

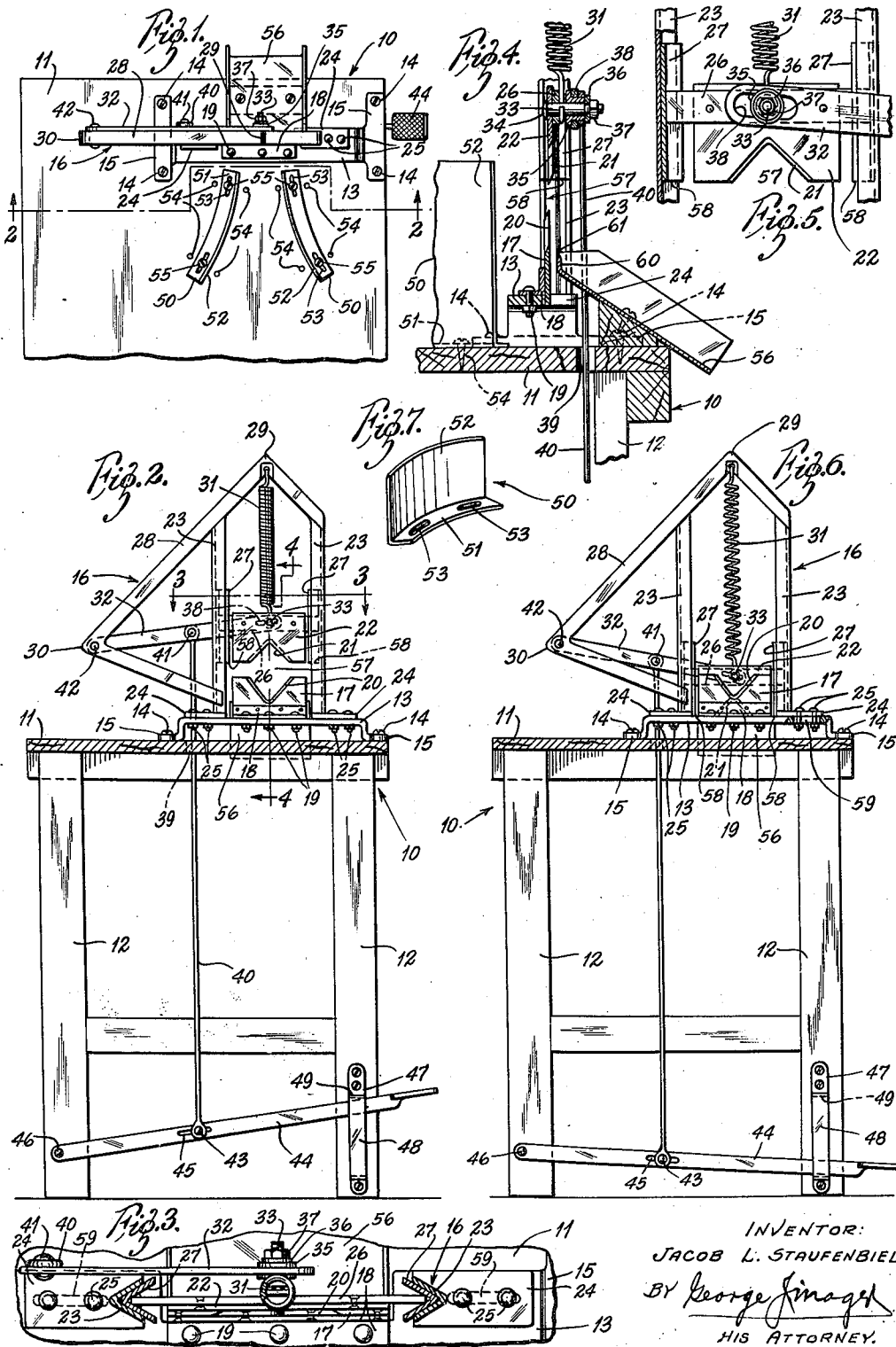
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POULTRY DECAPITATOR

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POULTRY DECAPITATOR

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The present invention pertains to a novel device for use in the beheading of poultry or the like.

It is particularly, though not exclusively, useful when a relatively large number of chickens, ducks, geese, turkeys, or other edible fowl or game is to be prepared for the table.

