July 12, 1938. D. L. GORBATENKO 2,123,415

TAPING INSTRUMENT

Filed July 28, 1937

Fig. 1

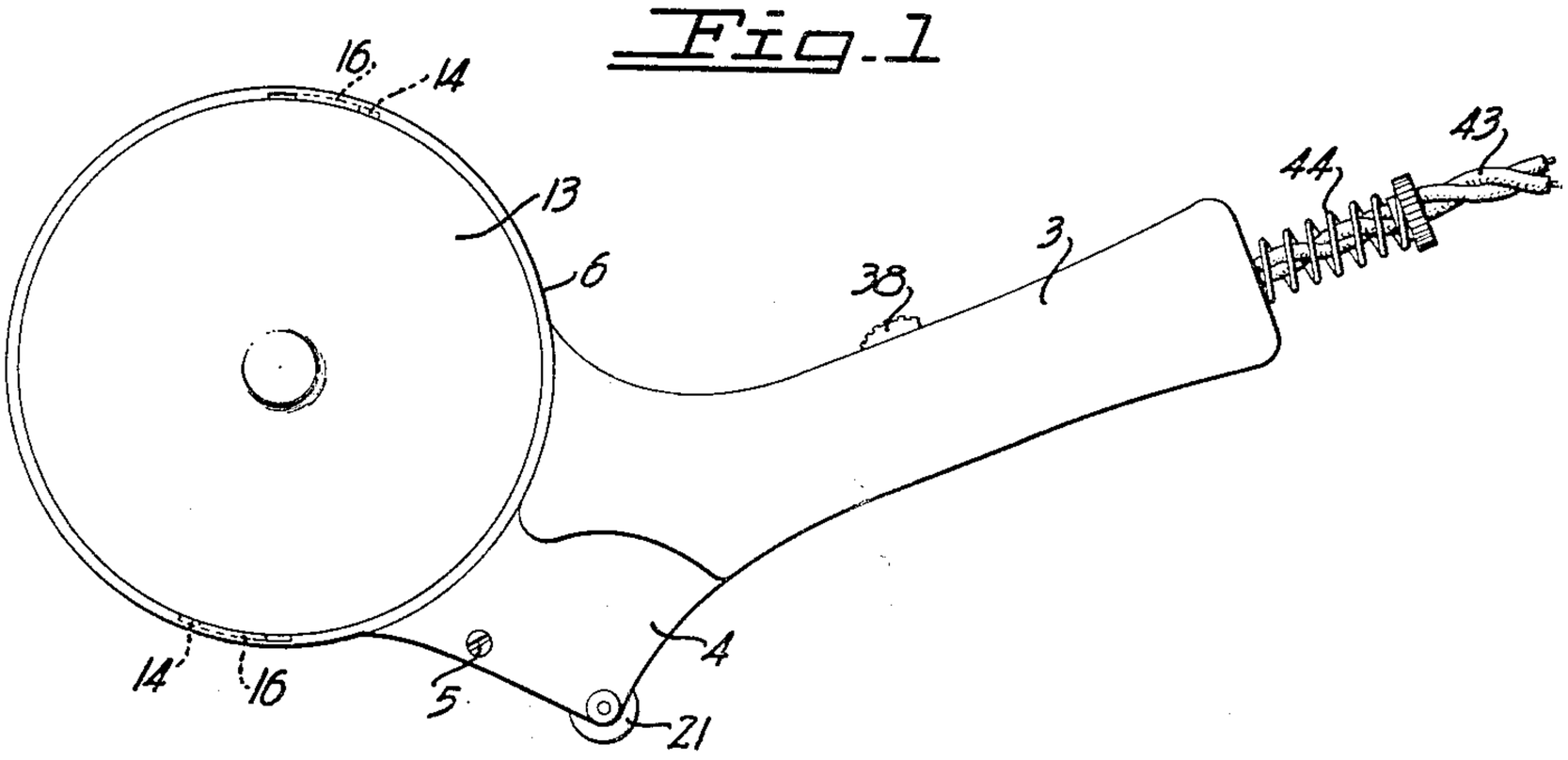


Fig. 2

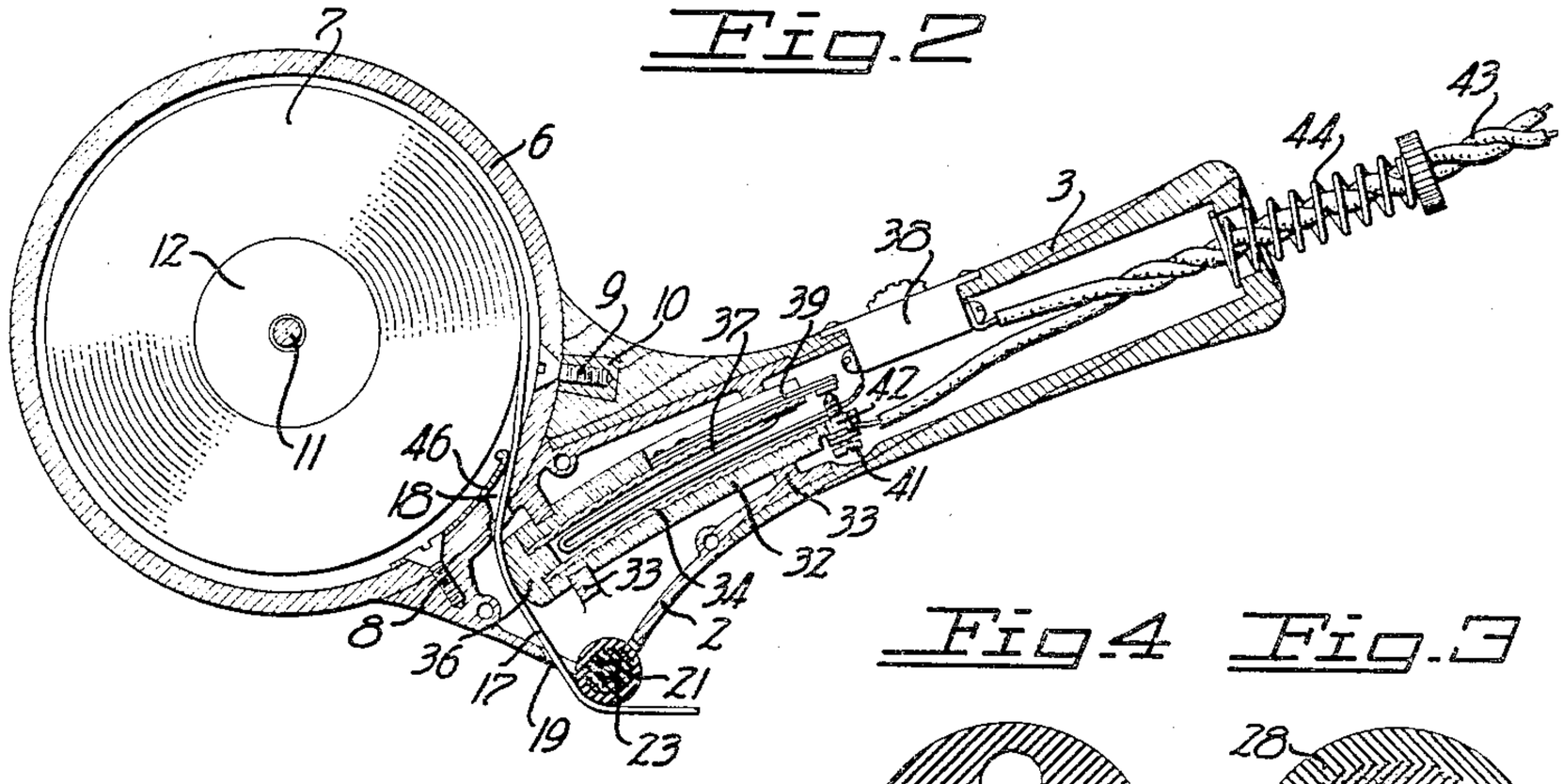


Fig. 4

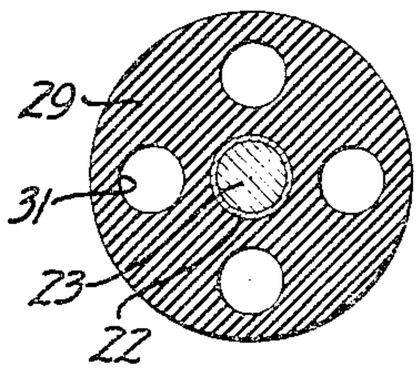


Fig. 3

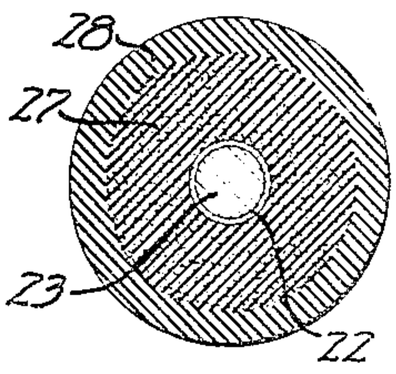
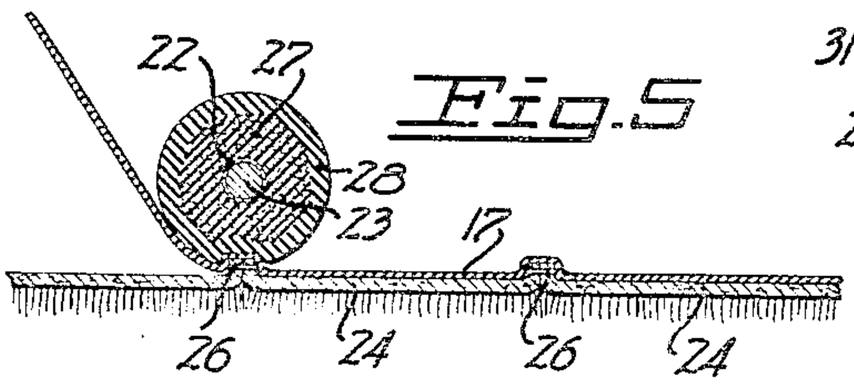


Fig. 5



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Patented July 12, 1938 2,123,415

UNITED STATES PATENT OFFICE

2,123,415

TAPING INSTRUMENT

Dimitri L. Gorbatenko, San Francisco, Calif., assignor, by direct and mesne assignments, of eleven-twentieths to A. J. Allgoewer and four-twentieths to Luka I. Gorbatenko, both of San Francisco, Calif.

Application July 28, 1937, Serial No. 156,249

3 Claims. (Cl. 216—20)

My invention relates to an instrument for applying tape, such as the reinforcing tape used on skins in the making of fur coats; and the broad object of my invention is to provide a device for applying the tape quickly and without harm to the skins.

Another object of the invention is to provide means for pressing the tape firmly against the irregular and seamed surface of the skins.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of my invention. It is to be understood that I do not limit myself to this disclosure of species of my invention, as I may adopt variant embodiments thereof within the scope of the claims.

Referring to the drawing:

Figure 1 is a side elevational view of an instrument embodying the improvements of my invention; and

Figure 2 is a vertical sectional view of the same.

Figure 3 is a vertical sectional view of the preferred form of pressure roller; and

