

zontal bar mounted on the carrying member, a saddle seat mounted on the horizontal bar, means for horizontally adjusting the saddle seat along the bar, the saddle seat having a shape adapted to fit snugly the fronts of the thighs and perineal crotch of the subject, means carried by the saddle for securing the subject to the saddle, a tubular housing carried by the bar, a shaft turnable in the housing, a frame adjustably mounted in the shaft and having a labial cross bar on the frame adapted to be gripped by the teeth of a subject, whereby the subject is postured fixedly uprightly in a readily duplicatable position for re-examination when desired.

3. An X-ray stand adapted to position a subject immovably relative to X-ray apparatus, which comprises, in combination, a base, a turntable mounted on the base, means for horizontally adjusting the turntable relative to the base, a mounting standard secured vertically to the turntable adjacent to the periphery thereof, a carrying member telescopically mounted in the mounting standard for vertical adjustment relative thereto, means for securing the carrying member in desired vertical adjustment, a horizontal bar mounted on the carrying member, a saddle seat mounted on the horizontal bar, means for horizontally adjusting the saddle seat along the bar, the saddle seat having a shape adapted to fit snugly the fronts of the thighs and perineal crotch of the subject, means carried by the saddle for securing the subject to the saddle, a hub housing carried by the horizontal bar, a shaft turnable in the housing, a frame including spaced lateral bar members adjustably mounted in the shaft for vertical movement relative to the shaft and a labial cross bar for the frame adapted to be gripped by the teeth of a subject mounted on the saddle member, means for securing the frame in vertical and angular positions of adjustment whereby the subject is erectly postured in a duplicatable upright position, means for securing the saddle in adjusted position, rotation of the turntable positioning the subject in any desired angular position relative to the X-ray apparatus, and cooperating means on the base and turntable for indicating angular positions of the subject relative to the X-ray apparatus.

4. An X-ray stand for posturing a subject for X-ray examinations or treatments, which comprises a base, a rotatable turntable mounted on the base, a vertical stand mounted on the turntable, means for vertically adjusting the stand, a horizontal mounting bar carried by the stand, a saddle member mounted on the bar above the turntable for holding the subject to be examined, and a vertically and angularly adjustable frame carried by the stand including a bit bar adapted to be gripped by the teeth of the subject for maintaining the subject in rigidly erect posture.

5. An X-ray stand for posturing a subject in upright position for X-ray examinations or treatments which comprises, in combination, a base, a turntable rotatably mounted on the base upon which the subject stands, a mounting member carried by the turntable, a saddle member carried by the mounting member, instrumentalities carried by the mounting member for vertically adjusting the saddle member for bringing the saddle member into snug engagement with the perineal crotch of the subject, the said instrumentalities including means mounted on the said

justment of the saddle member, a frame mounted on the said means and provided with a bit bar adapted to be gripped in the teeth of the subject mounted on the saddle member, and mounting means carried by the saddle member-adjusting means for vertically and angularly adjusting the frame relative to the subject to permit the subject to grip the bit bar with his teeth while positioned on the saddle member, the said subject thereby becoming postured erectly and rigidly upright, and cooperating means on the base and on the turntable for enabling any desired reproduction of the position of the subject relative to the X-ray apparatus.

6. An X-ray stand for posturing a subject in upright position for X-ray examinations or treatments which comprises, in combination, a base, a turntable rotatably mounted on the base upon which the subject stands, a mounting member carried by the turntable, a saddle member carried by the mounting member, instrumentalities carried by the mounting member for vertically adjusting the saddle member for bringing the saddle member into snug engagement with the perineal crotch of the subject, the said instrumentalities including means mounted on the said instrumentalities for producing horizontal adjustment of the saddle member, a frame mounted on the said means and provided with a bit cross bar adapted to be gripped in the teeth of the subject mounted on the saddle member, means carried by the saddle member for holding the subject firmly on the saddle member, and instrumentalities carried by the saddle-member-adjusting means for vertically and angularly adjusting the frame relative to the subject to enable the subject to grip the bit bar in his teeth while positioned on the saddle member, the subject thereby being held erectly and rigidly upright for exposure to the X-rays.

7. An X-ray stand for posturing a subject for X-ray examinations or treatments, which comprises, in combination, a base, a turntable rotatably mounted on the base, a vertical stand mounted on the turntable, a seat member for receiving the subject to be X-rayed, means for mounting the seat member on the stand, means carried by the stand for vertically adjusting the seat member relative to the stand and subject, means on the seat member-mounting means for horizontally adjusting the seat member, a posture frame carried by the stand and including a cross bar adapted to be gripped by the teeth of the subject, means also mounted on the seat-member mounting means for vertically adjusting the posture frame, the said means also angularly adjusting the posture frame for enabling the cross bar to be brought into teeth-grasping position relative to the subject for securing the subject in a fixed upright position, and means carried by the stand for securing the subject on the seat member.

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#### REFERENCES CITED

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

#### UNITED STATES PATENTS

| Number    | Name     | Date          |
|-----------|----------|---------------|
| 377,556   | Gomber   | Feb. 7, 1888  |
| 398,712   | Endean   | Feb. 26, 1889 |
| 537,516   | Woodruff | Apr. 16, 1895 |
| 1,065,022 | Bell     | June 17, 1913 |

May 15, 1951

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2,552,593

MACHINE FOR PROCESSING FUR AND PILE FABRICS

Filed Sept. 27, 1949

4 Sheets-Sheet 1

FIG. 1.

