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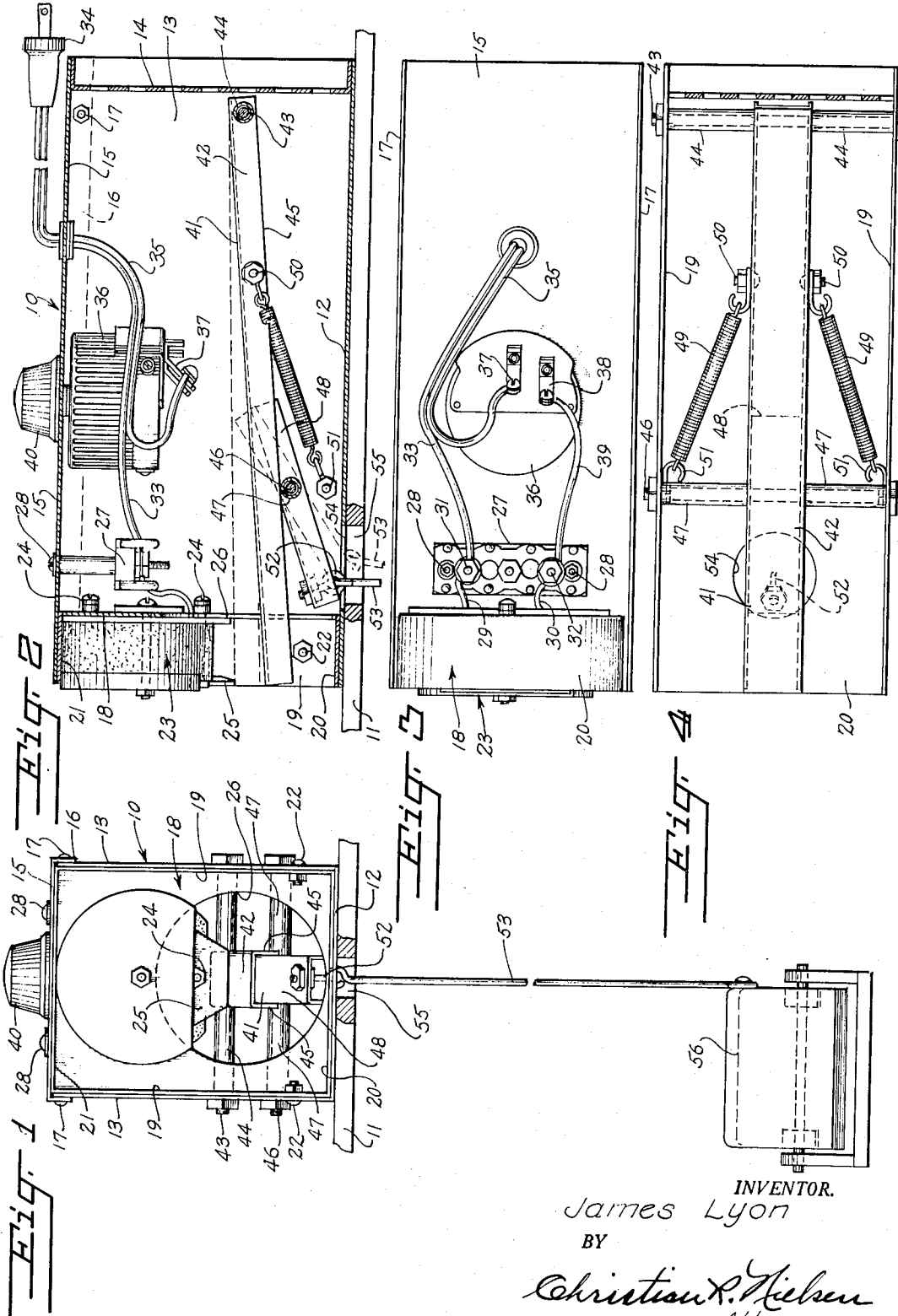
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BEAK TRIMMER AND CAUTERIZING DEVICE FOR FOWL

