

Nov. 18, 1924.

1,515,836

M. CANTER
FLESHING MACHINE

Filed Nov. 1, 1923

2 Sheets-Sheet 1

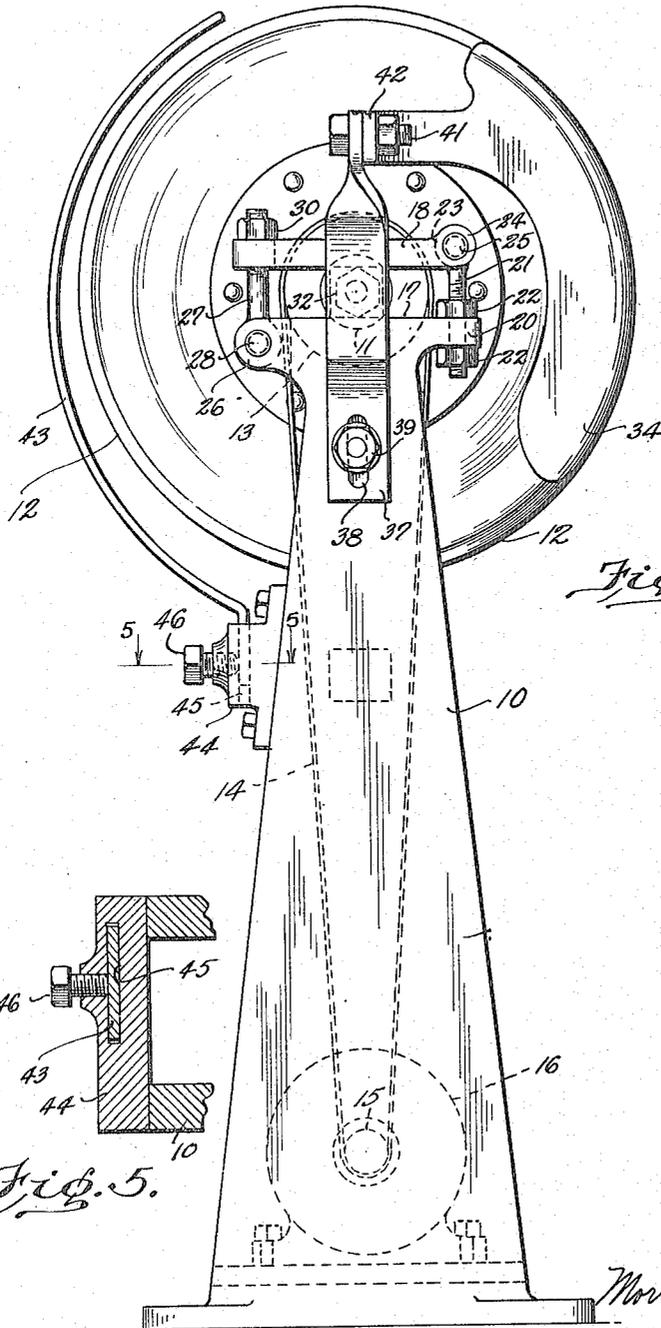


Fig. 1.

Fig. 5.

Inventor

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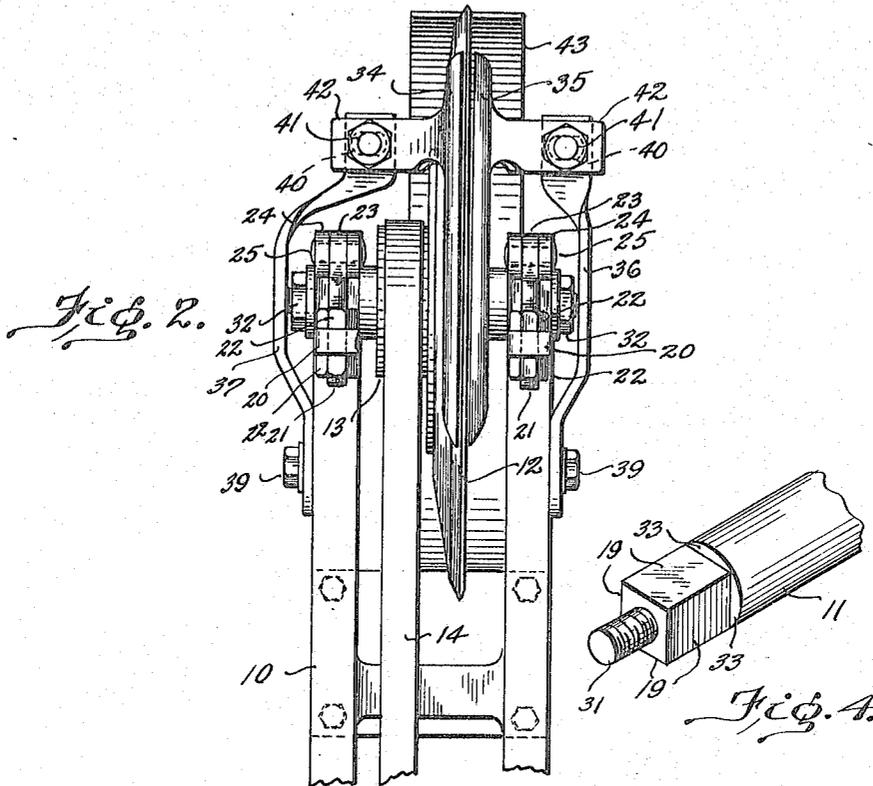