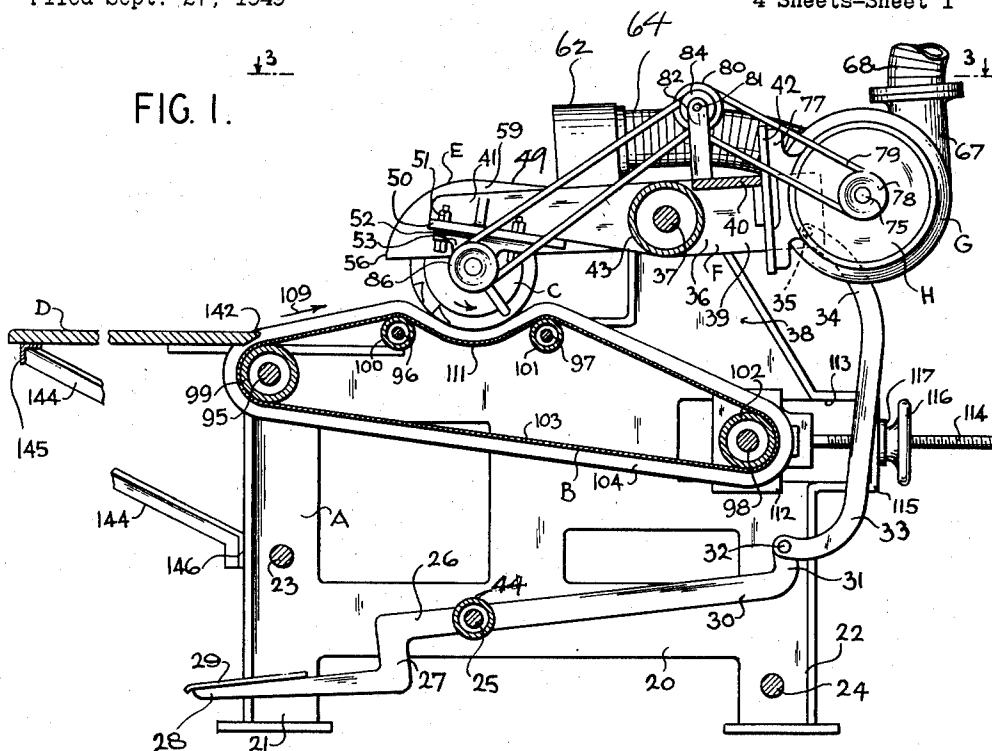
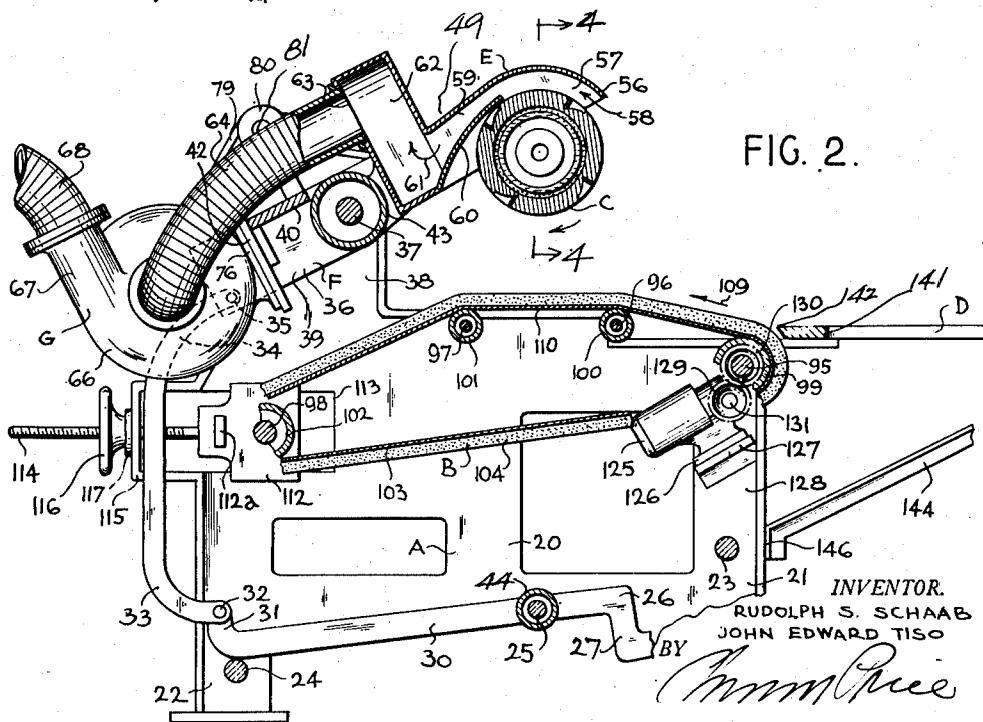


FIG. 2.