Filed July 14, 1954

2 Sheets-Sheet 1



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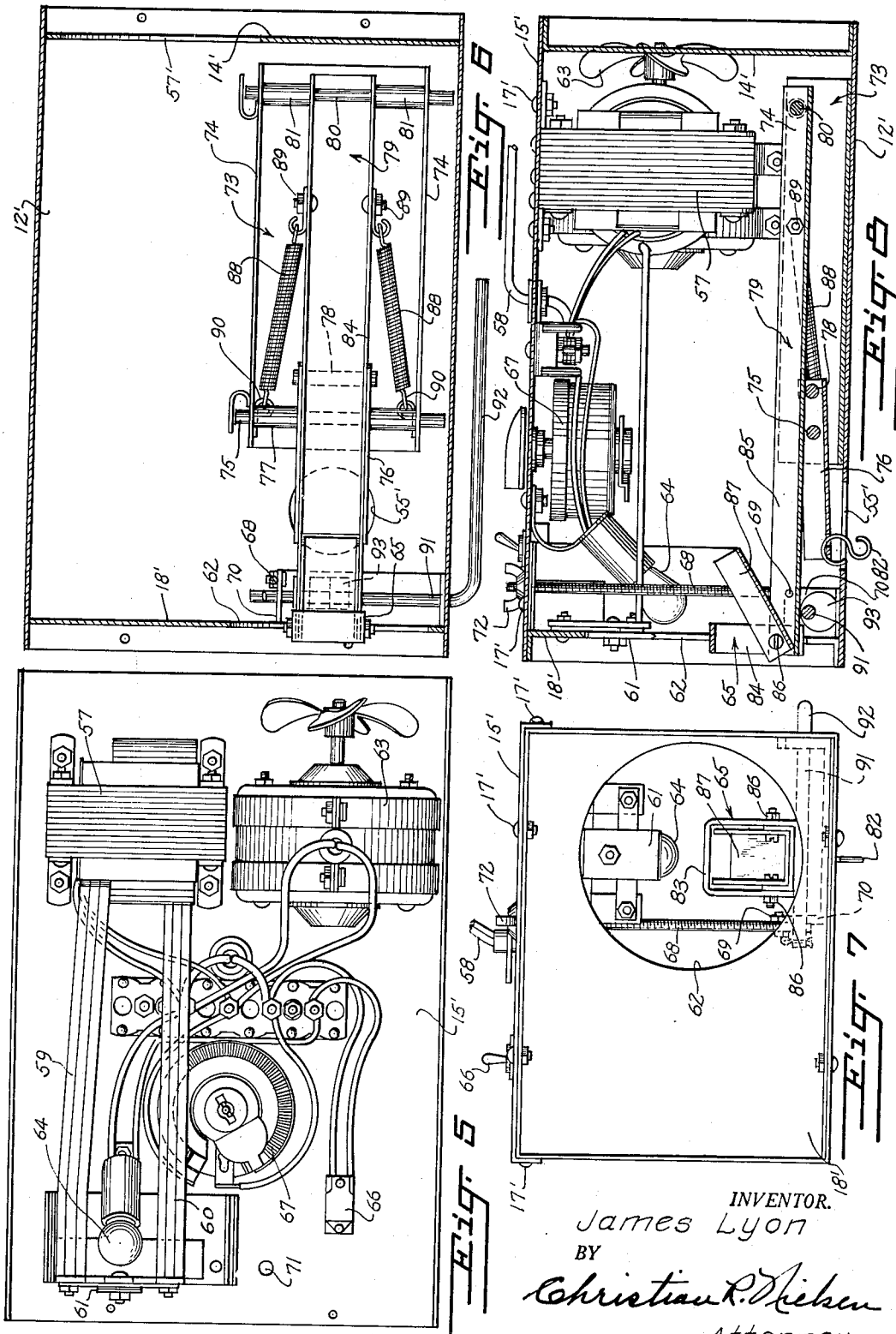
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BEAK TRIMMER AND CAUTERIZING DEVICE FOR FOWL

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4 Claims. (Cl. 128-303.1)

This invention relates to beak trimming and cauterizing devices for fowl and it consists in the constructions, arrangements and combinations herein described and claimed.

