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P. L. FORD

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HAM MARKING GUIDE

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Fig. 1

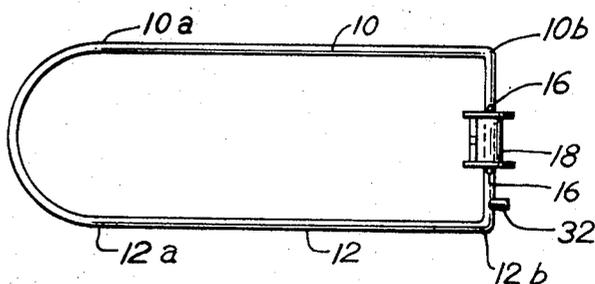


Fig. 2

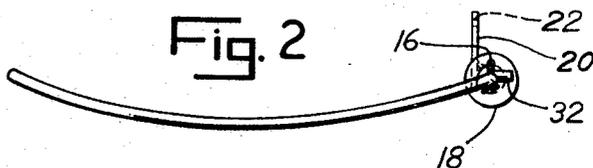


Fig. 3

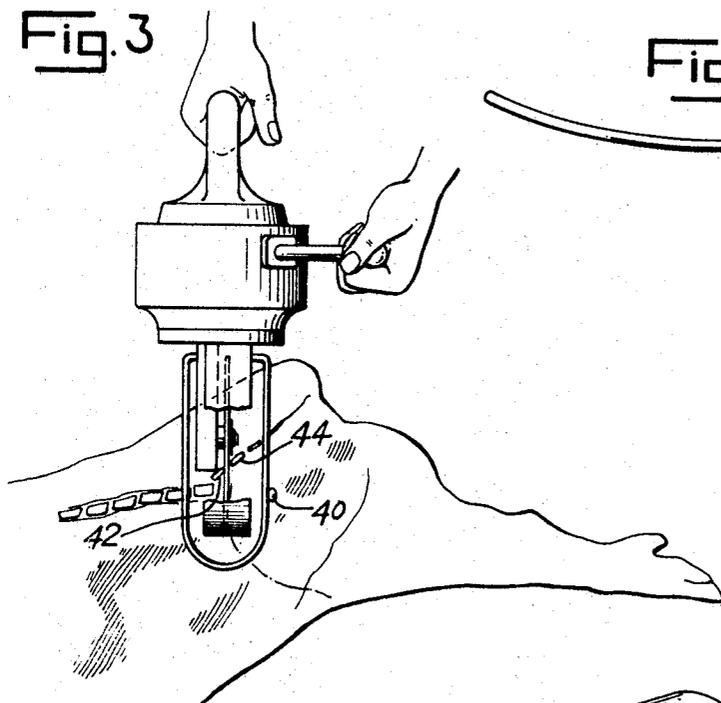
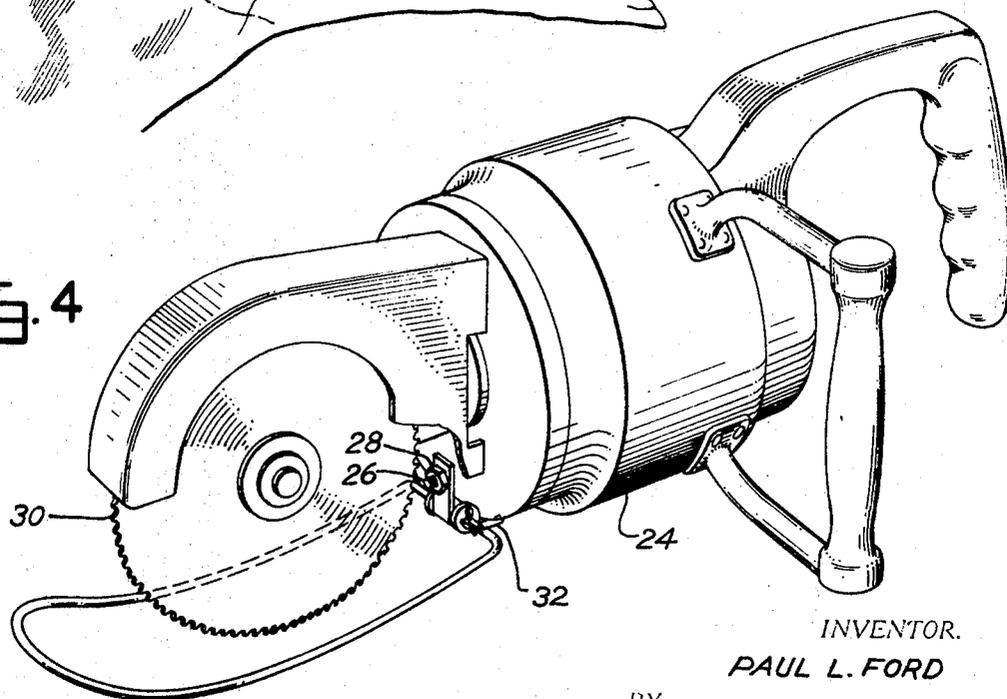


Fig. 4



INVENTOR.