Figure 4 is a similar view showing a modified roller construction.

Figure 5 is a vertical sectional view showing the manner in which the resilient pressure roller deforms itself to conform with a raised seam and press the tape tightly about the seam.

In the making of fur coats the practice is to apply reinforcing tape along the inside edges of portions of the coat to be sewn together; thus, for example, along the edges where a sleeve is stitched to the body portion of a coat. The purpose of this tape is to reinforce the fur skins so that the stitches will not pull out. The tape used is a rubberized tape which securely bonds to the skins under heat and pressure. In the past, the practice has been to apply this tape entirely by hand, using an ordinary electric iron to apply the heat and pressure. This is a tedious job and requires great skill, because the skins are easily burned by heat. Some animal skins are very thin, and even a slight amount of excess heat burns them or so weakens the skin structure as to render them useless.

Another difficulty is that fur coats are made up of a large number of small skins, sewn together. The seams stand up on the inside of the material, and the tape has to be conformed to them. The problem of pressing the tape over and about the seams by means of an ordinary iron is a very real one, and even experienced operators often fail to get the tape firmly in place. Still another difficulty in working with an iron is that the heat of the iron on the surface of the skins tends to shrink them, and change the shape of a carefully cut and fitted piece. This often results in poorly fitted pieces, and many times makes the article absolutely unusable for the purpose it was fitted for.

In view of these problems and difficulties it is the broad object of my invention to provide a taping instrument which applies the tape quickly and accurately, and conforms it exactly to the irregular surface of the seamed skins, and without danger of burning or shrinking them.

In terms of broad inclusion, the taping instrument embodying my invention comprises a resilient pressure roller for engaging a tape, and a handle for guiding the roller and for pressing the tape against a surface, whereby the resilient roller deforms itself into conformity with irregularities in the surface to press the tape firmly against the surface. Means mounted on the handle are preferably provided for holding a supply roll of tape, and means are also provided for heating the tape. The latter means is preferably electrical, and a thermostat is preferably provided for controlling the temperature.

In greater detail, and referring to the drawings, the taping instrument of my invention comprises a recessed frame **2**, preferably of metal, mounted on the lower end of a hollow handle **3** of any suitable material, such as wood. The recess of frame **2** is covered by a side plate **4** fastened by suitable screws **5**. Frame **2** also includes a mounting or case **6** for holding a supply roll **7** of tape, the latter preferably being a standard roll of rubberized tape, such as used for reinforcing the edges of animal skins used in making fur coats. Case **6** is cup shaped and may be made as a separate piece fastened to the frame by a screw **8**, or it may be cast as an integral part of the frame.

