May 19, 1931. H. H. McKEE 1,806,076

MEAT MARKER

Filed June 29, 1928 3 Sheets-Sheet 1

Fig. 1.

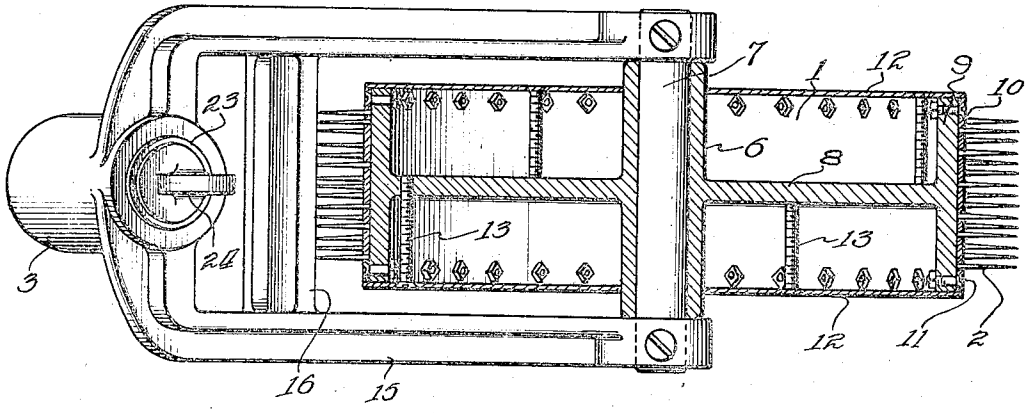
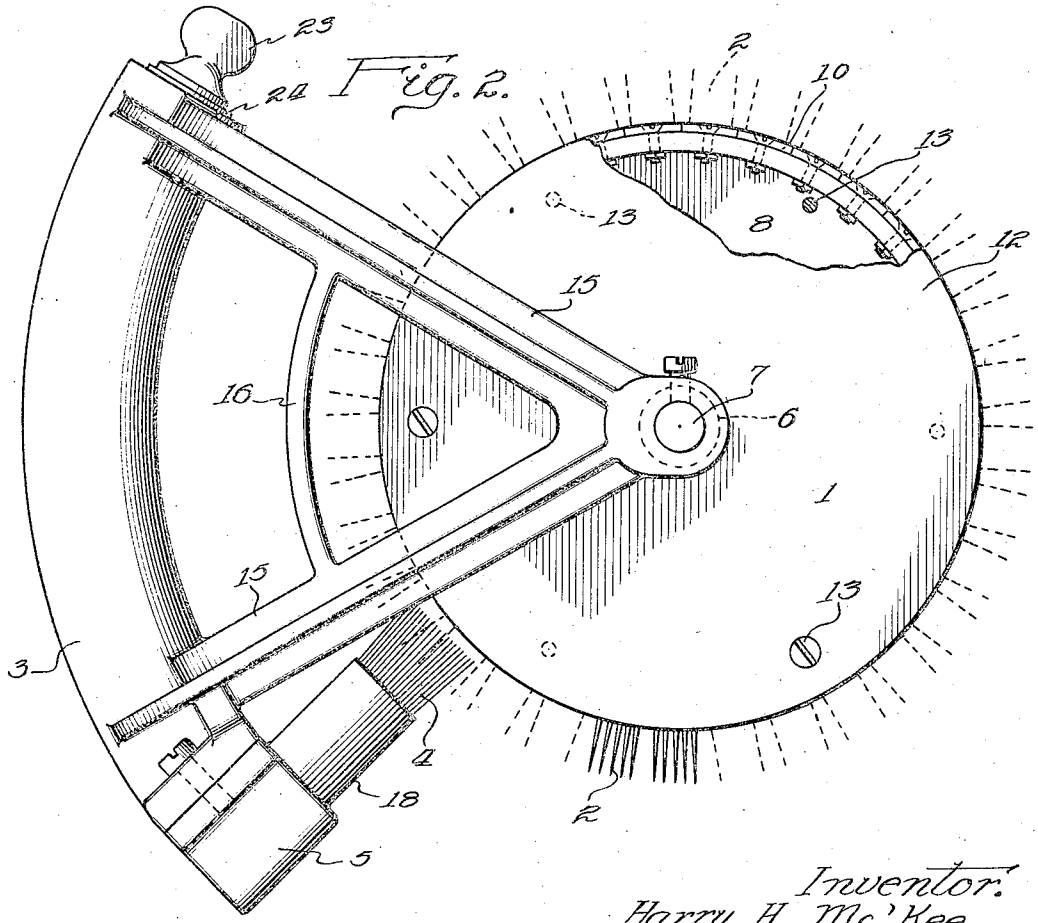


