March 15, 1927. 1,621,285

C. J. SOLOMON

APPARATUS FOR CUTTING FURS

Filed Jan. 13, 1926 2 Sheets-Sheet 1

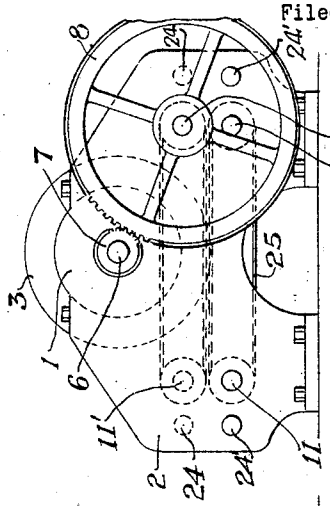


Fig. II

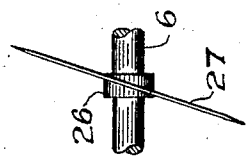


Fig. IV

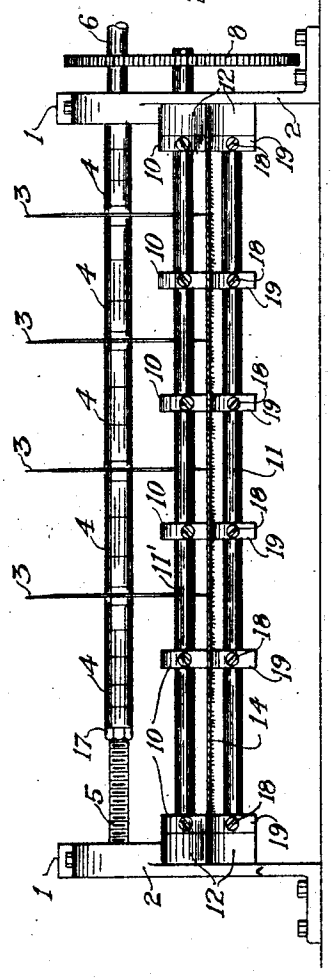


Fig. I

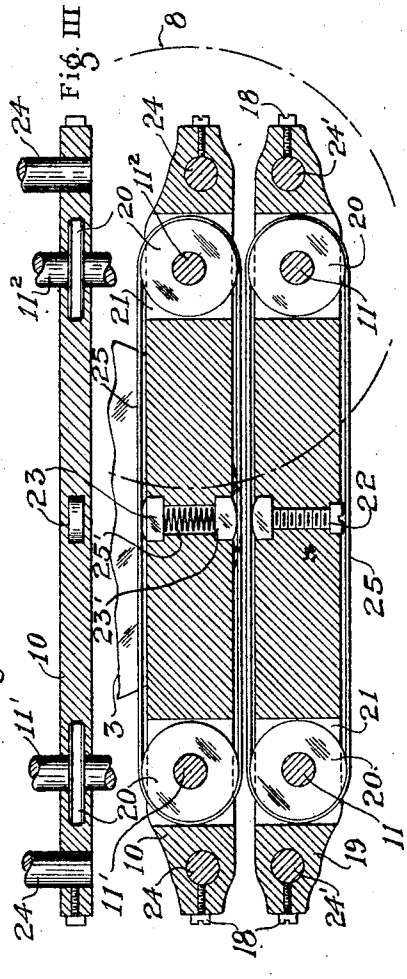


Fig. III

Fig. III a

INVENTOR.

Cecil J. Solomon

BY Mocho Blum

ATTORNEYS.

