July 5, 1938. M. CANTER 2,122,557

METHOD AND APPARATUS FOR APPLYING METALLIC SEALS

Filed Aug. 14, 1936

Fig. 1

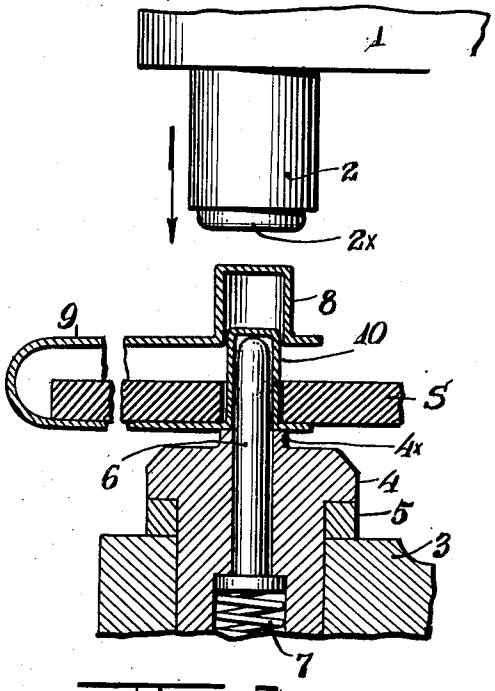


Fig. 2

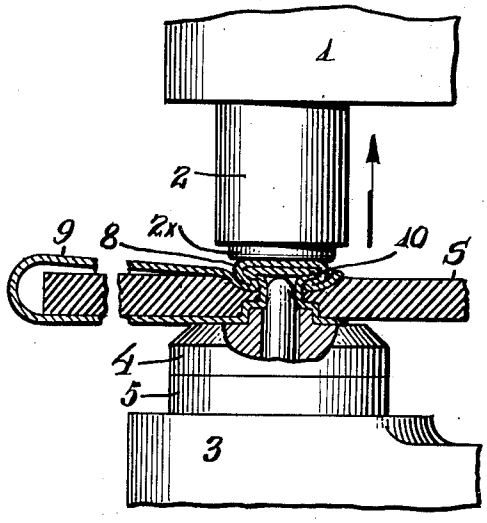


Fig. 3

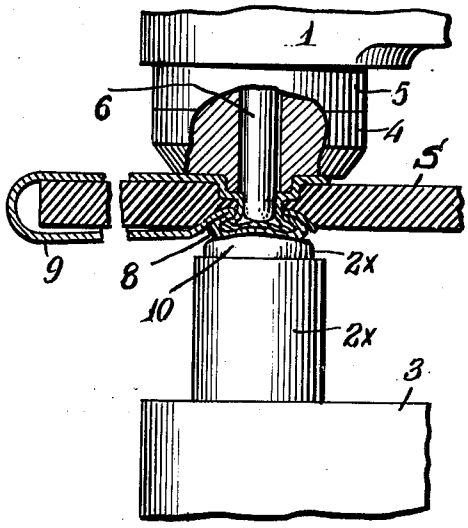


Fig. 4

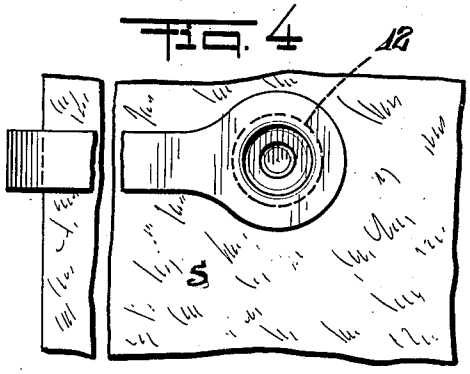
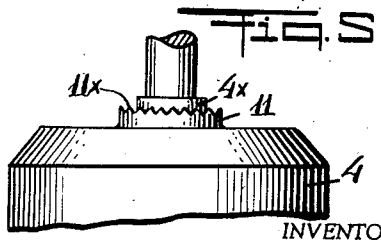


Fig. 5



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METHOD AND APPARATUS FOR APPLYING METALLIC SEALS

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2 Claims. (Cl. 153—1)

This invention relates to identifying seals and collapsing dies therefor, the seal being of that type adapted for application to furs and skins and of the type disclosed in United States Letters Patent No. 1,606,398 and 1,888,090, wherein the seal comprises a male member which passes through an aperture in the skin or fur and a female member disposed at the opposite side of the male member, the two members being interengaged and interlocking when compression forces are applied to the device at the opposite sides of the fur or skin.

It has been proposed in the past to enable the interlocking compression of the male and female members by weakening the ends of the male member, as by transverse apertures therethrough, or, by forming the male member with an open and tapered end and the female member with a conical frustum at its base to act as a spreading member against the inner wall of the tubular male member at the end of the latter. In both cases however, there are disadvantages as well as increased cost of manufacture. I have discovered that by forming both male and female members of the seal as closed cups, thus reducing the forming operations for the seal to the utmost simplicity, and employing a compression die of special form, I obtain a stronger seal and a better interlocking action between the two members thereof.