Fig. 2.



Witnesses
Arthur M. Franke.
W. A. Snow

Inventor.
Harry H. Mc'Kee.
By. Kummer & Kummer,
Attys.

May 19, 1931. H. H. McKEE 1,806,076

MEAT MARKER

Filed June 29, 1928 3 Sheets-Sheet 2

Fig. 3.

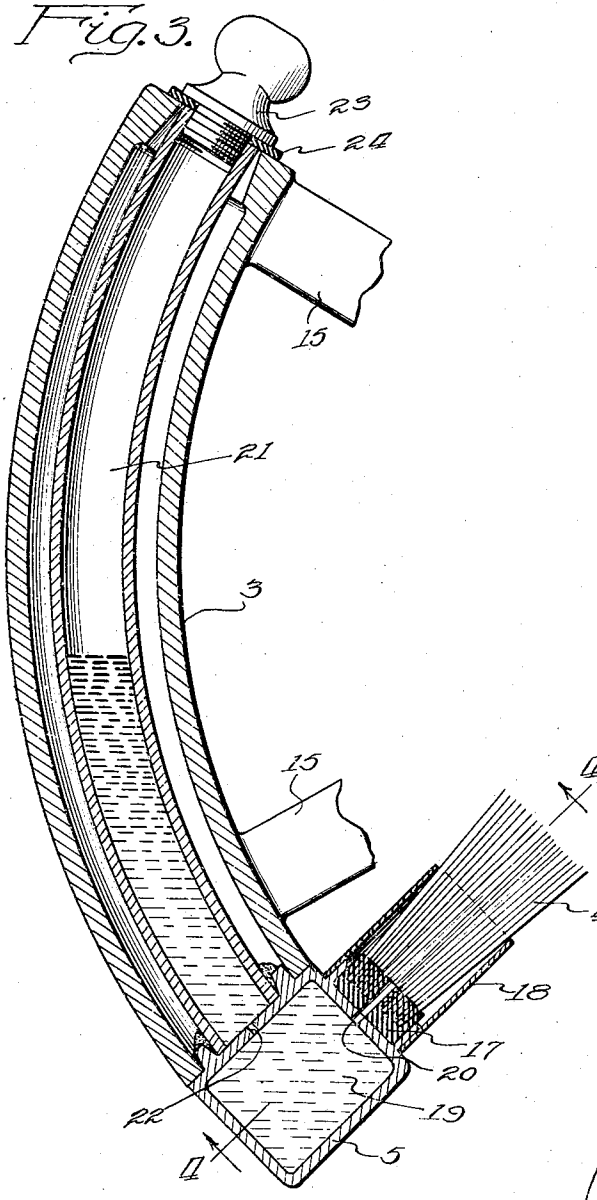


Fig. 4.

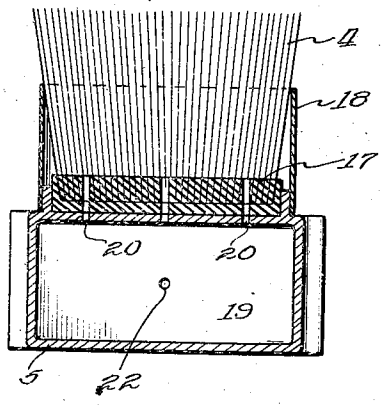


Fig. 5.