In prior trimmers and cauterizers for beaks of fowl, the cutting and cauterizing edge of the severing element have been moved downwardly upon the beak which was supported on an anvil or the like, and while these constructions operate satisfactorily to the end sought, such downward movement of the cutter and cauterizer partially obstructed the view of an operator, as well as requiring springs to return the cutter and cauterizer to its raised position, and still further, guide means were required to positively move the cutter and cauterizer in a straight path.

It is therefore the cardinal object of the present invention to provide a device of the character described, wherein the cutter and cauterizer are maintained stationary within the housing and providing a novel arrangement of leverage for raising an anvil or similar support into engagement with a fixed cutter and cauterizer.

It is also an object of the invention to provide a novel arrangement of leverage means for quickly and positively elevating an anvil or the like and a supported beak of a fowl into engagement with a cutting and cauterizing instrument.

A still further object of the invention is to provide a beak cutter and cauterizer, in which a cover for the housing is detachable therefrom, the interior of the cover functioning as a support for the cutter, the cauterizer and electrical control units, thereby enabling ready removal of the cover for repair or replacement of parts.

Additional objects, advantages and features of invention will be apparent from the following description, considered in conjunction with the accompanying drawings, wherein

Figure 1 is a front elevation of the beak cutting and cauterizing device, the supporting stand being shown partly in section.

Figure 2 is a longitudinal section through the unit.

Figure 3 is a top plan view of the cover removed and in reverse position to illustrate the mounting of the cutter, cauterizing elements and current control units within the cover.

Figure 4 is a top plan view of the housing, the cover having been removed, and illustrating the mounting of the anvil employed in the device.

Figure 5 is a view similar to Figure 3, but illustrating the use of a transformer in connection with the cauterizing element, a fan also being employed for exhausting fumes during operation of the device, as well as providing ventilation within the housing.

Figure 6 is a top plan view of the housing with the cover removed and illustrating the leverage means for elevating the anvil employed therewith.

Figure 7 is a front elevation of the device, and

Figure 8 is a longitudinal section through the unit.

Attention is first invited to Figures 1 and 2 of the drawings wherein there is shown a trimming and cauterizing unit generally indicated by the reference character 10, which as shown is supported upon a shelf, table or the like 11. The unit comprises a housing consisting of a bottom wall 12, side walls 13 and a perforated rear wall 14, the front of the housing being open for a purpose presently to be explained.

A cover 15 is provided for the open top of the housing, said cover having side flanges 16 adapted to embrace the side walls 13 and is secured thereto by means of screws or bolts 17. A front wall 18 is welded or otherwise secured to the forward end of the cover 15, so that when the cover is removed, the front wall is likewise removed. The front wall 18 in the present instance, is formed as a flanged boxing, side flanges 19 being spaced to fit between the side walls 13 of the housing, a bottom flange 20 seating upon the bottom wall 12 of the housing, and a top flange is secured to the cover 15. The front wall 18 is secured to the side walls 13 by means of bolts or screws 22. Obviously by removing the screws or bolts 17 and 22, the cover 15 and front wall 18 may be removed from the housing as a unit.

As clearly shown in Figures 2 and 3, the trimming and cauterizing unit 23 is mounted rigidly upon the front wall 18, by means of screws 24 and is so located that the trimming and cauterizing blade 25 extends below the upper peripheral edge of an opening 26 formed in the front wall 18.

An electrical connector bar 27 is mounted to the underside of the cover 15 rearwardly of the front wall 18 by means of bolts 28. Conductors 29 and 30 from the trimmer and cauterizing unit 23 are electrically connected to respective contacts 31 and 32. A conductor 33 from contact 31 forms one line to a plug 34, while conductor 35 from the plug is connected to one side of a rheostat 36 as at 37. A contact 38 of the rheostat has a conductor 39 electrically connected to a contact 32 which completes the circuit to the trimming and cauterizing unit 23.

It will be noted that the rheostat 36 is also mounted upon the underside of the cover 15 and includes a control knob 40 exteriorly of the cover. The rheostat 36 is that type wherein an "on" and "off" position of the current is inherent and a separate control switch is therefore eliminated. The conductor wires 33 and 35 pass through an opening in the cover 15 for connection with the plug 34.