The invention will be described with reference to the accompanying drawing, in which:—

Figure 1 is a view in elevation and partly in vertical section, showing my improved seal in position relatively to the two members of the compression die ready for the compression action upon a skin penetrated by the male member.

Figure 2 is a view similar to Figure 1, showing the position of the parts at the end of a closing action of the die.

Figure 3 is a view similar to Figure 1 with the plunger and seat of the die carried by the moving die head.

Figure 4 is a bottom plan view, partly broken away, showing a section with the seal affixed thereto.

Figure 5 is a fragmentary view in elevation of the lower die member having applied thereto an annular plunger for weakening the area of the seal surrounding the male member.

Referring to the drawing, I have shown in Figures 1 and 2, the upper movable die block 1 carrying the die head 2 which may have a reduced lower end 2x somewhat larger than the female member of the seal.

The lower member of the compression die consists of a supporting standard 3 apertured to receive a plunger sleeve 4 which may be shouldered so that the ring 5 may lie under the shoulder and if desired, the ring may be made of softer metal than the hard steel usually employed for members 3 and 4 so as to act as a shock receiving element.

Within the axial aperture of the plunger receiving member 4 is a plunger 6 below which is placed a spring 7. The spring will rest upon a seat (not shown) as will be well understood without the necessity of illustration.

The seal comprises an inverted cup-like female member 8 connected integrally by a strip of metal 9 with a cup-like male member 10 which is of substantially less diameter than the female member 8. It will be seen that the male member has been passed through an aperture in the skin s and that the base of the male member is held in elevated position above the main area of plunger receiving member 4, being held in such elevated position by a vertically projecting ring 4x, the diameter of which is substantially the diameter of the male member 10.

The parts being in the position of Figure 1, the upper die members are moved downwardly causing the female member to be brought down into contact with the male member at about the time the female member exterior of cup 8 lightly contacts with a skin of usual thickness. It will be seen, therefore, that the pressure of the die is carried in straight lines through the vertical annular wall of the male member through the intermediary of the top wall of the female member 8, and to no other parts of the seal. In the downward movement of the upper die head, plunger rod 6 prevents collapse of the male member 10 inwardly and therefore its initial collapse must be outwardly. In such initial outward collapse, it must force outwardly the vertical wall of the female member 8. At such point the angularly extending metal of the seal integral with member 8 will bear firmly upon the skin and the continued downward movement of the upper die members will cause the projection upwardly of the male member above the lower face of the skin, as shown in Figure 2, which causes a further outward spreading at the upper area of the male member, securing a very strong permanent interlocking of the seal male and female members and to an extent never heretofore obtained to my knowledge with devices of the kind.

It will further be noted that both the male member and the female member are imbedded

into the skin substantially below the surface thereof at the area surrounding the skin opening, which is a result not heretofore achieved with devices of this type.

In Figure 5 I have shown below ring 4x a collar 11 having puncturing points 11x adapted to form an annular line of punctures 12 in the seal surrounding the male member 10. By such means, if attempts are made to separate the elements of the seal, the latter will be broken along the line of punctures.

If desired, the plunger 6 and ring 4x may be carried by the movable head 1 of the die in each case and members 2 and 2x will be reversed in position, as shown in Figure 3, the action being the same.

In some cases it will be desirable to form the lower end of the die head 2 with its contacting face for the closure wall of the cup-like member 8 somewhat rounded so that the surface will be arcuate, this being shown in Figure 3. Therefore, in the claims, by "substantially flat bearing surface" I include a surface which is slightly arcuate as indicated in said figure.

Having described my invention, what I claim and desire to secure by Letters Patent, is as follows:

1. In the art of marking furs and skins, the method of applying to a fur or skin an identifying seal comprising a strip of metal integrally formed at its ends with tubular male and female members, each of the male and female members comprising a cup having a substantially flat closure wall, and the male member being of substantially greater length than the female member, which consists in passing the male member through an aperture formed in the fur or skin and internally supporting said male member, then simultaneously applying pressures in opposite directions to the seal, to wit, a pressure applied to the male member confined substantially to its tubular base interiorly of the surrounding area of the strip of metal carrying said male member and sufficient to counter-sink the male member relatively to the said strip of metal, and a pressure applied to the female member in opposition to the first-named pressure and sufficient to collapse the same and the male member interiorly thereof to interlock said male and female tubular members of the seal.

2. A seal collapsing die for applying seals to furs and skins, which seals comprise a strip of metal integrally formed at its end with tubular male and female members, which die comprises a projecting ring adapted to abut an annular area of the strip of metal confined to substantially the cross section of the male member, a plunger supported for movement in an aperture axially of the ring and adapted to receive the male member, a puncturing ring surrounding the said projecting ring and provided with an annular line of puncturing members, and an opposed die member having a substantial flat bearing surface for the closed wall of the female member of the seal, the die members being adapted for movement toward and from each other to collapse and interlock said male and female tubular members of the seal.

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