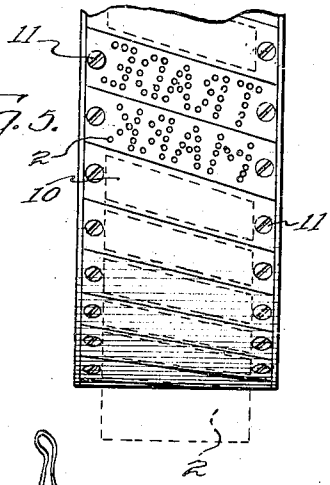


Fig. 6.

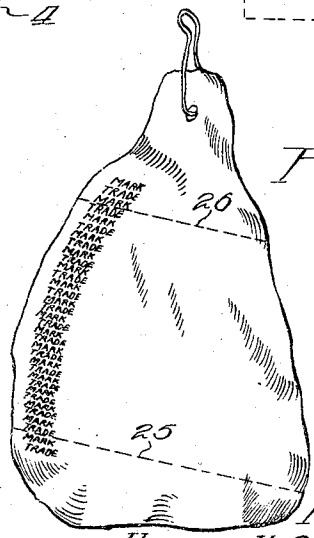
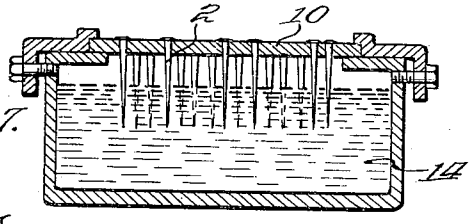


Fig. 7.



Witnesses

Arthur M. Frambe.

W. A. Snow

Inventor

Harry H. McKee.

By. Rummler & Rummler

Attys.

May 19, 1931.

H. H. McKEE

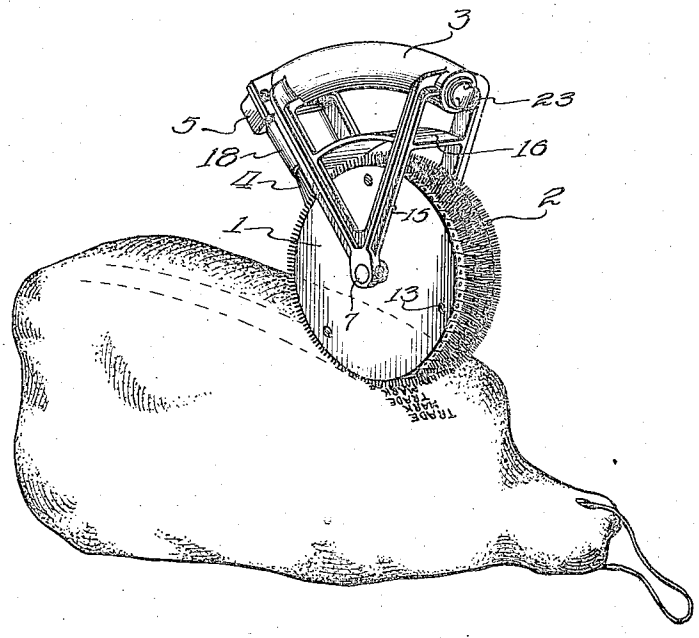
1,806,076

MEAT MARKER

Filed June 29, 1928

3 Sheets-Sheet 3

Fig. 8.



Witnesses.
Arthur M. Franke
W. A. Snow

Inventor.
Harry H. McKee.
By. Pennie & Pennie
Attys.

Patented May 19, 1931 1,806,076

UNITED STATES PATENT OFFICE

HARRY HENRY McKEE, OF CHICAGO, ILLINOIS, ASSIGNOR TO SWIFT & COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS

MEAT MARKER

Application filed June 29, 1928. Serial No. 289,292.

This invention relates to meat marking devices and is particularly directed to certain improvements in the meat marking apparatus described and claimed in my copending application, Serial No. 208,668, filed July 27, 1927. No claim is made herein to the method which constitutes the subject matter of my copending application, Serial No. 415,838, filed December 21, 1929, for improvement in methods of marking meats.