PAUL L. FORD

BY

Carl C. Batz
ATTORNEY

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HAM MARKING GUIDE

Paul L. Ford, 1117 Leavitt, Flossmoor, Ill. 60422

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2 Claims

ABSTRACT OF THE DISCLOSURE

An improvement in ham marking saws is disclosed, consisting of a guide having guide arms hingedly fixed to the saw to permit the arm to be moved upwardly and to one side of the blade at a predetermined distance therefrom.

BACKGROUND OF INVENTION

This invention relates to a new apparatus for marking hams on hog sides.

Many cutting operations are performed to break up the carcass of a hog into a variety of commercially saleable cuts of meat. One such operation is to saw through certain bones in the area of the buttocks in preparation for severing the ham from the rest of the carcass. This is referred to as "marking" the ham.

After a hog has been slaughtered and its entrails removed and certain members severed from the carcass, the remaining carcass is split lengthwise into two halves referred to as "hog sides" or simply, "sides." The sides are subsequently broken up by severing therefrom the hams which comprise the rear leg and buttocks. The back portion of the side adjacent to the ham contains a certain portion of meat referred to as the "loin" which must be severed from the ham along a predetermined cut in preparation for removing the ham from the side.

The first step in the conventional method of severing the ham while the hog side is lying lengthwise with the split area facing upward is to saw through the hip bone (shaft of the ilium) and through the base of the tailbone (coccygeal vertebrae) joining the ham to the rest of the carcass. This is usually performed by a ham marking saw such as the type manufactured by Best & Donavan. In using this type of saw, the operator first locates the aitchbone which vertically projects out of the ham near its butt or thick end and which serves as one of the points of reference for determining where to mark the ham. After sighting the aitchbone, the operator visually locates a point two to three inches from the aitchbone and toward the butt end and visually aligns the blade of the saw with this point and with another point between the second and third vertebrae in the tailbone from the beginning of the tailbone. The operator then brings the saw downward to sever the hip and tailbones on a line between these two points. This will free the ham from the bones connecting it to the side and allow the ham to be hand-cut from the side in the conventional manner.

One difficulty with the aforesaid ham marking procedure is the lack of control over positioning the cut made by the ham marking saw to sever the hip and tailbones. There is no sharp line of demarcation between the ham and the rest of the side and the ham marking cut will usually be made to maximize or minimize the ham or loin depending on whether the ham or the loin is currently more valuable. If hams are more valuable, the cut will be made about three inches from the aitchbone to increase the size of the ham by removing some of the loin, whereas if loins are more valuable the cut will be about two inches from the aitchbone to decrease the size of the ham and add to the amount of the loin.

In large packinghouses, the sides are moved rapidly on conveyors and are marked for their hams by an operator standing alongside the conveyor. The operator, however,

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has very little time to make the proper visual alignment as aforesaid because of the rapid rate at which the sides pass by. Consequently, the ham mark is usually not where it should be and as a result, the maximum yield of the ham or loin cannot be attained.

SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a new apparatus for marking hams that will maximize the yield of hams or loins cut from hog sides.

Another object of the invention is to provide a new ham marking apparatus that will provide for uniformity in the distance the ham mark is made from the aitchbone.

Other objects and advantages of the invention will become apparent as the specification proceeds.

This new apparatus is a ham marking guide which comprises a guide arm hingedly fixed to the ham marking saw to permit the arm to be moved upwardly at a predetermined distance from the blade.

DESCRIPTION OF THE DRAWINGS

The invention will be more specifically described in connection with the accompanying drawings in which:

FIG. 1 is a top view of the guide.

FIG. 2 is a side view of the guide.

FIG. 3 is a view illustrating the position of the guide and saw blade in preparation for marking a ham.

FIG. 4 is a perspective view of the guide attached to a ham marking saw.

DESCRIPTION OF A PREFERRED EMBODIMENT

Referring now to the drawings, the guide of the instant invention comprises a generally rectangular shaped rod having parallel guide arms 10 and 12, a front portion 14 connecting the front ends 10a and 12a of said guide arms, and a rear portion 16 connecting the rear ends 10b and 12b of said guide arms. The rod is preferably made from stainless steel but any other suitable material will serve as well.