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4 Sheets-Sheet 2

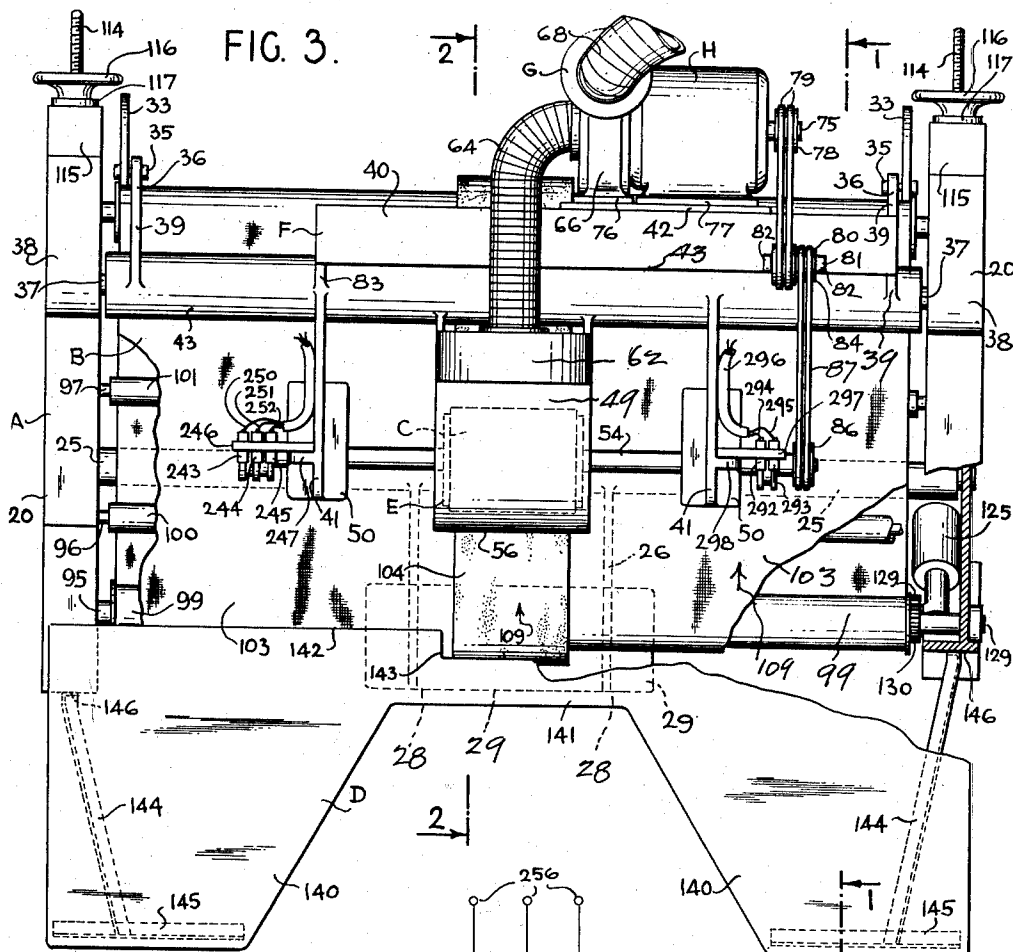


FIG. 5.

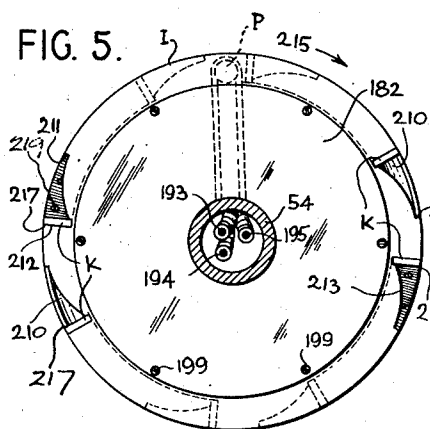
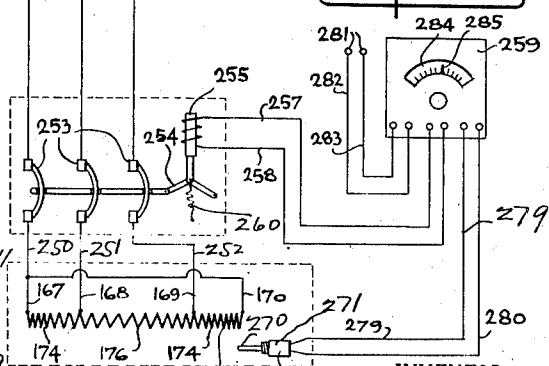


FIG. 6.