The hollow handle **3** is fitted to the frame to provide an extension of the latter, and is held securely in place by a screw **9** passing through the wall of case **6**. If the handle is of wood a tapped metal plug **10** is preferably set in the handle to receive the screw. Case **6** is also provided with an internal stud **11** forming a journal for the wood core **12** of the tape roll. A cover **13** is provided for the case, and comprises a plate set flush with its recessed outer edge and provided with locking tongues **14** engaging grooves **16** in the case wall.

The tape **17** peeled from supply roll **7** passes through an opening **18** in the case wall and adja-

cent frame structure, and then extends across the frame recess and passes out through an opening 19 at the base of the frame. A resilient pressure roller 21 is mounted in this latter opening, and is so positioned that the tape passes out under it. This roller is provided with a hub sleeve 22 journaled on a pin 23 extending transversely of the frame. The purpose of this roller is to apply pressure to the tape, and its being resilient plays an important part in the proper functioning of the instrument; in fact, a roller of hard material, such as metal, is wholly unsuitable.

The reason here is that a piece of fur material is made up of many small sections 24 of skin, sewn together along seams 26, as shown in Figure 5. These seams stand up on the inside of the material, and the tape 17 has to be pressed firmly over the seam to make a secure adhesive contact. In other words, the roller must be capable of deforming itself to conform with the seam when the roller passes over it. A roller of resilient material accomplishes this very effectively, as illustrated in Figure 5, and the tape is pressed firmly against the sides as well as the top of the seam.

I prefer to use a roller having a core portion 27 of highly resilient material, such as sponge rubber, and a tire portion 28 of solid rubber. This roller construction is shown in Figure 3. If desired however, a roller of solid rubber 29 having transverse holes 31 may be used, as shown in Figure 4, although this structure is not as uniformly resilient as that illustrated in Figure 3. By using a rubber roller I have found that the tape does not tend to adhere to it.

Means are also provided in the instrument for heating the tape. For this purpose a heating unit is employed comprising an insulating tube 32 of suitable material, such as porcelain, held between studs 33 formed in the frame recess. The inside of the heating unit is lined with a metal tube 34, connected at the base of the unit with a metal shoe 36 presenting a heating face over which the tape passes. An electrical heating element 37 is positioned in the tubular unit, and is connected at one end to the inside tube 34 and at the other end to a switch 38 suitably arranged on handle 3.

A thermostat is also preferably provided for controlling the temperature of the heating unit, and comprises a bi-metallic strip 39 fastened at one end to the inside tube 34 and engaging a contact screw 41 at its free outer end. The latter also provides an adjusting screw for the thermostat, and is threaded through a metal sleeve 42 pressed in the porcelain tube 32. This sleeve also provides a terminal for one of the conductors of a flexible cord 43, the other conductor being connected to switch 38. Cord 43 conveniently leads into the instrument through the end of the hollow handle, and is held by a spring holder 44.

In order to tension the tape across the face of the heating unit, to insure contact between the tape and the heating surface, a leaf spring 46 is provided on the inside of case 6 to bear against the tape. This spring may conveniently be fastened by screw 8. As a result, the tape is pulled across the heating face under tension, and proper heating of the tape is insured. The amount of heating necessary is not great, just enough to thoroughly warm the tape, and the heating element may therefore be a small one. I have used a 17 watt element successfully for this purpose.

I claim:

1. An instrument for applying tape to an irregular surface, comprising a resilient roller for engaging the tape, a handle for guiding the roller and for pressing the tape against the surface, whereby the resilient roller deforms itself into conformity with irregularities in said surface to press the tape firmly against the surface, means mounted on the handle for holding a supply roll of tape, and means mounted on the handle for heating the tape.

2. A taping instrument comprising a frame, means on the frame for holding a supply roll of tape, a roller on the frame for engaging the tape to press the latter against a surface to be taped, and a heating unit on the frame and having a face interposed between the supply roll and pressure roller and over which the tape may pass.

3. A taping instrument comprising a frame, means on the frame for holding a supply roll of tape, a roller on the frame for engaging the tape to press the latter against a surface to be taped, a heating unit on the frame and having a face interposed between the supply roll and pressure roller and over which the tape may pass, and means for tensioning the tape over the face of the heating unit.

DIMITRI L. GORBATENKO.