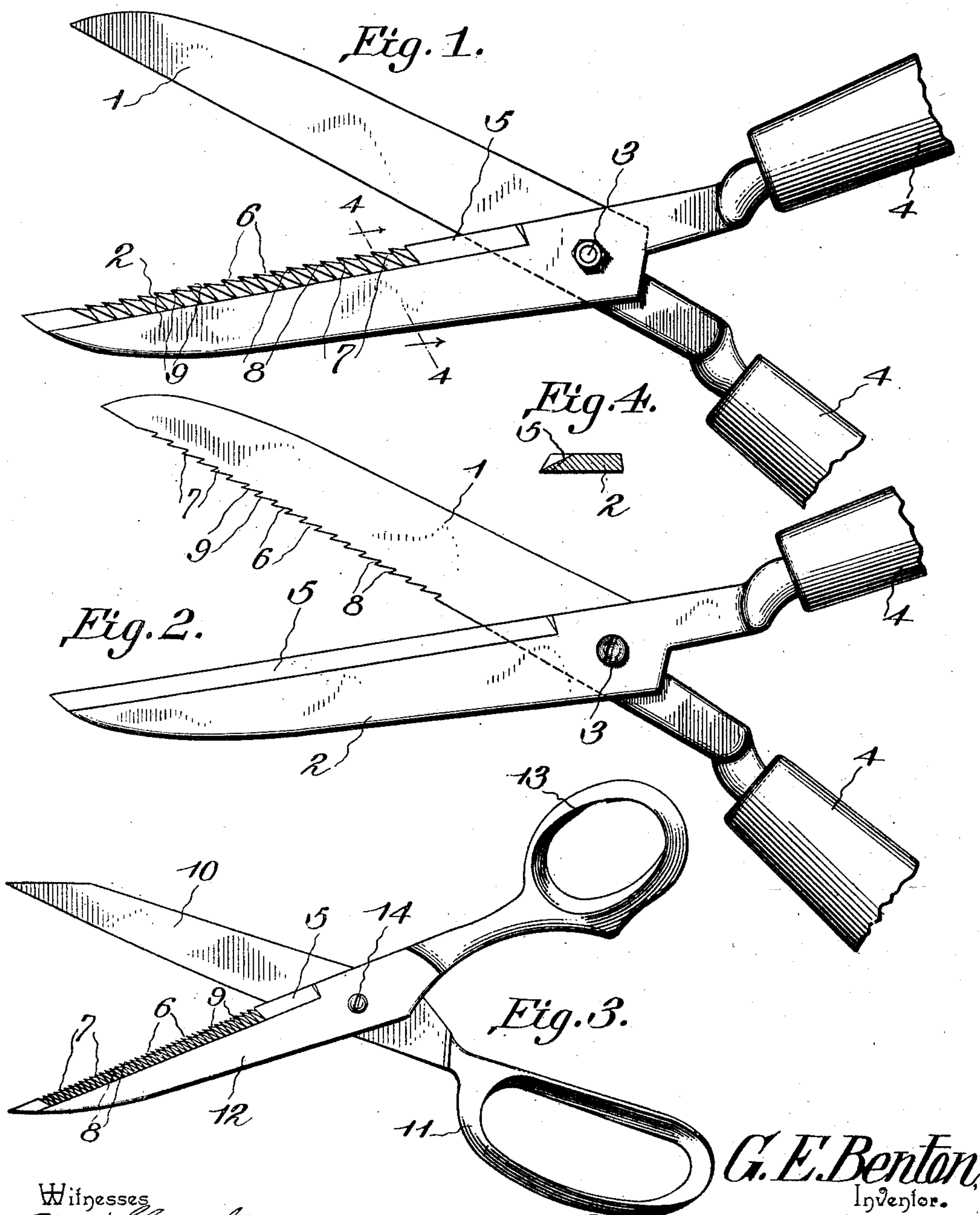
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G. E. BENTON.
CUTTING SHEARS.

APPLICATION FILED SEPT. 30, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE EDWARD BENTON, OF EAST HAMPTON, NEW YORK.

CUTTING-SHEARS.

SPECIFICATION forming part of Letters Patent No. 756,818, dated April 12, 1904.

Application filed September 30, 1903. Serial No. 175,200. (No model.)

To all whom it may concern:

Be it known that I, GEORGE EDWARD BENTON, a citizen of the United States, residing at East Hampton, in the county of Suffolk and State of New York, have invented a new and useful Cutting-Shears, of which the following is a specification.

This invention relates to cutting-shears, and has especial reference to shears for use in hedging or pruning, but may be applied to shears for cutting cloth, paper, leather, and other materials.