Fig. 2.

Fig. 4.

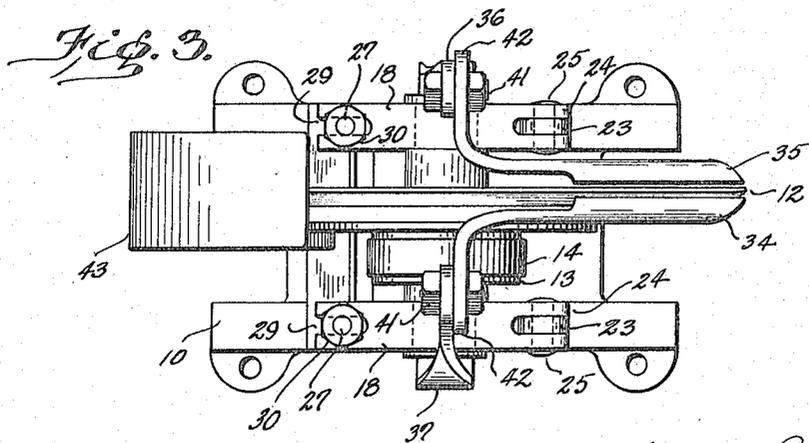


Fig. 3.

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UNITED STATES PATENT OFFICE.

MORRIS CANTER, OF SOUTH NORWALK, CONNECTICUT.

FLESHING MACHINE.

Application filed November 1, 1923. Serial No. 672,080.

To all whom it may concern:

Be it known that I, MORRIS CANTER, a citizen of the United States, residing at South Norwalk, county of Fairfield, State of Connecticut, have invented a new and useful Fleshing Machine, of which the following is a specification.

This invention relates to fleshing machines, such as are employed for removing flesh from the inner surface of raw skins and furs, and has for an object to provide an improved and simplified construction for this type of device which will be easier to adjust so that less of the time of the operator will be required in setting up and adjusting, but in which all of the necessary adjustments may be easily and quickly secured.

It is also an object of the invention to provide an improved mounting for the rotating knife which will allow adjustment of this knife toward and from the guards without interfering with the adjustment of the guards, and which will also allow for quick and easy insertion and removal of the knife without injury thereto and without changing the adjustment of the guards.

With the foregoing and other objects in view, I have devised the construction illustrated in the accompanying drawings, forming a part of this specification, similar reference characters being employed throughout the various figures to indicate corresponding elements. In these drawings,

Fig. 1 is a side elevation of a fleshing machine involving my invention.

Fig. 2 is a rear elevation of the upper part thereof.

Fig. 3 is a top plan view thereof.

Fig. 4 is a perspective view of one end of the knife carrying shaft, and

Fig. 5 is a detailed section substantially on line 5-5 of Fig. 1.

The machine includes a suitable stand forming a support for the operating parts. At the upper part of this stand or support are a pair of spaced guide ways in which is mounted a shaft 11 for carrying the rotating knife 12. The shaft is normally stationary and the knife rotates on the shaft. In the present construction a pulley 13 is connected to the knife over which runs a belt 14 from any suitable source of power, as a pulley 15 driven by any suitable means, such as an electric motor 16, indicated merely in outline by dot-