The invention is particularly designed to expedite and facilitate the decapitation of live poultry, in that it permits the free use of both hands during decapitating operations, and simultaneously insures severance of the head from the body of the fowl with a single stroke.

In general, the invention includes a vertically disposed, stationary blade cooperable with a companion blade slidably mounted for vertical reciprocatory movements toward and away from said first named blade; foot-operable means adapted to effect descent of the reciprocatory blade; spring means adapted to effect instantaneous ascent of said blade to its original position upon release of said foot-operable means; adjustable guide means facilitating proper positioning of the fowl and simultaneously obviating injury to the hands of the operator; and means whereby the severed head of the fowl and the attendant blood may be discharged into a suitable receptacle.

The principal object of the invention therefore is to provide a comparatively simple and inexpensive apparatus requiring little skill on the part of the user in order to behead a large number of fowl in a comparatively short time.

Another object is to provide such a device with means whereby the neck of the fowl is easily fed into proper position, said means at the same time functioning as safety guards to prevent injury to the hands of the person operating the device.

A further object is to provide a simple apparatus adapted for the beheading of poultry or fowl of various sizes.

Other objects and advantages of the invention will be apparent or pointed out in the following description, reference being had to the accompanying drawing, which forms part of this specification, and wherein similar parts are designated by similar numerals throughout the various views.

In the said drawing:

Fig. 1 is a plan view of the preferable embodiment of the invention, shown as mounted adjacent one end portion of a table;

Fig. 2 is a front elevational view thereof, the table top appearing in vertical section, and the view being taken along the line 2—2 in Fig. 1;

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Fig. 3 is a fragmentary horizontal sectional view on an enlarged scale, and taken on the line 3—3 in Fig. 2;

Fig. 4 is a fragmentary vertical sectional view on an enlarged scale, taken approximately on the line 4—4 in Fig. 2;

Fig. 5 is a rear elevational view, partly in section, of a portion of the invention, particularly illustrating the means for mounting a vertically reciprocable blade member;

Fig. 6 is a view similar to Fig. 2, with the moving parts of the device in an alternate position; and

Fig. 7 is a perspective view of one of the adjustable guide members which also serve as a safety device.

As shown in the drawing, the invention is preferably mounted adjacent one end portion of a table generally indicated 10, whose top 11 is supported on legs 12. The base 13 of the device is rigidly secured to said table top by means of removable screws or bolts 14 which pass through integral offset lateral flanges 15 of the base, and into said table top. The base proper is horizontally disposed and raised above the table top for reasons to be explained hereinafter.

Mounted on and supported by the base 13, is an angular structure or framework generally designated 16, and a stationary lower blade member 17, the latter being rigidly affixed to the base by means of an angle plate 18 to which the blade member is riveted or otherwise secured, and which is in turn secured to said base by means of bolts 19, as shown, or by analogous means. Said stationary blade member 17 is provided centrally with a V-shaped shearing or cutting edge 20, adapted to cooperate with a similar inverted V-shaped edge 21 provided in a reciprocable upper blade member 22, as will appear.

The framework 16 includes a pair of standards constituting vertical slideways 23, each of whose lower ends is rigid with a horizontal outstanding flange 24 which rests on the base 13, and is fastened thereto by means of bolt and nut assemblies 25.

The horizontal cross-sectional configuration of the slideways is optional. For instance, it may be channel-shaped, or, as illustrated, particularly in Fig. 3, it may be angular, or otherwise.

The upper blade member 22 is supported for vertically reciprocable movements by a horizontally disposed bar 26, rigid with a pair of slide members 27, each of whose horizontal cross-sectional configurations coincides with that of its associated slideway 23. The blade member 22 is

riveted or otherwise permanently secured to the bar 26.

The framework 16 also includes an angular member 23, rigidly secured by welding, or otherwise, to the vertical slideways 23, and having apices 29 and 30 formed therein. The upper end of a tension spring 31 is anchored at the apex 29, and a transversely disposed arm or lever 32 is pivotally secured at the apex 30.

As best seen in Fig. 4, a horizontally disposed pin or stud 33 is provided with an enlarged head 34 at one end and external screwthreads at its opposite end. It passes successively through the upper blade member 22, the bar 26, a flanged anti-friction roller 35, a washer 36, and an internally threaded nut 37. The lower end of the spring 31 is anchored about said stud between the bar 26 and the roller 35. Thus these parts are maintained in relative position between the head 34 and the washer 36 by means of said nut.

