Oct. 14, 1952 E. T. WAYNE 2,613,390

POULTRY SHACKLE

Filed March 14, 1951

Fig. 1.

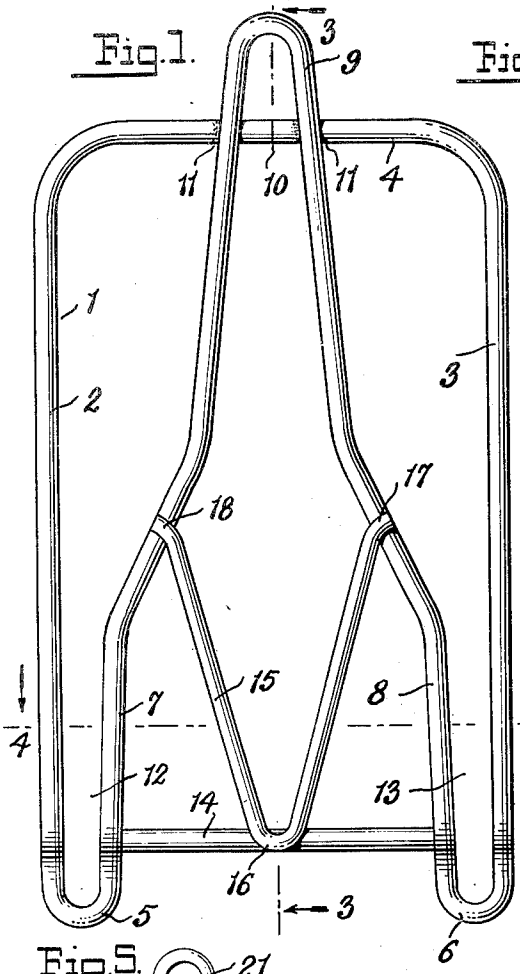


Fig. 2.

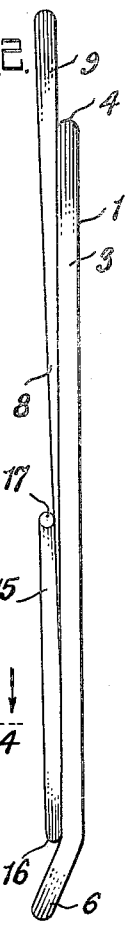


Fig. 3.

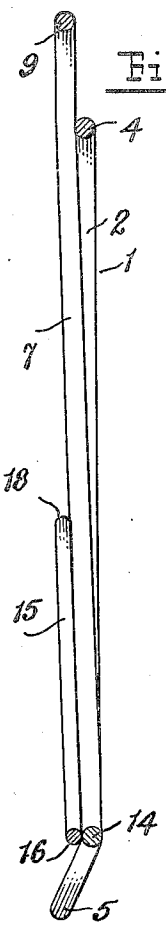


Fig. 5.

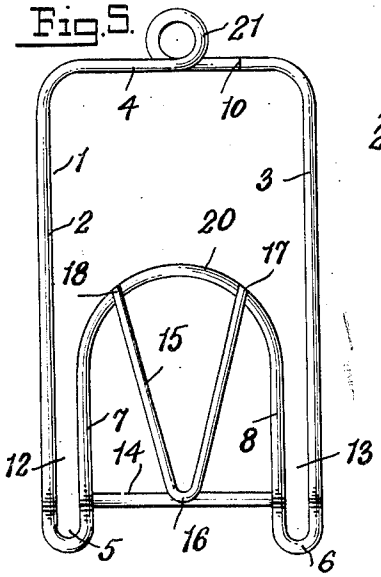
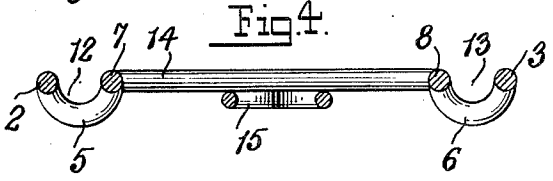


Fig. 4.



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POULTRY SHACKLE

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9 Claims. (Cl. 17—44.1)

1

This invention relates to shackles or suspension devices for fowls, and especially those of the kind adapted for supporting the fowls when they are being killed, scalded, picked or otherwise treated during processing operations.

In many of the devices commonly in use for the above-mentioned purpose, resilient, springy or movable elements are incorporated primarily for the purpose of gripping the feet of the fowl and retaining the same in recesses, notches or holding elements in the shackle. Since shackles of this kind are in constant contact with heat and moisture, this coupled with repeated pressure imposed on the springy, resilient or movable elements, soon causes such elements to lose their tension, and the device to become either inoperative or else more or less unsatisfactory in operation.