ted lines in Fig. 1. The guide ways in which the shaft is mounted can be constructed in various ways, but I have provided on the upper end of the support or stand substantially flat surfaces 17 and parallel with these and spaced above them transversely extending securing elements 18. The shaft 11 is provided at its opposite ends with a pair of substantially flat surfaces 19 on the opposite sides thereof which seat between these elements, as shown in Fig. 1. To facilitate mounting of the shaft I prefer to form four of these surfaces, that is to make a section of the shaft substantially square in cross section, but it will be obvious that two of these surfaces on opposite sides of the shaft will be sufficient or even one of these surfaces. The securing elements 18 may be mounted in different ways but I prefer that substantially as shown. On the rear side of the stand are rearwardly projecting ears 20, each having an opening therethrough for a threaded bolt 21, which may be secured in adjusted position by nuts 22 engaging the opposite sides of the ears, and the upper end of this bolt is provided with an eye 23 inserted between the ears 24 on the elements 18 with a suitable pivot pin 25 extending through them so that the element 18 is pivoted to the bolt 21. On the opposite side of the support are ears 26 between which is pivoted a similar bolt 27 by means of a rivet or pin 28, and this bolt at its upper end extends into a slot 29 formed by a fork at the other end of the element 18 with a nut 30 on the bolt for clamping the element 18 in position. It will thus be apparent that the rear end of the element 18 may be adjusted vertically and secured in the proper adjusted position by the nuts 22, and that by loosening the nut 30 the bolt 27 may be turned downwardly on its pivot releasing the front end of the element 18 so that it may be lifted and thrown back about the pivot 25. When in this position the shaft carrying the rotating knife may be easily drawn forward and lifted from the machine either for changing the knife, making repairs, sharpening or any other purpose desired, and it may be as easily again inserted in the machine and secured in proper position by tightening the nuts 30. I also prefer to thread the ends of the shaft, as shown at 31, and place clamping nuts 32 thereon so as to

provide an additional means for clamping the shaft in position.

It will be clear that when the flat surfaces 19 are provided on the shaft that shoulders 33 will be formed which will abut against the sides of the guide ways, and especially against the sides of the upper end of the stand or support, and by coaction therewith will retain the shaft and the rotating knife in proper alignment. The improved functions secured by this will be brought out in connection with the description of the guards for the knife

Mounted on opposite sides of the rear edge of the knife, which is the working side of the knife, is a pair of arcuate guards 34 and 35 which are so mounted that they may be placed closely adjacent the cutting edge of the knife to regulate the depth of cut of the knife as the skins are drawn across the knife edge over the guards, the curved edge of the guard being substantially on the same radius as the knife edge. These guards are normally stationary but are so mounted that they may be adjusted to the proper position with respect to the edge of the knife. For this purpose there are secured to the opposite sides of the stand or support 10, supporting brackets 36 and 37. These brackets are preferably strips of metal provided with longitudinally extending elongated slots 38 through which extends a clamping screw 39 threaded into the support 10. At their upper ends these strips are twisted through an angle of ninety degrees and are provided with transverse slots 40 through which extends a bolt 41. This bolt also extends through a laterally projecting ear 42 on the guards 34 and 35, and by tightening these bolts the guards are securely fastened to the upright or bracket members 36 and 37. It will be apparent that these two connections will allow adjustment of the guards in all directions, giving them a universal adjustment. That is, by loosening screw 39 the guard may be raised or lowered or it may be adjusted angularly about the screw as a pivot and then clamped in adjusted position. By loosening bolt 41 the guard may be adjusted laterally with respect to the knife or it may be adjusted angularly about this bolt, as a pivot, to bring it parallel with the plane of the knife.

At the forward side of the knife is a curved guard 43 for protecting the operator. This guard is preferably a flat strip of metal removably mounted on the stand or support. For this purpose I mount on the forward side of the stand a bracket 44 having an elongated upright opening 45 therein into which the lower end of the guard 43 may extend, and it is secured therein by a set screw 46.

The knife may be mounted in the stand or support and secured therein in proper po-

sition. The guards 34 and 35 may then be adjusted to proper position with respect to the edge of the knife by loosening the screw 39 and bolt 41, then secured in the proper adjusted position by tightening the screw and bolt. In machines now generally employed as the knife's edge wears down the guards are adjusted in proper position for the decreased side of the knife. This in the ordinary construction is a difficult and tedious operation, as there are two guards and each must be given several different adjustments. In my construction, however, the guards are left in the position in which they are first set and the required adjustment between the knife and the guards is made by adjusting the position of the knife. This is done by loosening the nuts 32 and 30 which releases the shaft and allows it to be slid in the guide ways on the stand or support 10 in a direction transversely to the axis of rotation of the knife toward or from the guard. Thus by advancing the knife toward the guard the reduction in the knife may be compensated for without moving the guards and also without requiring another adjustment thereof. The coaction of the shoulders 33 with the sides of the stand or support 10 maintain the shaft in proper alignment and keeps the knife in proper position between the guards.