Referring now to Figures 1, 2 and 4 of the drawings, a leverage system 41 is shown for elevating an anvil or beak support into operative position with the trimming and cauterizing blade 25.

A beak support 42 is pivotally mounted adjacent the rear of the housing as at 43. The beak support 42 is formed as a narrow elongated channel member (see Figure 1) terminating slightly beyond the blade 25 and of a width corresponding to the width of the cutting edge of the blade 25. In order to maintain the beak support centralized beneath said edge, spacer sleeves 44 are positioned on the pivot pin 43 interposed between the flanges 45 of the support and side walls 13 of the housing.

At a substantial distance forwardly of the pivot pin 43 and at a lower horizontal level, a pivot pin 46 is mounted between the walls 13 of the housing and this pin likewise includes spacer sleeves 47 for a trigger member 48 rockably mounted on the pin 46. The trigger member 48 is also formed as a channel member of a width to fit between the flanges 45 of the beak support 42.

As clearly shown in Figures 2 and 4, a helical spring 49 is secured at one end to respective flanges 45 of the beak support 42 as at 50, the opposite end of the springs

being secured as at 51 to the side walls 13 of the housing. The tension of the springs will draw the beak support downwardly although the beak supporting return to normal position under action of gravity.

The trigger 48 has an eyelet 52 at its forward end for securement of a rod 53 which has passage through an opening 54 formed in the bottom wall 12 of the housing and also through a slot 55 of the table or other support 11. The lower end of the rod 53 is pivotally connected to a foot treadle 56 which is rigidly mounted so as to be maintained in proper alignment with the trigger 48.

In use, the knob 40 is rotated to produce the necessary heat to the blade 25. An operator then opens the bill of the fowl and places the upper beak upon the flat top side of the beak support. The lower beak of the fowl will be accommodated within the channel portion of the beak support. With the beak firmly held to the beak support, it is only necessary to operate the treadle to raise the support and beak into engagement with the cutting edge of the blade 25. A portion of the beak will thus be severed and the beak cauterized. Upon release of pressure upon the treadle, the beak support and trigger will return to normal position by virtue of the springs 49.

The form of the device shown in Figures 5 to 8 is of a heavy duty type especially practical in trimming and cauterizing the beaks of larger birds, such as turkeys. The housing is substantially the same as the first form described, except that the front wall 13' is formed as a fixed part thereof and the rear wall 14' is provided with an opening 57' for a purpose presently to be described.

The cover 15' supports the instrumentalities for trimming and cauterizing and is removable as previously described.

Upon the underside of the cover a transformer 57 is mounted in circuit with a suitable source of current by means of a conductor 58. The transformer has two pairs of conductor bars 59 and 60 electrically connected to respective sides of a trimming and cauterizing blade 61 mounted inwardly of an opening 62 formed in the front wall 18'. An electric fan 63 is also in circuit with the source of current and is positioned in advance of the opening 57' of the housing for cooling purposes for the transformer and electrical leads as well as to exhaust fumes created by the trimming and cauterizing of beaks. Also in circuit with the source of current is an electric light 64 located immediately behind the blade 61 so as to illuminate a beak support 65 which is advantageous in case of trimming and cauterizing fowl at night or when operating in a plant having insufficient light. A switch 66 controls the lighting of the lamp.

A rheostat 67 controls the flow of electrical current to the transformer.

The cover 15' is secured to the housing by bolts or screws 17' as in the first form of the device and at the front end of the housing, a vertical threaded rod 68 is hingedly mounted upon a stud 69 secured in a bracket 70. The upper end of the shaft 68 projects through an opening 71 in the cover 15' and receives a thumb screw 72 for additionally securing the cover.