March 15, 1927. 1,621,285

C. J. SOLOMON

APPARATUS FOR CUTTING FURS

Filed Jan. 13, 1926 2 Sheets-Sheet 2

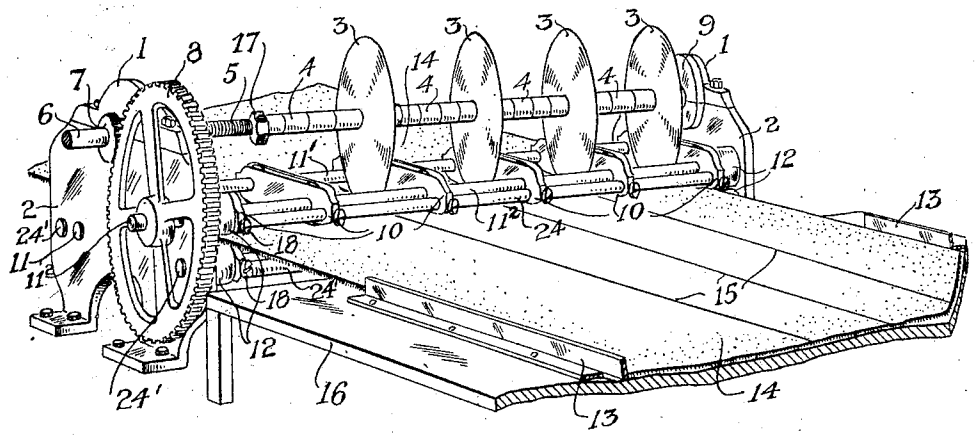


Fig. V

Fig. VI.

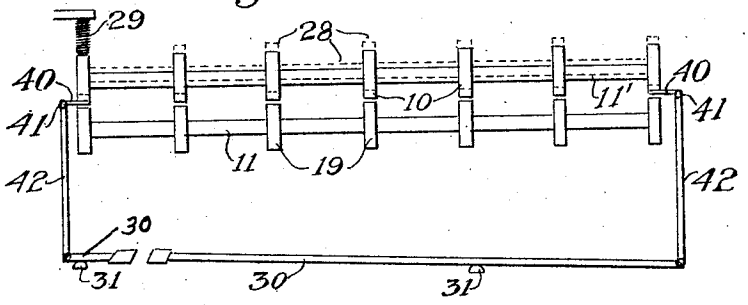
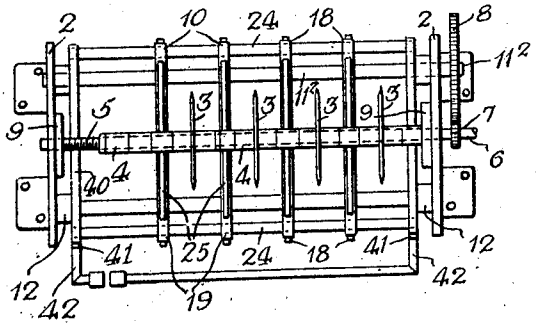


Fig. VII



INVENTOR.

Carl J. Solomon

BY

Mock & Blum

ATTORNEY.

Patented Mar. 15, 1927. 1,621,285

UNITED STATES PATENT OFFICE.

CECIL J. SOLOMON, OF NEW YORK, N. Y.

APPARATUS FOR CUTTING FURS.

Application filed January 13, 1926. Serial No. 80,976.

My invention relates to a new and improved method of and apparatus for cutting furs.

One of the objects of my invention is to devise a method of and apparatus for cutting furs so that little or no injury will be caused to the hair of the fur.

Another object of my invention is to devise a method of and apparatus for cutting furs whereby the edge of the cutting knife will not press the hair side or hairs of the fur against a rigid or immovable base or the like.

Another object of my invention is to devise a method of and apparatus for cutting furs whereby the operation can be rapidly accomplished and the depth of the cut can be regulated.

Another object of my invention is to devise a method of and apparatus for cutting furs whereby a skin can be cut into a series of uniform strips so that these strips can be readily utilized for making matched fur garments and the like.

Other objects of my invention will be set forth in the following description and drawings which illustrate a preferred embodiment of my invention, it being clear that the above general statement of the objects of my invention is intended merely to generally explain the same and not to limit it in any manner.

Fig. I is a front elevation.

Fig. II is a side elevation.

Fig. III is a detail sectional view.