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4 Sheets-Sheet 3

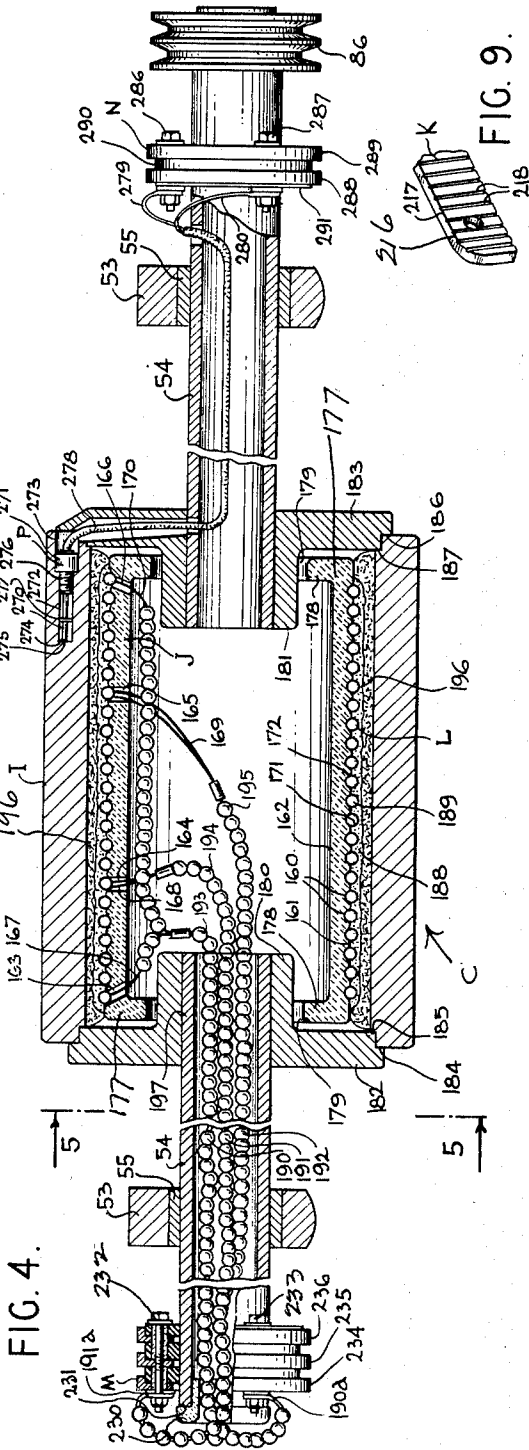


FIG. 9.

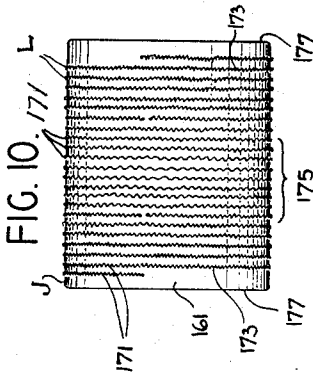


FIG. 8.

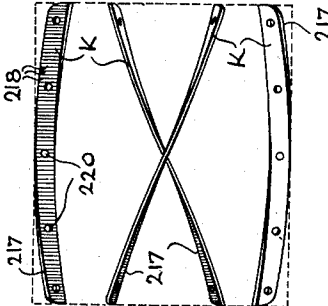
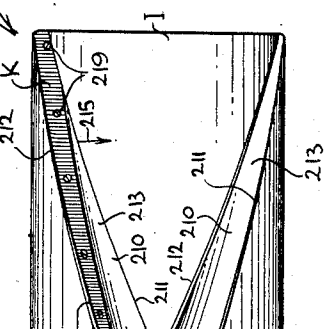


FIG. 7.



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4 Sheets-Sheet 4

FIG. 11.

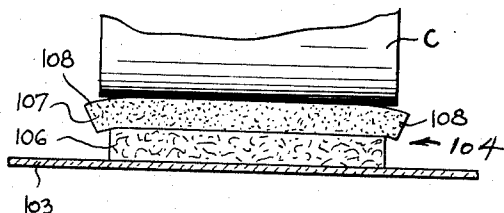


FIG. 12.

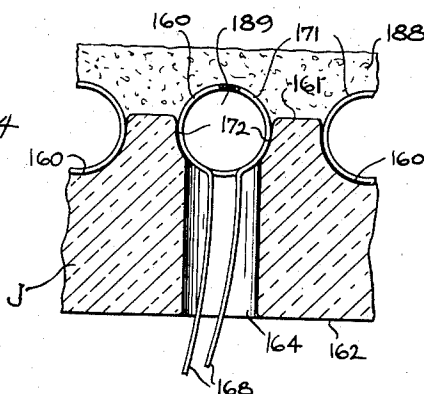


FIG. 13.

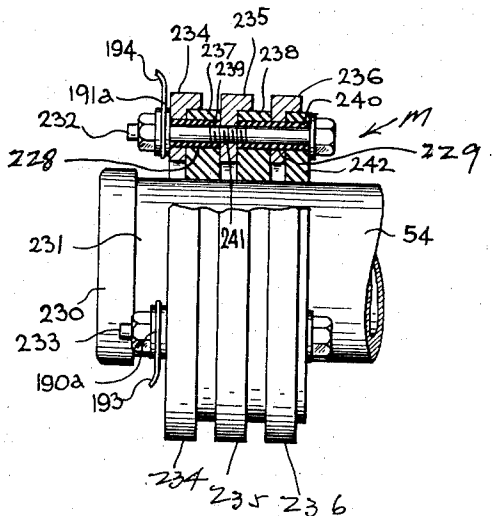


FIG. 14.

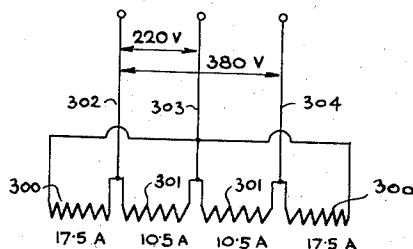


FIG. 16.

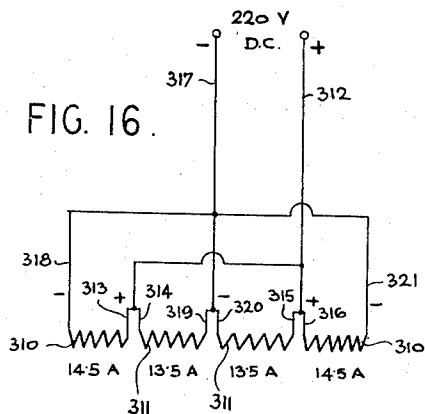
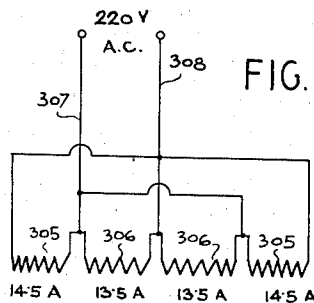


FIG. 15.