The means for elevating the beak support 65 will now be described, reference being made particularly to Figures 6 and 8 of the drawings, wherein a bracket 73 is welded or otherwise secured to the bottom wall 12 in medial longitudinal alignment with the opening 62 of the front wall 18'. The bracket 73 is in the form of a channel member having longitudinal parallel upright side flanges 74, at the front of which there is mounted a pin 75. The pin 75 supports a trigger 76 which is maintained in alignment with the opening 62 by means of sleeves 77 on the pin and interposed between respective flanges 74 and the sides of the trigger. Rearwardly of the pin 75, the trigger is provided with a fulcrum bar 78 for an elongated channel member 79, which is rockably mount-

ed upon a shaft 80 supported between the flanges 74 of the bracket 73, the channel being centered with respect to the trigger by means of sleeves 81.

The forward end of the trigger has mounted thereon a hook 82 to which a link may be secured for foot operation of the device, and to this end, the bottom wall 12' is provided with an opening 55' for passage of the link therethrough. It will be apparent that upon downward pull of a link connected to the hook 82, the anvil will be elevated for operative position with the blade 61.

The forward end of the elongated channel member supports the anvil 65 medially beneath blade 61. In the present instance the anvil is shown as a U-shaped member, the bight portion 83 extending horizontally beneath the blade, the legs 84 thereof being secured to respective flanges 85 of the channel 79, by means of bolts and nuts 86, which also secure a chute 87 in position beneath the bight portion 83. The chute 87 is inclined downwardly so as to shunt severed portions of beaks to the outside of the housing. A pair of helical springs 88 are employed for tensioning the channel member 79. One end of the springs are anchored to respective flanges 84 of the channel member as at 89, while the other ends of the springs are secured to respective flanges 74 of the frame 73, as at 90, which point of attachment is at a lower horizontal level than the anchorage 89, the springs thus tending to pull downwardly and maintain the channel member 79 in contacting engagement with the fulcrum bar 78.

The channel member 79 and associated anvil and chute may also be hand operated, and to this end, a shaft 91 is journaled in the bracket 70, the shaft extending through a side wall of the housing and provided with a handle 92. A cam 93 is secured upon the shaft 91 and disposed beneath the forward end of the channel member 79. By rotating the cam 93 by means of the handle 92, the channel member 79 will be elevated at the forward end to present the anvil to the cutter 61. The channel member 79 will return to lowered positions upon reverse movement of the handle 92.

While I have shown and described preferred forms of the device, this is by way of illustration only, and I consider as my own all such modifications in construction as fairly fall within the scope of the appended claims.

I claim:

1. A beak trimming and cauterizing device comprising a housing, a fixed severing member supported in said housing, means within the housing for heating said severing member to a cauterizing temperature, said heating means being adjacent to said fixed severing member, a trigger member pivotally mounted within the housing, an elongated member pivotally mounted within the housing and operatively connected to said trigger member, said elongated member including a beak support disposed beneath said severing member, spring means connected to said elongated member for tensioning the elongated member in its lowermost position and means exteriorly of the housing and connected to said trigger member for rocking said trigger member to elevate said elongated member and beak support into contacting engagement with said severing member.

2. A beak trimming and cauterizing device comprising a housing, a fixed severing member supported within the housing and projecting below the upper peripheral edge of an opening formed in the front wall of said housing, means within the housing for heating said severing means to a cauterizing temperature, a trigger member pivotally mounted upon the base of said housing, an elongated member pivotally mounted within the housing positioned above and in contacting engagement with one end of said trigger member, spring means connected between said elongated member and said housing for tensioning upward movement of said elongated member, an anvil mounted upon the forward end of said elongated member

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aligned with said severing member and means exteriorly of the housing and connected to said trigger member for effecting swinging movement of said trigger member to elevate said elongated member to present said anvil into engagement with said severing member.

3. The structure of claim 2 wherein said elongated member includes a chute for shunting the severed portion of a beak exteriorly of the housing and said means for heating the fixed severing member being adjacent thereto.

4. A beak trimming and cauterizing device comprising 10 a housing, a fixed severing member supported within said housing, means within the housing and connected to the same for heating said severing member to a cauterizing temperature, an elongated member pivotally mounted

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within said housing and having a beak support at the free end thereof and disposed beneath said severing member, a cam member rotatably mounted beneath the free end of said elongated member and a hand lever exteriorly 5 of the housing and connected to the cam member for rotating the cam to elevate said elongated member and beak support to present the latter into contacting engagement with said severing member.

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