The guide is hingedly fixed to the saw by means of a tubular section 18 and is fixed in such a position that the arms 10 and 12 lie in a plane approximately perpendicular to the plane of the blade 30 and are opposite the lower portion of the blade. The rear portion 16 is rotatably held within the tubular section 18 which is connected to a bracket 20. The bracket is mounted to the housing of the saw by means of a nut 28 which is threaded to a bolt 26 which is fixed to the housing and which passes through a hole 22 in the bracket.

The guide is free to rotate in the tubular section 18 in an upwardly or downwardly direction but a short stop rod 32 is fixed to the rear portion 16 on either side of the tubular section 18 to abut against the housing when the guide begins to drop and thereby prevent the guide from falling below the blade 30. Cotter pins 17 are provided in the rear portion 16 on each side of the tubular section 18 to prevent any lateral movement thereof on the rear portion 16.

The distance between the blade and each of the guide arms 10 and 12 will range from about two to about three inches depending on the desired distance the ham mark is to be made from the aitchbone. The guide is not limited by this range, however, but comprehends any distance depending upon the desired size of the ham and loin as aforesaid. The guide can be fabricated with adjustable arms by any of the conventional techniques of the art to provide for the desired distance, or a number of guide arms can be made with fixed guide arms for each distance desired.

The guide arms 10 and 12 are also provided with a concave curvature as illustrated in FIGS. 2 and 3 so as

to reduce any interference with the hog side when the guide and saw are positioned for cutting. The front portion 14 joined to the ends of the guide arms 10 and 12 is also curved to eliminate corners and to cover the ends of the arms which might otherwise jab into the hog side and become stuck when the guide and saw are positioned for cutting. The curvature of the arms 10 and 12 and the presence of the front portion 14 are not to be considered as limitations on the invention, however, as the guide arms will perform their function just as well if they are straight without any curvature and have nothing connecting their front ends.

In operation, the saw blade is positioned over the butt end and one of the guide arms 10 and 12 (depending on whether the hog side is being conveyed to the right or left side of the operator) is placed on top of the hog side and up against the side of the aitchbone 40 nearest to the butt end. This will fix the position of the cutting blade at a predetermined distance away from the aitchbone as determined by the distance between the guide arm and the blade. The saw blade is then visually aligned with the point between the first 42 and second 44 vertebrae of the tailbone and is brought down while in this position to sever the aforesaid bones connecting the ham to side. The guide does not interfere with the downward movement of the blade into the hog side because of the hinged connection which allows the blade to move downwardly while the guide remains on top of the hog side.

After this operation the saw is retracted and the operator prepares to mark the ham in the next hog side moved down the conveyor. The guide will not drop lower than the blade 30 after being retracted because the stop rod 32 abuts against the housing of the saw when the guide begins to fall. The guide is thus kept relatively perpendicular with respect to the saw housing and disposed about the lower portion of the blade which enables the saw and guide to be conveniently and quickly positioned. The invention is not limited thereby, however, but comprehends a guide that is disposed at any height with respect to the blade that will permit the guide to be positioned against the aitchbone before the ham is marked. Furthermore, the invention is not limited to use of the stop rod but comprehends any other means, such as a coil spring or the like, which will permit the guide to be moved upwardly but prevent it from falling downwardly.

The guide thus presents a considerable advantage as it will fix the desired distance from the aitchbone toward

the butt end which is one of the two points that must be established by the operator to mark the ham. This point has heretofore been the most difficult to establish as it called for a visual estimation by the operator of the desired distance while the hog sides were moving rapidly on the conveyor. The second point that must be established, i.e., between the first and second tail vertebrae, is much easier to fix visually because the vertebrae are easily seen and present a definite reference. As a consequence of using the guide, the hams can be marked more uniformly and accurately with a resultant increase in yield of hams or loins.

While the embodiment of the invention chosen herein for purposes of the disclosure is considered to be preferred, the invention is intended to cover all changes and modifications of the disclosed embodiment which fall within the spirit and scope of the invention.

I claim:

1. In a ham marking saw of the type used to sever the shaft of the ilium and the coccygeal vertebrae of a hog side in preparation for removal of the ham portion from the loin portion thereof, the improvement of a ham marking guide comprising first and second guide arms adapted to contact the aitchbone of the hog side and remain in guiding contact with the aitchbone throughout the ham marking so that the saw blade contacts the hog side at a predetermined lateral distance from the aitchbone, the forward portions of said guide arms being connected by a curved front portion and the rear portion of said guide arms being hingedly connected to the marking saw motor housing and adapted to move upwardly about said hinged connection in rotary motion and including a stop means to restrict downward movement about said hinged connection, said guide arms extending forwardly and rearwardly of the blade of said marking saw.

2. The ham marking guide according to claim 1 wherein said guide arms, said curved front portion, and said rear portion are formed from a single unitary rod.

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LUCIE H. LAUDENSLAGER, Primary Examiner

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