The main objects of this invention are to provide an improved structure and arrangement of the various parts of the apparatus for greater ease of operation; to provide improved construction for the ink fountain whereby the ink feed is improved and whereby the capacity of the ink reservoir may be greatly enlarged by utilizing the space within the handle, without increasing the bulk of the apparatus; and to provide an improved structure and arrangement of the type needles, whereby the device may be more readily directed along a curved path, and whereby the risk of accidental breakage of the needles may be practically eliminated.

A specific construction embodying this invention is illustrated in the accompanying drawings, in which:

Figure 1 is a front elevation of the improved meat marker, the inking wheel being shown in section.

Figure 2 is a side elevation of the same, a portion of one of the side walls of the marking roller being broken away to illustrate the method of fastening the type plates.

Figure 3 is a fragmentary sectional detail of the inking fountain and handle.

Figure 4 is a section of the ink fountain taken on the line 4—4 of Figure 3.

Figure 5 is a fragmentary face view of the type wheel illustrating the diagonal arrangement of the type plate and the mounting of the needles thereon. In this figure, as well as in Figure 2, some of the banks of needles are indicated in dotted outline to simplify the work of illustration.

Figure 6 is an illustrative view of a ham showing applied thereto a band of markings, such as a trade mark or other desired indicia for the application of which upon meats the herein described apparatus is particularly designed.

Figure 7 is a sectional view of one of the inking plates shown in connection with apparatus employed in the assembly thereof, when the needles are fastened by welding.

Figure 8 is a perspective view showing the general relation of the marker with respect to the piece of meat, while the band of markings is being applied to the latter by rolling the roller over its surface.

In the construction shown in the drawings, the apparatus comprises in general an inking roller 1 having projecting needles 2, serving as ink carrying fingers, arranged around its periphery in type form and carried by a handle 3 whereby it may be rolled over a piece of meat for the purpose of pricking the ink into the surface thereof and thereby applying thereto a band of markings of the general character described in my said co-pending application. Ink is applied to the sides of the needles by means of a brush 4 supplied by an ink fountain 5 associated with the handle, as will be hereinafter described.

The inking roller comprises a hub 6 journaled on a shaft 7 and having a central web or spider 8 carrying a broad rim 9 to which are bolted a series of type plates 10, each carrying a group of said needles 2 arranged in suitable relation to make the desired imprint into the meat. The plates 10 are preferably set so that the words appearing thereon will stand at an angle to the axis of the roller, since it is found that this arrangement allows the roller to be moved along a curved path over the surface of the meat while the needles are pricking the marking pigment into the same and with a minimum of resistance by the needles embedded in the meat. Each plate 10 is preferably separately attached by bolts or screws 11 to the rim 9 to permit the plates to be readily removed and replaced for the purpose of repair or substituting different type characters. The sides of the wheel 1 are preferably covered by plates 12 held by screws 13.

A preferred method of assembling the type plates is illustrated in Figure 7, wherein one of the plates 10 is shown mounted in a clamp

having an oil bath 14 in which the hard points of the needles are submerged while the head ends thereof are welded to the plate 10. In this manner it is possible to weld the needles into their perforations in the plates without drawing the temper of the points of the needles, although the welding operation serves to anneal the parts of the needles in the immediate vicinity of the plate 10, whereby the risk of breakage of needles in the operation and handling of the apparatus is practically eliminated, since a lateral strain, which would ordinarily break a needle that is hardened throughout its length, will merely bend the needle having an annealed shank.

The shaft 7 is carried by a frame comprising a pair of sector-shaped side brackets 15 which are integral with the handle 3, which is of arcuate shape and lies in the plane of and substantially parallel with the adjacent part of the periphery of the wheel. A guard 16 prevents any possibility of injury to the operator's fingers by the needles 2.

Ink is applied to the sides of the needles by means of the brush 4, which is in turn supplied with ink by means of an inking fountain 5 comprising a reservoir back of the brush. The bristles of the brush are embedded in a plate 17 of rubber and are partly enclosed in a tubular sheath 18. The ink supply reservoir 19, which is immediately adjacent to the brush, is connected to the space between the fibres of the brush by small apertures 20 extending through the rubber disk 17. The handle 3 is hollow and contains a tubular reservoir 21.