It is an object of the present invention to provide a shackle of rigid and non-resilient construction having no movable parts or parts capable of flexure or distortion. As a result, a shackle constructed according to the present invention will last indefinitely; it will withstand very rough handling and the abuse to which articles of this kind are often subjected, and will effectively hold the fowls during all processing operations.

More particularly, the invention contemplates the provision of a rigid frame, preferably composed of metallic rod of non-corrosive metal, or else treated to render it corrosion-resistant, and which is bent in a manner to provide feet-supporting loops, a suspension loop and a neck recess, all of the parts or elements of the device being fixedly and immovably connected, resulting in a substantially integral and rigid device, yet one which will firmly retain and suspend the fowl while the same is being processed.

These and other objects are attained by the invention, a more particular description of which will appear hereinafter and be set forth in the claims appended hereto.

In the accompanying drawing, wherein an illustrative embodiment of the invention is disclosed,

Fig. 1 is a front elevation or face view of a poultry shackle, constructed in accordance with the invention;

Fig. 2 is a side view of the same;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1, looking in the direction of the arrows;

Fig. 4 is a sectional view, taken on the line 4—4 of Fig. 1, looking in the direction of the arrows, and

2

Fig. 5 is a front elevation of a modified structure.

Referring to the drawings, and particularly to Figs. 1 to 4 inclusive, 1 indicates generally the frame of the improved shackle. Said frame and all other parts of the device are preferably made of non-corrosive metal or metal treated to render it corrosion-resistant. The frame includes a pair of parallel side bars indicated respectively at 2 and 3, and an integral top bar 4. At their lower ends, the side bars 2 and 3 are bent upwardly rather sharply as to form loops, as indicated at 5 and 6, and then extend upwardly to form the inner longitudinal bars indicated at 7 and 8. The inner bars 7 and 8 continue upwardly on convergent lines toward the upper or top bar 4 and extend above said bar where they integrally join in forming a loop 9, said loop constituting a suspension member for the shackle and by which it is hung from a conveyor or other support.

It will be noted that the frame 1, including the inner bars 7 and 8 and the suspension loop 9, is formed from a single continuous section of metal rod, having its ends joined by welding or other suitable joinder, at the point 10, or at any other suitable location along the length of the rod. This formation of the shackle results in the production of a very strong and rigid frame structure which can be handled roughly or tossed about without damage. At the points where the legs of the loop 9 cross the top bar 4, welding 11 is provided to thus attach these legs to the bar, resulting further in stiffening the device at these points.

The lower or base portions of the inner bars 7 and 8 extend substantially parallel to the side bars 2 and 3, and the spacing between the bars 2 and 7 forms a leg-receiving recess or notch 12, while similar spacing 13, between the bar 3 and the inner bar 8 constitutes a second leg notch of recess. The loops or bends 5 and 6 at the lower end of the shackle are bent forwardly or are offset as clearly seen in Figs. 2 and 3.

Extending between the inner bars 7 and 8, and just above the offset loops 5 and 6, is a reinforcing cross-bar 14, which has its ends welded to the bars 7 and 8, thus adding very material stiffness to these bars. A V-shaped bar, indicated at 15, has its apex 16 welded at the center of the cross-bar 14, and the ends 17 and 18 of its divergent legs welded to the converging parts of the bars 7 and 8.

The device as shown, therefore, consists of a rigid outer frame 1 having an upwardly-extended

inner frame provided with leg portions 7 and 8 cooperating with the outer frame in forming notches or recesses 12 and 13 for receiving the legs of the suspended fowl, these notches or recesses being defined at their lower ends by off-set loops 5 and 6. The inner frame is thus in the form of an inverted V-shape which has its apex extending above the top of the outer frame and forming a suspension loop 9 for the shackle. The lower portion of the inner frame is reinforced by the cross bar 14, and this and the converging parts of the inner frame forms a support for the V-shaped member 15 providing a notch in which the neck of the fowl is inserted when it is desired to hold the head of the fowl as well as the legs or as an alternative for suspending the fowl by the legs.

In inserting the fowl in the shackle, the legs are thrust down in the recesses 12 and 13 to be positioned in the lower off-set loops 5 and 6 which will firmly hold the legs against dislodgement. The neck of the fowl may be thrust through the notch defined by the V-shaped member 15 if and when desired.