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## UNITED STATES PATENT OFFICE

2,552,593

MACHINE FOR PROCESSING FUR AND  
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Application September 27, 1949, Serial No. 118,132

12 Claims. (Cl. 69—27)

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The present invention relates to an ironing machine and it particularly relates to an ironing machine useful for renewing or refinishing furs, pile fabrics or articles of clothing made of furs or pile fabrics.

Although not limited thereto, or pile fabrics, the present invention will be particularly described in connection with its application to a process of ironing and to an ironing machine useful for ironing coats and other articles of clothing made of furs or skins, and particularly for renovating or renewing or refurbishing the fur on such mouton garments.

Mouton garments particularly when wet or after wear tend to lose their desirable fur quality and hand and considerable difficulty has been experienced in refurbishing and renewing the fur of such garments. It is not readily possible to produce the desired original fur appearance and fur hand of the garments and often streaks will result, and sometimes damage may be done to the garment.

Furthermore, to process or refurbish or iron such garment requires considerable labor and takes substantial time with resulting high cost without a particularly good renewing job being accomplished.

It is therefore among the object of the present invention to provide a novel fur renewing, refinishing, refurbishing or ironing procedure which will effectively renovate or refurbish articles of clothing made of fur, skins or pile fabrics, and particularly mouton coats, with most effective hand and fur appearance without streaking and without likelihood of any damage to the garment.

Another object is to provide a novel machine for ironing fur garments, and particularly mouton coats, which will only require attention of one operator and which will assure a most satisfactory ironing process without streaking of the garment and with assurance that the entire garment will be uniformly processed.

Still further objects and advantages will appear in the more detailed description set forth below, it being understood, however, that this more detailed description is given by way of illustration and explanation only and not by way of limitation, since various changes therein may be made by those skilled in the art without departing from the scope and spirit of the present invention.

In accomplishing the above objects, it has been found most satisfactory to provide a relatively wide belt member or support member at a convenient height in respect to the operator, which

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will support the fur garment, particularly when spread out, and have sufficient width to support such coat even though the coat has been moved to one side when one edge or one side thereof is being treated by the ironing device.

In one suitable form, this is accomplished by providing a relatively wide traveling canvas belt having about one and one half to twice the maximum width of the coat or garment when spread out.

Over the central portion of this traveling canvas belt is provided the ironing roll with the curved grooves.

This roll is supported upon a lever and may be lowered by the operator and at the same time is driven and provided with suitable internal electric heating arrangements. Alternately the travelling belt may be elevated to press the garment against the roll.

The temperature, speed and shape of the grooves on the roll are such as to raise the fur or pile and refurbish and return it to substantially its original condition.

In a preferred form of the invention, the shaft which carries the rotating roll is provided with three slip rings on one side to supply a triple phase current supply to the internal heater resistance unit while a double slip ring is positioned at the other side for temperature control arrangement.

Desirably, the roll is surmounted by a hood connected to an exhaust device to pick up dust or fragments which are formed, while a foot treadle controls the moving element whether it be the carrier belt or the ironing roller to press it into contact with the fur or pile surface.

In one preferred form of the invention, the roll, the exhaust, the motor for the exhaust, the electrical connections to the roll and other associated parts are all balanced and pivotally mounted upon a transversely extended lever which extends forwardly and backwardly across and substantially above the carrier belt.

A feature of the present invention, however, resides in the provision of a series of felt belts, pads or strips positioned opposite to and directly below the ironing rolls so that the portion of the fur coat or fur garment being treated or refurbished by the roll will be elevated above the canvas belt while being processed by the roll.

In one arrangement, there is provided a combination of a lower soft felt belt or pad and an upper hard felt belt or pad has been found most desirable for pressing the coat or pile against the roller or ironer member.

With the foregoing and other objects in view the invention consists of the novel construction, combination and arrangement of parts as hereinafter more specifically described, and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which fall within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:

Fig. 1 is a vertical side sectional view of the machine according to the present invention, taken upon the line 1—1 of Fig. 3.

Fig. 2 is a vertical side sectional view taken upon the line 2—2 of Fig. 3.

Fig. 3 is a top plan view taken from the line 3—3 of Fig. 1.

Fig. 4 is a longitudinal vertical sectional view taken upon the line 4—4 of Fig. 2 and upon an enlarged scale as compared to Fig. 2.

Fig. 5 is a vertical fragmentary detailed sectional view taken upon the line 5—5 of Fig. 4 to show the details of the ironing roller.

Fig. 6 is a diagrammatic circuit layout showing one type of electrical circuit arrangement which may be utilized with the device of Figs. 1 to 5.

Fig. 7 is a front elevational view of the ironing roller removed from its assemblage of Fig. 4 and upon a smaller scale as compared to Fig. 4.

Fig. 8 is a phantom view showing the four removable blades as they are positioned on the rotating cylinder.

Fig. 9 is a fragmentary end perspective view of the end of one of the said removable blades showing the combing grooves.

Fig. 10 is a diagrammatic side elevational view of the ceramic cylinder carrying the coiled heating element as shown interiorly upon Fig. 4, upon a reduced scale as compared to Fig. 4, before positioning inside of the ironing roller of Fig. 7 to form the combination of Fig. 4.

Fig. 11 is an enlarged diagrammatic side sectional view showing the relative positioning of the ironing roller, the carrier belt and the superimposed felt pads for pressing the fur or pile fabric into contact with the ironing roller.

