(No Model.)

W. W. BRIGG.

LEATHER CUTTER.

No. 273,018. Patented Feb. 27, 1883.

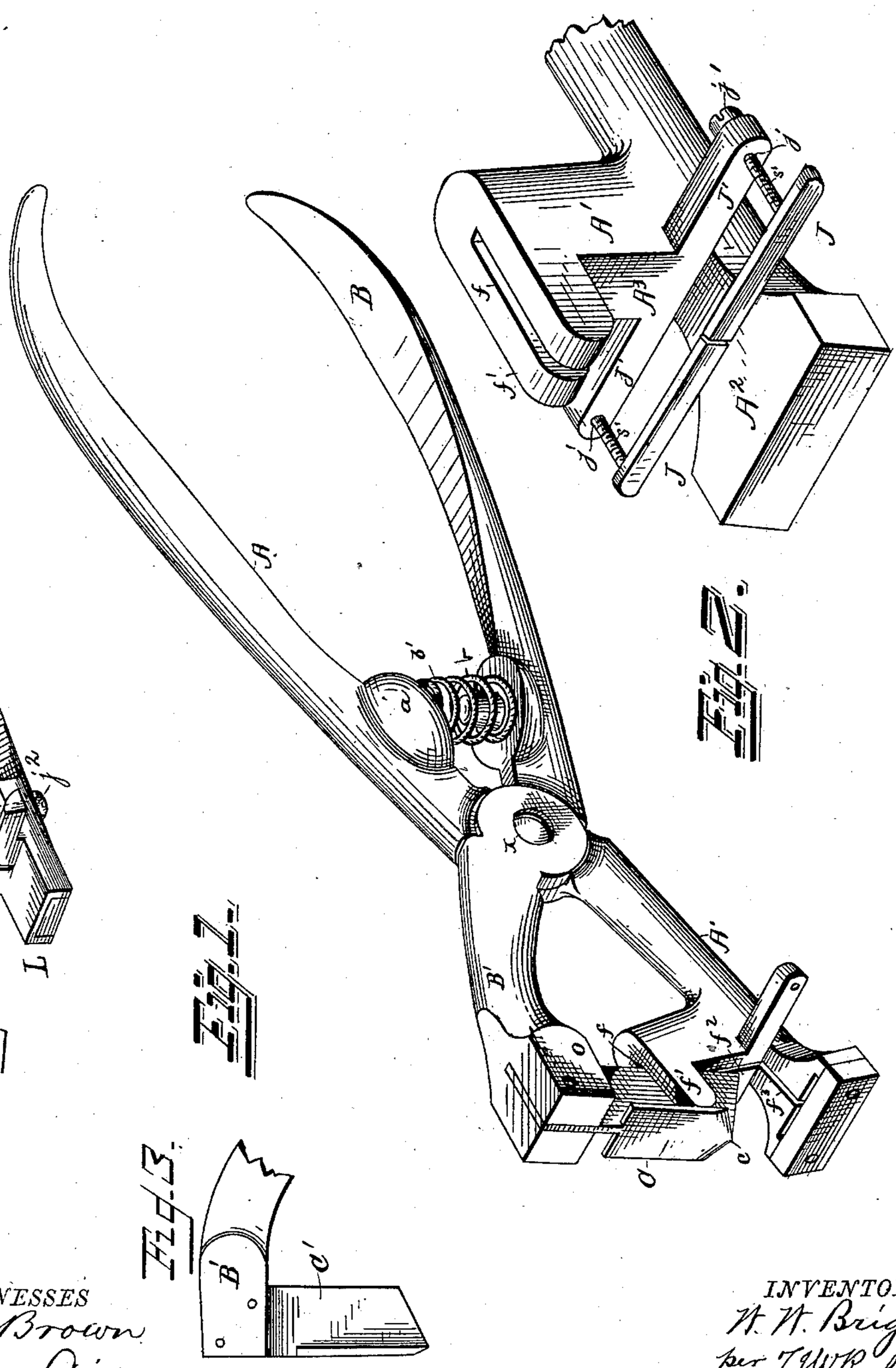

Fig. 2.

Fig. 4.

Fig. 1.

Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM W. BRIGG, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF ONE-HALF TO PHILIP FELIX HERWIG, OF NEW ORLEANS, LOUISIANA.

LEATHER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 272,018, dated February 27, 1883.

Application filed December 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. BRIGG, a citizen of the United States of America, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Leather-Cutters, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to devices for forming the strips or brushes used in cleaning cotton-gins; and the novelty consists in the construction and arrangement of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

The invention is designed for service in forming the brushes which are used in connection with cotton-gins of the class patented to me October 28, 1879, No. 220,957, and it is fully illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my invention with the gage-plates removed; Fig. 2, a detail perspective view of the jaw, of somewhat different form, with the duplex gage in position; Fig. 3, a detail showing the cutting-edge of the removable cutter so formed as to incline the material toward the gage, and Fig. 4 shows another modification of the jaw.