The roller 35 operates in an elongated slot 38 formed in the free end portion of the lever 32. Said roller, as shown in the drawing, may consist of two parts. In other words, the roller 35 includes a hub having an integral flange on one side, and a disc, welded or soldered to the laterally projecting portion of the hub after the latter has passed through slot 38, on the other side.

As shown especially in Fig. 4, an opening 39 is formed in the table-top to accommodate a vertical connecting rod 40 whose upper end is pivotally secured to the lever 32 as at 41, approximately intermediate the pivot 42 thereof, and the roller 35.

The lower end of the rod has a pivotal connection 43 with a treadle 44 provided with an elongated slot 45 through which the pivot passes. One end of the treadle is pivotally connected at 46 to one of the table legs 12, and the other end thereof is limited to vertical reciprocal movements by means of a strap 47 secured to another of the table legs. The strap has a portion 48 thereof offset slightly so as to provide a narrow space between it and the adjacent leg 12 to accommodate and confine the treadle therebetween. The upper horizontal portion 49 of said offset portion 48 may also serve as a stop or abutment limiting the upward travel of the treadle.

A pair of guide members 53, of the arcuate configuration seen especially in Fig. 7, and mounted on the table top in advance of the decapitator proper, as shown in Figs. 1 and 3, also serve as guards or safety devices. Each guide or guard member 53 includes a horizontal flange portion 51, and a vertical body portion 52.

One or more arcuate slots 53 are formed in each flange 51, and the table-top 11 is provided with correspondingly spaced sets of holes or apertures 54 for the reception of screws 55 which pass through the slots and are threaded into said holes. Two or more sets of holes 54 are provided for each guide member, so that lateral as well as longitudinal variations in the location thereof may be had.

As inclined chute 56, mounted as illustrated particularly in Fig. 4, serves to discharge the severed head and attendant blood into a suitable receptacle, not shown.

As previously indicated, the invention is primarily, though not exclusively, intended for use in the decapitation of poultry in relatively large numbers. It is also capable of achieving its ends regardless of whether the fowl be large or small, the only requirement being the proper positioning of the guide and guard members 53 in accordance with the size of the victim.

In the following description of operation, the term "bird" is assumed to cover any and all poultry or fowl susceptible of the action of the decapitator.

Assuming now, that a quantity of relatively large birds are to be beheaded, the combined guide and guard members 50 are positioned approximately as in Fig. 1, whereas for relatively small birds, the members 50 are shifted inwardly as is understood. For very large birds, the members 50 are positioned outwardly, the outermost sets of holes 54 being utilized in securing the guides to the table top.

The operator grasps the bird and slides it forwardly head first on the table top until its neck has passed through the opening 57, more or less defined by the V-shaped cutting edges 23 and 21 of the lower and upper blade members respectively, whereupon he depresses the treadle with his foot to complete the beheading operation.

As previously stated, one of the principal advantages inherent in the use of the invention is the ability of the operator to grasp the bird firmly with both hands. The arcuately shaped guide members facilitate proper positioning of the neck of the bird, also aid in maintaining the bird in position, and at the same time safeguard the hands of the operator from injury by the blades.

In Fig. 2, the device is illustrated in its normal position ready for use. At this time the spring 31 maintains the reciprocable upper blade member as well as the treadle in the elevated position shown.

In Fig. 6 the device is illustrated as it appears at the completion of a beheading operation, just prior to the removal by the operator of his foot from the treadle. Immediately upon removal of his foot, the parts return to their Fig. 2 position under the action of the tension spring 31. The return movement is arrested by the abutment 43, when the blade member 22 arrives at its normal elevated position.

The downward movement of the blade 22 is arrested by the lower extremities 53 of the slide members 27 when the apex of the cutting edge 21 has passed slightly beyond the apex of the cutting edge 23. This condition obtains in Fig. 6, wherein it is noted that the ends 58 of the slides 27 are in contact with the base 13, thus preventing further downward movement of the said blade.

It should be apparent from the foregoing that the invention achieves its objects in a highly efficient manner. The anti-friction roller 35 is journaled loosely on the stud 34 so that the latter does not revolve during reciprocal movements of the blade. This arrangement insures smooth and easy operation.