Fig. III^a is a detail top view partially in section.

Fig. IV illustrates a special mount for cutting knives.

Fig. V is a perspective view.

Fig. VI is a detail front elevation.

Fig. VII is a detail top elevation.

As shown in Fig. V, the machine comprises a table 16 and end plates 2. A shaft 6 provided with a gear 7 is journaled in the end plates 2 and the gear 7 is caused to mesh with a larger gear 8 which is mounted on the shaft 11^2 which is also journaled in the end plates 2.

As shown in Figs. III and V, a series of upper guide bars 10 are provided with recesses in which there are located pulleys 20, the said pulleys 20 being mounted upon the upper rear shaft 11^2 and the upper front shaft 11'. The upper shafts 11^2 and 11' pass through suitable side openings in the upper guide bars 10. The upper front shaft 11' does not pass through the end plates 2, so that the upper guide bars 10 can be tilted upon the upper rear shaft 11^2. In order to prevent any lateral movement of the upper guide bars 10 upon the upper shafts 11' and 11^2, the said upper guide bars 10 are provided with upper tie-bars 24 which pass through them and which are held in relative position by means of set screws 18. As shown in Fig. VII, the upper tie bars 24 are connected at their ends to lifting members 40. The upper rear shaft 11^2 passes through these lifting members 40 so that the said lifting members 40 can be tilted upon the upper rear shaft 11^2.

A series of lower guide bars 19 are provided with recesses in which a series of lower pulleys 20 are mounted in said recesses 21. Lower shafts 11 pass through suitable openings in the side walls of the lower guide bars 19 so that the lower guide bars 19 are supported upon the lower shafts 11.

As shown in Fig. II, both lower shafts 11 are mounted in the end plates 2. Lower bars 24' which are connected to the lower guide bars 19 by means of set screws 18, prevent the said lower guide bars 19 from shifting laterally upon the lower shafts 11.

Belts 25 are mounted upon the upper pulleys 20 and upon the lower pulleys 20. In order to regulate the depth of the cut, the position of the upper runs of the lower belts 25 can be regulated by means of the screws 22 which are provided with rounded upper heads so that by turning the screws 22 the position of the upper run of each lower belt 25 can be regulated.

Each upper guide bar 10 is provided with a slidable head 23' which is forced downwardly by means of a compression spring 25' whose upper end abuts a head 23 which can be adjustably connected by any suitable means to its respective upper guide bar 10.

As shown in Fig. V, a series of circular knives 3 are mounted upon the shaft 6. The said shaft 6 is provided with a threaded portion 5 and the knives 3 are held in proper position by means of spacing sleeves 4 which abut a member 9 at one end of the said shaft 6, and are held in position at the other end by means of a nut 17. The shaft 11^2 and the rear shaft 11 are provided with bearings 12 constructed in the well known manner so that said shafts can be readily removed.

In order to tilt the upper guide bars 10

around the rear shaft 11^2, mechanism of the type shown in Figs. VI and VII is employed.

Foot levers 30 are mounted on pivots 31, the adjacent ends of the foot levers 30 being placed so close to each other that both said levers can be simultaneously operated by a single movement of the foot of the operator. The horizontal foot levers 30 are connected to upright links 42 and these upright links 42 are connected to horizontal lifting members 40 by connections 41.

Lifting members 40 bear against the end members of the front upper shaft 11′ so that the said shaft 11′ can be raised against the resistance of the compression spring 29, until the upper bars 10 assume the dotted line position indicated by the numeral 28 in Fig. VI. As shown in Fig. VII, the lifting members 40 are pivotally mounted upon the upper rear shaft 11^2. Likewise, as shown in Fig. VII, the upper tie-bars 24 may be connected to the lifting members 40.

The operation of the mechanism illustrated is as follows:—

By depressing the horizontal levers 30, the operator can raise the front upper shaft 11′ and upwardly tilt the upper bars 10, so as to introduce a skin between the adjacent runs of the feed belts 25.