Fig. 12 is a fragmentary enlarged side sectional detail view showing the positioning of the coiled heating element and its ceramic covering upon the ceramic cylinder.

Fig. 13 is a fragmentary enlarged side elevational view, partly in vertical section, showing the slip ring construction and assembly for establishing electrical connections to the ironing roller.

Figs. 14, 15 and 16 are diagrammatic alternative electrical circuit arrangements similar to Fig. 6 for supplying electrical energy to the heating roller.

Referring to Figs. 1 to 3, the machine has a frame A, a continuously moving belt B, an oscillating ironing roller C, a table D, a hood E, a pivotally mounted carrier F, an exhaust arrangement G, and a motor H.

The frame A has two side frame members 20 with the forward legs 21 and the rear legs 22 and the connecting bar members 23 and 24.

Extending between the side frame members 20 is the rear shaft 25 having the encircling tubular member 44 for carrying the treadle lever 26. The treadle lever 26 has the down-turned portion 27 which extends forwardly and terminates

in the portion 28 carrying the foot contact member 29. The lever 26 extends rearwardly, as indicated at 30, and has an upturned portion 31 pivotally connected at 32 to the U-shaped lever 33.

The U-shaped lever 33 has an upper extension 34. The extension 34 is pivotally connected at 35 to the swinging frame 36 of the carrier F. The carrier F is pivotally mounted on the shaft 37. The shaft 37 extends between the upward extensions 38 of the side frames 20.

The frame 36 has the side arms 39, a cross bracket 40, the front extension 41, and the rear mounting plate 42.

The front part of the carrier F is provided with mounting plates 50. To the mounting plates 50, by the bolts 51, are attached the flanges 52 and of the side bearings 53 (see Fig. 1). The side bearings 53 carry the shaft 54 by the bearing sleeve 55, as will be more fully described in connection with Fig. 4.

The carrier F also carries the hood E (see Figs. 1, 2 and 3), having the top plate 49 and the down-turned front portion 56 which parallels the ironing roller C, forming an inlet passage 57 into which there is a strong exhaust or suction, as indicated at 58.

The side plates 59 of the exhaust hood E (see Fig. 2) also carry the lower curved plate 60, which extends closely adjacent to the roller C. The suction, as indicated by the arrow 58, will then pass, as indicated by the arrow 61, into the chamber 62 which opens at 63 to the flexible tube 64. The flexible tube 64 opens into the center of the exhaust or suction fan 66 and expels the stream of air carrying dust and dirt particles through the outlet pipe 67 into the flexible tube 68.

The exhaust fan G is driven by and directly connected to the shaft 75 of the motor H (see Fig. 3).

It will be noted that the base 76 of the exhaust fan G and the base 77 of the motor H are both mounted upon the plate 42 forming part of the carrier F (see Figs. 1 to 3). The other end of the motor shaft 75 is provided with a double pulley 78 carrying two belts 79 which extend over to and drive the quadruple pulley 80 on the shaft 81. The shaft 81 for the quadruple pulley 80 is mounted upon a bracket 82 (see Fig. 1) supported on the cross structure 40 which forms part of and moves with the swinging carrier F.

The cross plate 40 has the support members 83 and 39 which are mounted upon the sleeve 43 encircling the shaft 37. The reduced diameter pulley section 84, forming part of the quadruple pulley 80, has a double belt 87 leading to the double pulley 86 on the shaft 54 of the ironing roller C, which will be more fully described in connection with Fig. 4.

Extending between the side frame members 20 are also the shafts 95, 96, 97 and 98 for the carrier belt B, which shafts are enclosed in the sleeves 99, 100, 101 and 102 which carry the canvas belt 103.

Mounted upon the canvas belt 103 is the single or double felt pad 104. If desired, the felt pad 104 (see Fig. 11) may consist of a lower section 106 of relatively soft felt and an upper section 107 of a relatively harder felt. The upper section 107 extends beyond the lower section 106 and has the overhanging edges 108 which tend to turn downwardly. These edges 108 are as wide as the ironing roller C or wider so that there will be no

streaking of the fur or pile along the edges of the ironing roller C.

Normally, when the belt B is running idle in the direction indicated by the arrow 109, the belt B will be taut, as indicated at 110, in Fig. 2, between the rollers or sleeves 100 and 101. However, when the ironing roller C is lowered, or alternatively when the belt B is elevated, the belt 103 will be depressed, as indicated at 111 in Fig. 1, so as to subject the fur coat or other fur piece to refurbishing and finishing treatment.

The rear shaft 98 is carried at the sides by the sliding blocks 112 which are guided in the slots 113 in the side frames 20. The sliding blocks 111 have the cross members 112a connected to the take-up screws 114. These screws 114 pass through the U-brackets 115 in the frame members 20. The screws 114 carry the adjusting wheels 116. The wheels have abutments 117 against the U-brackets 115. By turning the wheels 116 it is possible to take up any slack in the belt 103, put the necessary amount of tension on the combination felt-canvas belt B. The belt is driven by the forward shaft 95 through the motor 125. The motor 125 is mounted by the plate 126 upon the angle plate 127 attached to the forward portion 128 of one of the side frames 20. The driving and driven gears 129 and 130 are positioned upon the shafts 131 and 95.

The table D has the side portions 140 (see Fig. 3) and the recessed central portion 141 which permits the operator to stand close to the felt pad 104 of the continuously operating belt 103.

The inside edge 142 of the table is provided with a cut-out 143 which fits around the felt belt member 104 and over the canvas belt member 103.