The ink reservoir 21 communicates with the ink reservoir 19 preferably through a restricted orifice 22 which gives a further control to the ink feed. The ink reservoir 21 is enclosed by a plug or cap 23 at its upper end and is preferably provided with a gasket 24 for air tight closure. In the form shown, this gasket bears upon the adjacent end of the handle 3 for the purpose of steadying the upper end of the ink reservoir within the handle.

The operation of the device shown is as follows:

In marking meat the operator grasps the handle 3 and sweeps the roller over the surface of the meat, as illustrated in Figure 8, so as to apply one or more bands of marks in order that the trade-mark or other marking, which is applied thereby, will appear upon any of the usual cuts or portions into which the piece of meat is subdivided for various retail orders.

As the roller sweeps over the meat, the points of the needle penetrate the surface thereof and prick the ink into it. The needles, passing through the brush of the ink fountain, are coated with ink throughout the length of that portion of the needles which penetrates the meat, the ink is fed by capillarity to the bristles of the needles but on account of the presence of the restricted passages leading to the ink reservoirs, the ink does not feed in excessive amounts. The tight closure 23 at the top of the ink reservoir 21 prevents the inflow of air and thereby prevents too rapid a flow of ink.

The operator may control the flow of ink by occasionally unscrewing the plug 23 to admit air into the reservoir 21 and thereby satisfying any partial vacuum that may form above the surface of the ink whenever the ink appears to be feeding too slowly. To this end, the threads of the cap 23 are loose, and backing it off a few turns or a part of a turn and then returning it to its seat is sufficient to admit the desired amount of air, it being understood that a continual inflow of air is not desirable since it tends to produce an excessive flow of ink. The operator soon becomes familiar with the conditions of ink flow and manipulates the cap at proper intervals without having to give the subject much attention.

Different kinds of meat require different arrangements of the band or bands of markings and, since but few of the needles penetrate the meat at a time, it is possible to sweep the apparatus over the meat in such manner as to make either a straight or curved band of markings without undue resistance by the needles and without having them tear the surface of the meat.

It has been found that the diagonal arrangement of the type plates on the surface of the roller contributes to the ease with which it may be swung around a curved path.

In Figure 6, I have illustrated the manner in which the markings are applied to a ham, in which case the band of markings is preferably made along the broad strip of fat which appears between the edge of the skin and the exposed flesh of the inner or cut side of the ham, and the individual trade-marks or other words, which indicate the source or quality of the goods, read crosswise of the band of markings and would thus appear upon any of the minor cuts or portions into which the ham may be subdivided when sold in less than the complete unit. The butcher, in cutting up a ham, usually cuts off the butt end on a line indicated by the line 25 in Figure 6, this particular cut being determined by the bone structure within the ham. Minor cuts are usually made along lines parallel to the line 25 and the hock is cut off at a place indicated by the line 26, also approximately parallel to the line 25. It will be seen that when a band of markings is applied, as shown in Figure 6, the trade-mark will appear upon any of the minor cuts.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be al-

tered or omitted without departing from the spirit of this invention as defined by the following claims:

I claim:

1. A meat marker comprising a roller, needles projecting from the periphery thereof, a pair of spaced side brackets in which said roller is journaled, a handle on said brackets lying in the plane of the roller and extending in the general direction of the periphery thereof, a brush carried by said frame for inking said needles and an ink reservoir mounted in said handle and communicating with said brush for supplying ink thereto.

2. A meat marker comprising a wheel, pointed type needles projecting from the periphery thereof, an inking brush arranged to ink the sides of said needles, a sheath enclosing the base of said brush, an ink reservoir having a contracted outlet orifice communicating with the interior of said sheath, and means for controlling the admission of air to said reservoir to regulate the ink feed.

3. A meat marker comprising a roller, a plurality of ink carrying fingers projecting from the periphery thereof, a pair of spaced side brackets in which said roller is journaled, a handle on said brackets lying in the plane of the roller and extending in the general direction of the periphery thereof, a brush carried by said frame for inking said fingers and an ink reservoir mounted in said handle and communicating with said brush for supplying ink thereto.

Signed at Chicago this 26th day of June, 1928.

HARRY H. McKEE.