The object of the invention is twofold in character and comprises the provision in shears of means to prevent the slipping of the material acted upon by the shear-blades, so as to insure more certain operation of the shears, and also the provision of an improved form of shear-blade, by the operation of which the shears are made self-sharpening.

With the objects above mentioned in view the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and having the novel features thereof particularly pointed out in the appended claim.

In the drawings, Figure 1 is a view in side elevation of a pair of hedging-shears constructed in accord with the present invention, the shears being shown with the blades separated in position to receive material to be cut. Fig. 2 is a view in side elevation of the shears with the parts in the same position shown in Fig. 1, the view being taken from the opposite side. Fig. 3 is a view of a pair of cloth-cutting shears constructed in accord with the present invention. Fig. 4 is a sectional view on the line 4 4 of Fig. 1.

Referring to the drawings, in which corresponding parts are designated by similar characters of reference, 1 designates a shear-blade of ordinary form, and 2 designates a shear-blade which differs from the shear-blade 1 in being provided with a serrated edge. The two blades are pivoted at 3 and are provided with handles 4, which may be of any ordinary or preferred construction. Both of the shear-blades are provided at their cutting edges with bevels 5, and the blade 2 has the bevel provided throughout the greater portion of

its length with indentations 6, which are inclined forward at their upper ends and are preferably of the form shown in Fig. 1. By forming the indentations 6 in the manner specified a plurality of teeth 7 are produced, presenting forward edges 8, which are disposed substantially at right angles to the edge of the blade as a whole, and rear edges 9, which are only slightly inclined to the edge of the blade.

In Fig. 3 a pair of cloth-cutting shears is shown which comprises an ordinary blade 10, having the usual finger-receiving loop 11, and a serrated blade 12, having a thumb-receiving loop 13, the blades being connected, as usual, by means of a pivot-screw 14.

In the operation of the shears whether for hedging and pruning, as illustrated in Figs. 1 and 2, or for cloth-cutting, as illustrated in Fig. 3, the action is the same. The serrated cutting edge of the blade 2 in the hedging-shears and of the blade 12 of the cloth-cutting shears will prevent the slipping along the blade of the material to be cut; but the formation of the teeth in the edge of the blade is such that the coöperating shear-blade may move along the toothed edge without impediment and will not only cut the material of whatever character quickly and certainly, but the passage of the blade with the smooth edge over the serrated edge of the other blade will have a sharpening effect upon both blades, which is entirely wanting in shears as ordinarily constructed. The teeth formed in one of the shear-blades act upon the other blade somewhat in the manner of a file, and the smooth blade acting against the teeth of the serrated blade serves to keep the rear or cutting edges thereof sharp also.

The principal difference in shears for cutting different materials as constructed in accord with this invention lies in the size of the teeth formed on the serrated blade. For cutting coarse heavy materials the teeth will naturally be made of comparatively large size, as shown, while for cutting delicate material the teeth will be made of small size to avoid tearing of the material, and yet prevent any slipping of the material between the shear-blades. The small teeth shown in Fig. 3 are

sufficiently fine to cut any ordinary fabric without tearing, whereas the teeth illustrated in Figs. 1 and 2 are well adapted for hedging and pruning shears or for heavy shears for cutting leather, canvas, and the like.

I am aware that shears have been constructed prior to my invention having serrations along the margin of one of the blades to prevent slipping of the material along the blade; but in shears of this kind, as heretofore constructed, the serrations were formed only as means of support for the material and did not take part in the cutting thereof. Instead the cutting was accomplished by means of a smooth knife-edged blade coöperating with the smooth face of the supporting blade or "arm," as it should be more accurately termed.

In shears of the type referred to in the preceding paragraph the serrations in the supporting arm or blade cannot of necessity aid in the cutting operation further than to prevent slipping of the material, and as they did not extend to the face of the supporting arm or blade in contact with which the knife-edged blade moved there was no sharpening effect upon the cutting-blade. Furthermore, the shears so constructed, while well adapted for use upon coarse heavy materials of considerable stiffness, could not be satisfactorily used upon light delicate fabrics which cannot be

successfully cut by means of a knife-edged blade unless supported on both sides of the blade.

It will be seen from the foregoing explanation that the shears forming the subject of the present invention are clearly distinguished in structure and function from the old form of shears described and are characterized by a much wider range of utility.

Having thus described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination in shears, of a pair of blades pivoted together and having substantially flat coöperating faces, one of said blades having a smooth beveled cutting edge and the other having a beveled cutting edge provided throughout a portion of its length with forwardly-inclined sharp-pointed cutting-teeth, each tooth having its forward edge disposed substantially at right angles to the edge of the blade as whole.

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

GEORGE EDWARD BENTON.

Witnesses:

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