The extensions 140 of the table are supported by the upwardly and forwardly extended beam members 144 of the cross members 145. The members 145 are attached at 146 to the front of the side frames 20.

Now, referring specifically to the ironing roller C shown best in Figs. 4 to 9, and 12 this roller has an outer metal cast-iron cylinder member I, a central ceramic heater member J, the removable blades K, the electrical coil arrangement L, the slip-ring arrangement M for the main current supply, and slip-ring arrangement N for the thermostatic supply and the thermostatic control P.

The inner ceramic roller J, as shown in Figs. 4, 10 and 12 is provided with spiral grooving 160 ceramically formed in its outer face 161 with the inner face 162 being smooth. However, at intervals, as indicated in Figs. 4 and 12, openings 163, 164, 165 and 166 are provided through which lead-in wires 167, 168, 169 and 170 extend to the coil section 171 (see Fig. 12) of heat-resistance wire.

The coil 171 should have a slightly larger radius than the radius of the semi-cylindrical spiral groove 160 so that it will be relatively tightly gripped by the side walls 172 of the groove at it expands and so that it will be tightly gripped when it is laid in the grooves 160. Normally, the wire constituting the coil 171 is wound upon a mandrel with its convolutions or turns equally spaced. The initial pitch of the coil is diagrammatically indicated at 173 in Fig. 10 and 174 in Fig. 6.

However, as the coil 171 is laid in the grooves 160, it will be stretched so that the coil will have a wider spacing over the area as diagrammatically indicated at 175 in Fig. 10 and as diagrammatically indicated at 176 in Fig. 6.

As a result the turns of the coil 171 will be more widely spaced over the middle 50% and de-

sirably over an area ranging from the middle 30% to 70% of the cylinder by an additional spacing equivalent to 125% to 200% of the spacing at the ends of the cylinder. This wider spacing or increased pitch is indicated at 173 in Fig. 10 and 176 in Fig. 6.

In this manner a more uniform heating effect is obtained with the coils being more closely spaced at the ends 177 of the cylinder J in Fig. 10 giving maximum heating effect where the loss by radiation and convection is most. In the middle part of the cylinder J, say the middle 50% to 80% thereof, the spacing is much wider and the heating effect less where the loss of radiation and convection is slightest.

The ends 177 of the ceramic cylinder J have inturned portions 178, as indicated in Fig. 4, for reinforcement purposes and central openings 179. In the central openings 179 project the nipples 180 and 181 of the end plates 182 and 183. The plates 182 and 183 shouldered at 184 and 185 and also at 186 and 187 to fit into the end of and close off the ends of the cast-iron cylinder I.

After the coil of heat-resistance wire L has been placed upon the cylinder J, a relatively soft and heat conducting cement 188 is placed over the exterior of the coil L. This cement is of such a nature that it will be yieldable with the varying heat generated by heating and cooling of the coil L and at the same time it is applied in such a manner that it will not fill the interior 189 of the coil 171. This interior 189 as shown in Fig. 12 will be empty.

Before the ceramic cylinder J, with the wire coils L, is inserted into the cast-iron cylinder I, the various connections 167, 168, 169 and 170 are made to provide the desired circuit arrangement.

Illustratively in the present embodiment of Fig. 6 is shown a three-phase connection.

Referring to Figs. 4 and 6, one line 190 will feed the end connections 167 and 170, another line 191 will feed the intermediate connection 168, and a third line 192 will feed the intermediate connection 169. To prevent internal sparking due to differences of potential, the lines 190 and 192 and the lead-in wires 167, 168, 169 and 170 are covered by the non-conducting or ceramic beads 193, 194 and 195 at all points where they will be adjacent to one another or in contact. As a result there will be no sparking internally of the ceramic cylinder J, nor inside the hollow shaft 54.

Upon assembly of the ceramic cylinder J into the cast-iron cylinder I, the cylinder J with the wires L and the cement covering 188, is placed in the cylinder I while standing upright and then the hard and heat conducting cement 196 is poured into position to cover the soft cement 188 and prevent it from powdering away and to hold it against the coils L.

At the same time the hard cement 196 will fill the space between the inner ceramic cylinder J and the outer cast-iron cylinder I and assure uniform heat transference from the inner cylinder J of the heating coils L to the ironing cylinder I.

If desired the combination of the cylinder J, coil L, and cement 186 and 196 may first be placed in a sheet copper cylinder and this cylinder then forced into the outer cast iron cylinder I.

The end plate 182 carrying the extension 197 of the shaft 54 is then placed on the cylinder I.

The nipple 180 will extend through the opening 179 at the left end of the cylinder J, as shown in Fig. 4. The plate 182 is bolted or clamped suitable in position.

The other end plate 183 (see Fig. 4) is suitably

clamped on the other end of the cylinder I with the shoulders and ridges 186 and 187 being tightly drawn against each other.

The outer cast-iron cylinder J is best shown in Figs. 5, 7 and 8. As shown, it has about four spiral grooves 210, which is indicated best in Fig. 5, having a slight step-down 211 at their shallow approach ends and a steep step-down 212 at the deep combing ends with an intervening recessed curved base or floor 213.

The shallow ends 211 are moved toward the pile or fur, as indicated at 215 in Figs. 5 and 7, while the deep ends 212 are effective in acting upon and refurbishing, renovating and combing the fur against which they are pressed.