The base 13 is raised above the table top to facilitate cleaning. Should either the slides 27 or the slideways 23 become worn after considerable usage, such wear may be taken up by a slight adjustment of the bolt and nut assemblies 25 in association with a pair of elongated slots 59 in the base 13 through which the bolts pass.

The discharge chute 56 is so located that only sufficient clearance to permit descent of the blade 22 obtains between the vertical flange portion 60 thereof, and the stationary blade 17. Thus the severed heads and the accompanying blood are automatically discharged at the rear of the device upon descent of the upper blade. The upper edge of the flange 60 may be beveled as at 61 to increase the efficiency of the chute.

While the particular embodiment of the in-

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vention illustrated and described has been found highly efficient, it is obviously susceptible of modification without departing from the principle thereof.

What is claimed is:

1. A device for decapitating poultry including a base secured to a table or the like, a stationary vertical blade member mounted on the base, a companion blade slidably mounted for vertical reciprocatory movements toward and away from said first named blade, foot-operable means to effect descent of the reciprocatory blade, spring means to effect instantaneous ascent thereof following release of said foot-operable means, adjustable guide and guard means to facilitate proper positioning of the fowl and simultaneously obviating injury to the hands of the operator, and means to discharge the severed poultry heads to the rear of the device.

2. A device for decapitating poultry including a base secured to a table or the like, a stationary vertical blade member mounted on the base, a companion blade slidably mounted for vertical reciprocatory movements toward and away from said first named blade, foot-operable means to effect descent of the reciprocatory blade, means limiting the descent thereof, spring means to effect instantaneous ascent of said blade upon release of said foot-operable means, means limiting the ascent thereof, adjustable guide and guard means to facilitate proper positioning of the fowl and simultaneously obviating injury to the hands of the operator, and means to discharge the severed poultry heads to the rear of the device.

3. Apparatus for beheading poultry including a base secured to the top of a table, a stationary blade member secured to the base, a framework also supported on the base, said framework including a pair of vertical slideways, a vertically reciprocable blade member, slide members secured thereto for cooperation with said slideways, means to effect reciprocation of said reciprocable blade, means to limit the downstroke thereof, means to limit its upstroke, combined guide and guard means secured to said table top in predetermined position in advance of and relative to said blade members, and means for discharging the severed poultry heads at the rear of the device.

4. Poultry decapitating apparatus including a horizontal base secured to the top of a table, a vertically disposed stationary blade member mounted on the base, a vertically upwardly extending frame structure also mounted on the base, a pair of vertical standards constituting slideways incorporated in said frame structure, a vertically reciprocable blade member affixed to a transversely disposed supporting bar, a slide member rigidly secured to each extremity of said bar, a substantially horizontally disposed lever pivotally secured at one end to said reciprocable blade and at the other end to a portion of said frame structure, an aperture in the table top, a vertical rod freely passing therethrough, a pivotal connection with said lever at the upper end of said rod, a substantially horizontally disposed treadle pivotally attached at one end to a leg of said table, a pivotal connection with said treadle at the lower end of said rod, a tension spring whose lower end is attached to said reciprocable blade and whose upper end is attached to a portion of the frame structure, arcuate guide members adjustably secured to the top of the table adjacent to and in advance of said blades, and

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an inclined poultry head and blood discharge chute positioned in close proximity to said blades.

5. A device for decapitating poultry comprising a horizontally disposed base secured to the top of a table or the like adjacent one end thereof and in vertically spaced relation thereto, a vertically disposed stationary blade member provided with a V-shaped cutting or shearing edge affixed to the base, an upwardly extending frame structure comprising a pair of vertical standards constituting slideways and an angular member rigid therewith also mounted on the base, a vertically reciprocable blade member provided with an inverted V-shaped cutting or shearing edge rigid with a transversely disposed supporting bar, a slide member rigidly secured to each extremity of said bar, a substantially horizontally disposed lever pivotally secured at one end to said reciprocable blade and at the other end to a portion of said frame structure, an aperture in the table top, a vertical rod freely passing therethrough, a pivotal connection with said lever at the upper end of said rod, a substantially horizontally disposed treadle pivotally attached at one end to a leg of said table, a pivotal connection with said treadle at the lower end of said rod, a tension spring whose lower end is attached to said reciprocable blade and whose upper end is attached to a portion of the frame structure, arcuate guide members adjustably secured to the top of the table adjacent to and in advance of said blades, and an inclined poultry head and blood discharge chute positioned in close proximity to said blades.