If the shaft 11^2 is then caused to revolve, this causes the revolution of the circular knives 3 and it also causes the fur to be fed forward.

As shown in Fig. I, the fur or skin 14 has its hair side placed downwardly.

By adjusting the depth of the cut, the circular knives 3 are caused to cut substantially only through the base of the fur and without substantially injuring the hairy underside. Experience has shown that this method of cutting produces minimum injury to the hair of the fur because the cutting edges of the knives do not press against any lower rigid or immovable abutment. On the contrary, the fur is supported at the sides of the cutting edges.

A fur or skin can therefore be cut into a number of strips of uniform width without any substantial injury to the hair. These strips are also cut in a certain definite relationship which makes it easier to utilize them afterwards for matching or for producing various artistic contrasts and effects.

In the modification shown in Fig. IV, the knife 27 is mounted at an angle upon a ring 26 connected to the knife shaft 6 so that a spiral cut is formed in the fur.

I have described a preferred embodiment of my invention, but it is clear that numerous changes and omissions could be made without departing from its spirit.

I claim:—

1. In a mechanism for cutting furs, the combination of a plurality of pairs of belts adapted to hold and feed the fur, and cutting means adapted to be associated with said belts and located intermediate the said pairs of belts so that the cut is formed between those portions of the fur which are gripped by the said pairs of belts, the cutting edge of said cutting means being so located that they operate substantially only on the base of the fur, said cutting means having a support located wholly at one side of the adjacent runs of the said belts.

2. In a mechanism for cutting furs, the combination of a plurality of pairs of belts adapted to hold and feed the fur, and cutting means adapted to be associated with said belts and located intermediate the said pairs of belts so that the cut is formed between those portions of the fur which are gripped by the said pairs of belts, and mechanism adapted to control the position of the adjacent runs of each said pair of belts, the cutting edge of said cutting means being so located that they operate substantially only on the base of the fur.

3. In a mechanism for cutting furs, the combination of end plates having a table associated therewith, a pair of lower shafts mounted in the said end plates, a series of lower guide bars mounted upon the said lower shafts, each said guide bar having a plurality of recesses, pulleys mounted upon the said lower shafts and located in the said recesses, each pair of pulleys associated with one of said guide bars having an endless belt mounted thereon, a rear upper shaft mounted in the said end plates, a front upper shaft free from said end plates, the said upper shafts having upper guide bars mounted thereon and respectively associated with the lower guide bars, the said upper guide bars having recesses, upper pulleys mounted on said upper shafts and located in said recesses, each pair of pulleys in each said upper guide bar having an endless belt mounted thereon, means adapted to prevent the lateral shifting of the said guide bars upon their respective shafts, and means adapted to tilt the upper guide bars about the rear upper shaft.

4. In a mechanism for cutting furs, the combination of a plurality of spaced cutting members, means adapted to actuate the said cutting members, movable and yieldable holding means adapted to hold a fur at a plurality of spaced points laterally spaced with respect to said cutting members and to feed the fur under the said cutting members, and means adapted to actuate the said holding means, said cutting members being so located that their edges operate substantially only on one side of the base of the fur.

5. In a mechanism for cutting furs, the combination of a plurality of spaced cutting members, a plurality of pairs of associated endless belts located intermediate said cutting members, means adapted to operate said

belts, and movable control means located intermediate the ends of said belts and adapted to control the positions of the adjacent runs of said pairs of belts, so that the furs can be presented to the cutting edges of said cutting members to have their bases severed without any substantial injury to the hair sides thereof.

6. In a mechanism for cutting furs, the combination of a plurality of spaced cutting members, pairs of bars located intermediate said cutting members, each said bar being associated with an endless belt passing around it, means adapted to operate said belts, and movable control means associated with said bars and adapted to control the position of the adjacent runs of the belts associated with each said pair of bars.

In testimony whereof I affix my signature.

CECIL J. SOLOMON.