In the embodiment of the invention shown in Fig. 5, the inner frame consists of an upwardly extending loop member 20 which terminates below the upper bar 4'. In this embodiment of the invention, the suspension loop 21 is formed in the top bar 4' as clearly shown in Fig. 5 rather than by an inner frame apex. The remaining elements of the device of this embodiment, correspond to those described in connection with the structure shown in Figs. 1 to 5 inclusive.

From the foregoing, it will be apparent that the described devices are of such construction as to render the same strong, rigid and of lasting nature. Having no resilient, pivotal or movable parts, the cooperating elements of the device remain in fixed relation and uniformly hold the fowls during processing. All parts of the device being welded or otherwise permanently connected, the device will not readily become bent or distorted out of shape or damaged by repeated use.

Having described one embodiment of the invention, it is obvious that the same is not to be restricted thereto since various modifications may be made without departing from the spirit of the invention. For example, in cases where it is found desirable to support the fowls by the legs only, it will be apparent that the V-shaped member 15 might be eliminated.

What I claim is:

1. In a poultry shackle, a section of metallic rod defining a three-sided frame, said frame having side bars, said bars having upward bends at one end to form a pair of leg-receiving loops located at one end of the frame, said upwardly-bent portions of the side bars presenting parts positioned within the frame, bracing elements extending between the said parts, one of said bracing elements being a rigid V-shaped member for the reception of the neck of a fowl.

2. In a poultry shackle, a section of metallic rod defining a three-sided frame provided at one end with a pair of off-set leg-receiving loops, said frame including an inverted V-shaped portion extending upwardly from the off-set loops, said V-shaped portion having a loop located above the top of the frame and constituting a suspension loop for the shackle, a cross bar extending across the inverted V-shaped portion, and a bracing element extending between said cross-bar and parts of the V-shaped portion and constituting a neck-receiving notch.

3. In a poultry shackle as provided for in claim 2, wherein the frame and the inverted V-shaped portion extending therefrom are composed of a single length of metallic rod, and the cross-bar and the bracing member are secured in place so that all portions of the shackle are rigidly connected together.

4. A poultry shackle comprising, a frame having a top bar, a pair of side bars extending downwardly therefrom, said side bars being substantially parallel to one another, said side bars having upward bends at one end to form a pair of leg-receiving loops, the upwardly-directed portions of the bars meeting in a loop located above the top bar, a V-shaped brace member extending between the upwardly-directed parts and forming a neck-receiving notch, and a cross bar extending between the upwardly-directed parts, the V-shaped brace member having an apex secured to the cross-bar.

5. A poultry shackle comprising, a frame having a top bar, a pair of side bars extending downwardly therefrom, said side bars being substantially parallel to one another, the side bars being upwardly-directed at their lower ends to form a pair of leg-receiving loops, said loops being directed angularly and being thus off-set to the frame, the upwardly-directed portions of the side bars meeting in a loop, a V-shaped brace member connecting the sides of the latter loop and forming a neck-receiving notch for a fowl, and a cross-bar extending across said loop and to which a part of the V-shaped brace member is attached.

6. A poultry shackle comprising, a frame in the form of a continuous loop, said frame having a pair of outer side legs and a pair of inner legs, the inner legs being respectively connected to the outer legs by off-set leg-receiving loops, the inner legs being connected together at the top by a bend, and a cross-brace extending between the inner legs.

7. A poultry shackle comprising, a frame in the form of a continuous loop, said frame having a pair of outer side legs and a pair of inner legs, the inner legs being respectively connected to the outer legs by leg-receiving loops, the inner legs being connected together at the top by a bend, a cross-brace extending between the inner legs near the loops, and a V-shaped brace member extending between the inner legs and the cross-brace.

8. A poultry shackle comprising, a rigid frame in the form of a continuous loop, said frame having a top bar and a pair of outer side legs and a pair of inner legs extending substantially parallel for a portion of their length to the side legs, the inner legs being respectively connected to the outer side legs by loops, the inner legs being joined together at the top by a bend located above the top bar and constituting a suspension loop for the shackle, a brace member extending between the inner legs adjacent to the loops and a V-shaped brace extending between said inner legs and the brace member, all of the above-mentioned elements of the shackle being maintained in rigid relationship.

9. A poultry shackle comprising, a frame in the form of a rigid continuous loop, said frame having a pair of outer side legs and a pair of inner legs, the inner legs being respectively connected to the outer legs by leg-receiving loops, the inner legs being connected together at one end by a

loop and connected together adjacent to the leg-receiving loops by a cross-brace.

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