6. A device for decapitating poultry comprising a horizontally disposed base secured to the top of a table or the like adjacent one end thereof and in vertically spaced relation thereto, a vertically disposed stationary blade member provided with a V-shaped cutting or shearing edge affixed to the base, an upwardly extending frame structure comprising a pair of vertical standards constituting slideways and an angular member rigid therewith also mounted on the base, a vertically reciprocable blade member provided with an inverted V-shaped cutting or shearing edge rigid with a transversely disposed supporting bar, a slide member whose horizontal cross-sectional configuration coincides with that of its associated slideway rigidly secured to each end of said bar, a substantially horizontally disposed lever whose free end is pivotally secured to said reciprocable blade by means of a non-rotatable stud passing therethrough and through said blade, an elongated slot formed in said end of the lever, an anti-friction roller loosely journaled on said stud and operative in said slot, a washer and a nut arrangement to maintain the roller on the stud and in the slot, a pivotal connection for said lever at its opposite end to said frame structure at one apex thereof, an aperture in the table top, a vertical rod freely passing therethrough, a pivotal connection with said lever at the upper end of said rod, a substantially horizontally disposed treadle pivotally attached at one end to a leg of said table, a pivotal connection with said treadle at the lower end of said rod, a tension spring whose lower end is attached to said reciprocable blade and whose upper end is attached to a portion of the frame structure, arcuate guide members adjustably secured to the top of the table adjacent to and in advance of said blades, and an inclined poultry head and blood discharge chute mounted on the table to the rear of the device, said chute includ-

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ing a vertical flange portion whose upper edge is beveled, and whose location is such that only sufficient clearance obtains between it and the stationary blade to accommodate the reciprocable blade when the latter descends.

7. A poultry decapitator comprising a horizontally disposed base secured to the top of a table or the like adjacent one end thereof and in vertically spaced relation thereto, a vertically disposed stationary blade member provided with a V-shaped cutting or shearing edge affixed to the base, an upwardly extending frame structure including a pair of spaced vertical slideways and an angular member rigid therewith, a horizontally disposed flange member rigid with the lower extremity of each slideway, a pair of elongated slots in the base, nut and bolt assemblies associated with said slots to adjustably secure said slideways to the base, a pair of apices in said angular member of the frame structure, a vertically reciprocable blade member provided with an inverted V-shaped cutting or shearing edge, a horizontal supporting bar therefor, slide members secured to the ends of the supporting bar and slideable in said slideways, a transversely disposed lever pivotally attached at one end to said angular frame member at one apex thereof, a vertically disposed tension spring anchored at its upper end to said angular frame member at the other apex thereof, a headed stud passing through the reciprocable blade and its supporting bar and projecting rearwardly therebeyond, an anti-friction roller loosely journaled on the rearwardly projecting portion of the stud, an elongated slot in the free end of the transverse lever associated with said roller, a washer about said stud interposed between the roller and a nut threaded on

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the extremity of the stud, said tension spring anchored at its lower end to said stud, an aperture in the table top below the transverse lever, a vertically reciprocable rod pivotally connected at its upper end to the lever passing through said aperture, a transversely disposed treadle pivotally secured to a stationary part of said table, a pivotal connection between the lower end of said vertical rod and the treadle, an elongated slot in the treadle about said pivotal connection, a strap member secured to a stationary part of the table, a horizontally offset portion formed in the strap to confine the treadle to vertical movements between said offset portion and said stationary part of the table, an abutment on the strap to limit the upward travel of said treadle, a complementary pair of guide members mounted on the table in advance of said blade members, each guide member comprising an arcuately contoured vertical body portion and a similarly contoured horizontal flange portion, one or more arcuate slots in the flange portions, and a plurality of laterally spaced corresponding sets of apertures in the table top to receive removable screws passing through said slots and engaging said apertures.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
487,560	Furnas et al.	Dec. 6, 1892
549,008	Olson	Oct. 29, 1895
551,283	Huddle	Dec. 10, 1895
1,149,517	Hogan	Aug. 10, 1915