If it is necessary to change the knife or to remove the knife from the machine for any purpose, this may be done by loosening the nuts 30 and 32 when the knife may be drawn forwardly from between the guards and removed from the machine. Of course, before performing this operation the guard 43 must be removed, which may be done by loosening the set screw 46. In mounting the new knife or the old knife again in the machine the flattened portions of the shaft are placed on the flat surfaces 17 of the stand and advanced to the proper position between the guards. While the knife is being advanced to this position the coaction of the shoulders 33 with the sides of the stand will maintain the shaft in proper alignment and prevent the edges of the knife from hitting the guard so that there is no chance of dulling the knife or injuring the cutting edge thereof. As the operator does not have to be extremely careful to prevent this injury to the knife edges, the knife may be quickly and easily inserted in the proper position, and it may then be secured in this position by clamping the nuts 30 and 32. It will be obvious that as the position of the guards do not have to be changed the knife may be changed or sharpened and set up much more quickly and easily with this device than can be done in machines where the guards must be first removed or moved to a position out of their regular working position which requires resetting and adjusting

of the guards before the machine is again in condition for operation.

Having thus set forth the nature of my invention, what I claim is:

5 1. In a fleshing machine, a support, a rotary fleshing knife carried by said support, an arcuate guard adjacent the periphery of the knife, said knife being mounted so that it may be adjusted toward and from the
10 guard in a direction transverse to its axis of rotation, and means for securing the knife in adjusted positions.

2. In a fleshing machine, a support having spaced guide ways, a transverse shaft
15 having substantially parallel plane surfaces on opposite sides thereof seated in said guide ways, said shaft being also provided with shoulders coacting with the support to retain the shaft in alignment, a knife mounted
20 to rotate on said shaft, and an arcuate guard at one side of the knife adjacent its periphery, said shaft being slidable in the guide ways to adjust the position of the knife with respect to the guard.

25 3. In a fleshing machine, a support provided with spaced substantially horizontal guide ways, a shaft having substantially rectangular portions seated in said guide
30 ways and shoulders engaging sides of the guide ways to maintain the shaft in alignment, a knife mounted to rotate on said shaft, and an arcuate guard at one side of the knife adjacent its periphery.

35 4. In a fleshing machine, a support having spaced, substantially horizontal guide ways, a shaft adjustably mounted in said guide ways, means for securing the shaft in
40 adjusted position, a rotary knife carried by said shaft, and an upright arcuate guard mounted adjacent the periphery of the knife.

45 5. In a fleshing machine, a support, a rotary knife carried by said support, a supporting element secured to said support and adjustable vertically and angularly on the support and an arcuate guard for the knife
secured to the supporting element and adjustable horizontally and angularly thereon.

50 6. In a fleshing machine, a support, a rotary knife carried by said support, a supporting element having an upright slot, a clamping screw carried by the support and extending through said slot, said supporting
55 element being provided with a substantially horizontal slot adjacent its upper end, an arcuate guard for the edge of the knife

having an ear, and a clamping bolt extending through said ear and the latter slot.

7. In a fleshing machine, a support provided with spaced, substantially horizontal
60 surfaces, a transverse shaft resting on said surfaces, an upright bolt adjustably secured to the support at one side of said shaft, a second bolt pivoted to the support on the other side of the shaft, a securing element
65 hinged to the first bolt and provided with an open slot to receive the second bolt, a nut on the second bolt for clamping the securing element against the shaft, and a rotary knife carried by said shaft.
70

8. In a fleshing machine, a support provided with spaced, substantially horizontal
75 surfaces, a transverse shaft resting on said surfaces, and provided with shoulders engaging the support to hold the shaft in alignment, securing elements hinged to the support at one side of the shaft, clamping means
for detachably securing the other end of the securing elements to the support and clamping
80 the shaft in position thereon, a rotary knife carried by said support, and arcuate guards adjustably secured at opposite sides of the knife.

9. In a fleshing machine, a support provided with spaced, substantially horizontal
85 surfaces, a transverse shaft resting on said surfaces, securing elements hinged to the support on one side of the shaft, clamping means for detachably securing the other ends of the securing elements to the support and
90 clamping the shaft in position thereon, a rotary knife carried by said shaft, and an arcuate guard adjustably secured at one side of the knife.

10. In a fleshing machine, a support provided with spaced, substantially horizontal
95 surfaces, a transverse shaft resting on said surfaces, and provided with shoulders engaging the support to hold the shaft in alignment, an upright bolt adjustably secured to the support at one side of the shaft,
100 a second bolt pivoted to the support on the other side of the shaft, a securing element hinged to the first bolt and provided with an open slot to receive the second bolt, a nut on the second bolt for clamping the securing
105 element against the shaft, a rotary knife carried by said shaft, and arcuate guards adjustably secured at opposite sides of the knife.
110

In testimony whereof I affix my signature.
MORRIS CANTER.