The steep edges 212 are subjected to considerable wear and stress and will rapidly lose their relatively sharp edge at 216. To achieve the highest efficiency in application to the fur garment or other fur article the edge 217 should have a curvature less than  $\frac{3}{64}$ " radius and desirably about  $\frac{1}{64}$ " radius. Therefore, it is desirable to use a harder facing for the steep edge 112 which is replaceable.

This is accomplished by the replaceable face blades K shown in Figs. 7, 8 and 9. These blades K may be of a hardened steel as compared to the body of the cylinder I and they will have a sharp edge 217 with a plurality of ridges 218 closely spaced and extending vertically. These ridges help to align the fur fibres in the direction of the rotation of the roller C and thus give a straightening action. The sharp edge 217 and the ridges 218 also give a combing action. These blades are shaped to conform to the curvature of the back face 212 of the grooves 210 and they are held in position by a plurality of screws 219 which pass through the openings 220 and are screwed in the deep side 212 of the grooves 210. The combing grooves 213 may be spaced about  $\frac{3}{64}$ " apart.

In Fig. 8 is shown a phantom view of the four active combing and beating blades K with their curvature as they are applied to the cast-iron cylinder I. By providing these replaceable, hardened steel blades K, much longer wear is obtained. When the edges 217 of the cylinder I wear, it is not necessary to replace the entire cylinder I but is just sufficient to replace the four blades K.

As shown best in Fig. 4, the electrical heating connections 190, 191 and 192 pass from the roller C through the hollow shaft 54, through the bearing 53 and around the thimble 235 which fits in the left end 231 of the shaft 54. The ends of the electrical connection, as indicated at 190a and 191a are connected to three bolts, two of which, 232 and 233, are shown in Figs. 4 and 13 extending through the conductor slip rings 234, 235 and 236, of brass or copper which are separated by the insulating rings 237 and 238. These bolts 232 and 233 are enclosed in the insulating sleeves 239 and 240 (see Fig. 13), except at the respective slip ring 234, 235 or 236 to which connection is made. At this point the bolt 232 is screwed through the slip ring 235, as indicated at 241. The other two slip rings 234 and 236 have the large openings 228 and 229 to receive the insulating sleeves 239 and 240.

It will be noted that the entire assemblage is mounted upon the end 231 of the shaft 54 by means of the annular insulating elements 237, 238 and 242.

As indicated in Fig. 3, the brushes 243, 244 and 245 are carried by the arm 246, which is

mounted upon the element 247 on the plate 50 carried by the arm 41. The arm 41 extends to the sleeve 43. The brushes 243, 244 and 245 are preferably enclosed in a casing (not shown) and they connect to the wires or electrical conduits 250, 251 and 252. The wires 250, 251 and 252 as shown on Fig. 6, lead to the circuit breaker arrangement 253 operated by the toggle 254 of the solenoid 255. From the circuit breaker 253 the lines lead to any triple-phase source 256.

The solenoid 255 of the circuit breaker 253 has the electrical connections 257 and 258 to the control box 259.

The circuit breaker 253 is operated to cut off the supply of current to the roller C when the temperature exceeds a certain predetermined level, this being controlled by the thermostat arrangement P.

The thermostat arrangement P (see Figs. 4 and 6) has the projecting contact finger element 270 and a body 271, which respectively fit in the double recess 272 and 273. The narrow recess 272 receives the elongated thermostatic element 270 of the thermostat. The end 274 of the element 270 will contact the bottom of the pocket 275 as shown in Fig. 4.

The body 271 is provided with a threaded shank 276 which is threaded into the outer tapped portion of the narrow pocket 272. The collar 277 will hold the elongated thermostat structure 270 centrally in said pocket. From the body 271 the cable 278 containing the wires 279 and 280 extends by the slip rings N to the control box 259 (see Fig. 6). The control box 259 is connected to an electrical source indicated at 281, by the wires 282 and 283.

The temperature of the heating roller I is indicated on the dial 284 by the needle 285 (see Fig. 6). When the temperature of ironing roller C exceeds a predetermined maximum, as indicated by the thermostat P the control box 259 will automatically actuate the circuit breaker 257 through the wires 257 and 258 and the solenoid 255 to open the circuit to the coils L and discontinue the heating of the ironing roller I.

As shown best at the right side of Fig. 4, the wires 279 and 280 of the cable 278 are connected by the bolts 286 and 287 to the slip rings 288 and 289 with the intervening insulation 290 and 291. The slip rings 288 and 289 are substantially of the same construction as the slip rings 234, 235 and 236 at the left side of Fig. 4. The slip rings 288 and 289 are provided with the brushes 292 and 293 (see Fig. 3) which carry the wires 294 and 295 in the cable 296. The brushes 292 and 293 are supported by the arm 297 on the bracket 298. The bracket 298 in turn is supported on the plate 50. The plate 50 is carried on the arm 41 extending outwardly from the sleeve 43.

In operation, the fur coat is handled and stretched outright by the operator, standing in the recess 141, on the table 140 and over the canvas belt 103. The portion of the fur coat to be acted upon will be carried by the single or double continuous felt pad 104 of Figs. 1, 2 and 3 or 106 and 107 of Fig. 11.

The operator, by pressing down on the treadle 29, can press the ironing roller C into the fur coat on the canvas belt which moves slowly forwardly in the direction 109 while the opening, ironing and combing edges 212 of the ironing roller C are acting to refurbish and renew the fur. While the motor is driving the motor I by the belts 79 and 87 and through the pulleys 78, 84 and 86, the fan G will be directly driven. The resultant exhaust, as indicated at 58 in Fig. 2 will draw in all