Referring to the drawings, in which similar letters of reference indicate like parts in all the figures, A and B represent two cross-levers, pivoted at *x*, the lever A carrying the anvil-jaw A′ and having socket *a*, and the lever B having the hammer-jaw B′ and provided with a projection, *b*, which is received into the socket *a*, where the handles are forced together to prevent lateral play in the operating parts. A spring, *b*′, embraces the projection *b*, and has a bearing upon the inner surface of both handles, serving with a constant force to hold the handles apart.

C represents a removable T-knife secured in the slot b^2, formed in the head B′, as shown. This knife is formed of the main plate C′, the width of which is arranged parallel to the longitudinal plane of the levers, and a cross-plate, C^2, the said parts C′ and C^2 being formed in one piece, and the lower portions of each being formed into cutting-edges inclined from the point *c*, so as to give a draw cut to the material being operated upon. The part C′ of the T-knife C oscillates freely but snugly in a slot, *f*, formed in the head of the anvil-jaw A′, while the cross portion C^2 passes in front of the projection *f*′. The slot *f* continues down the front of the head, as shown at f^2, and terminates in the T-slot f^3, which corresponds with the cutting-edges of the knife C, as seen in Fig. 1; or the slots f^2 f^3 may be omitted, as seen in Fig. 2, and the knife C may be formed so as to have the cutting-edges strike squarely on the bed A^2 of the jaw A′. The plate C′ is designed to cut a slit in a strip of leather or other proper material at right angles to a straight edge thereof, and the cross-plate C^2 to cut a slit parallel with such edge, the center of which latter slit shall form a junction with the inner end of the slit formed by the cutting-edge of the plate C′.

For the purposes aimed at by this invention it is necessary that the first-named slits—that is, those cut by the cutting-edge of the plate C′—should be varied in length as occasion may require, and to accomplish this end I provide a gage composed of bars J, held in position by set-screws *s*′, passing through apertures *j* in the opposite ends of the arms J′, and having their ends riveted in the gage-bars J, by which means said gage is adjusted at will.

When the anvil-jaw A′ is formed as shown in Fig. 2, it is necessary that the inner corner of the cutting-edge of the plate C′ should approach very closely to the front A^3 of the head at the latter part of its stroke, in order that the extreme edge of the leather or other material should be severed at that point when the gage is not employed, and the said front A^3 serves the function of a gage. When, however, the front A^3 and bed A^2, as shown in Fig. 1, are employed, the inner corner of the said plate will operate in the slot f^2, and the gage may be used or not, as desired.

It is also important that the location of the slits should be arbitrarily exact, and when the guide-plate is used and a certain length of edge-slit is required I provide a knife the cutting-edges of which incline upward in three directions from the point *c*, as the incline in a downward direction might have a tendency to force the material away from the gage.

Modifications in details of construction may be made without departing from the principle or sacrificing the advantages of my invention,

the essential features of which have been freely described and illustrated.

By this invention I am enabled to form a brush for the purposes described without the necessity of employing expert labor, as any novice can use the device successfully, and I am also enabled to effect a saving in time and labor—say two or three days—in the formation of a brush for each cotton-gin, which saving, in connection with thousands of gins now in use, will be an immense advantage, as will be obvious.

It will of course be understood that the face of the bed-plate A^2 may be formed of or provided with a plate of soft metal, if desired, which may be secured in any convenient way, or may be cast in the form shown in Fig. 4, in which L represents the plate, provided with gage-arms J and a set-screw, j^2, by which the length of the edge-slot may be gaged. This plate may be made of any suitable metal; but I prefer brass.

I have shown the device as operated by cross-levers, in the manner of shears; but it is obvious that other arrangements of means may be employed with equal efficiency.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a device for forming brushes for cotton-gins, a T-knife having longitudinal and transverse cutting-edges, and operating means, substantially as described, combined with a bed and a gage-surface arranged at right angles to said bed, and constructed and arranged to have the inner corner of the longitudinal cutting-edge in close contact with a line drawn upon the plane of the front of the gage at or near the end of its stroke, whereby the edge of the material operated upon is severed, substantially as described.

2. In a device for forming brushes for cotton-gins, a T-knife having the faces of its three cutting-edges inclined on different planes from their point of juncture, whereby a shearing cut is given, substantially as and for the purposes set forth.

3. In combination with a gage and a slotted bed and guide, a T-knife having its cutting-edges inclined outwardly and upwardly from their point of junction, as set forth.

4. The removable T-knife C, composed of the plates C' and C^2, and having cutting-edges inclined in different directions from the point *c*, combined with the bed A^2, having slots f^3, front A^3, having slot f^2, and head having slot *f*, as and for the purposes set forth.

5. The knife C, as described, and anvil-jaw A', having slots $f f^2 f^3$, combined with the adjustable gage J, and adapted to serve as set forth.

6. The duplex gage J, arms J', having apertures *j*, and the set-screws j', combined with the jaws A A', knife C, and guiding-slots $f f^2 f^3$, as set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 18th day of December, 1882.

WILLIAM W. BRIGG.

Witnesses:

CHARLES P. WEBSTER,

CHARLES SMITH.