

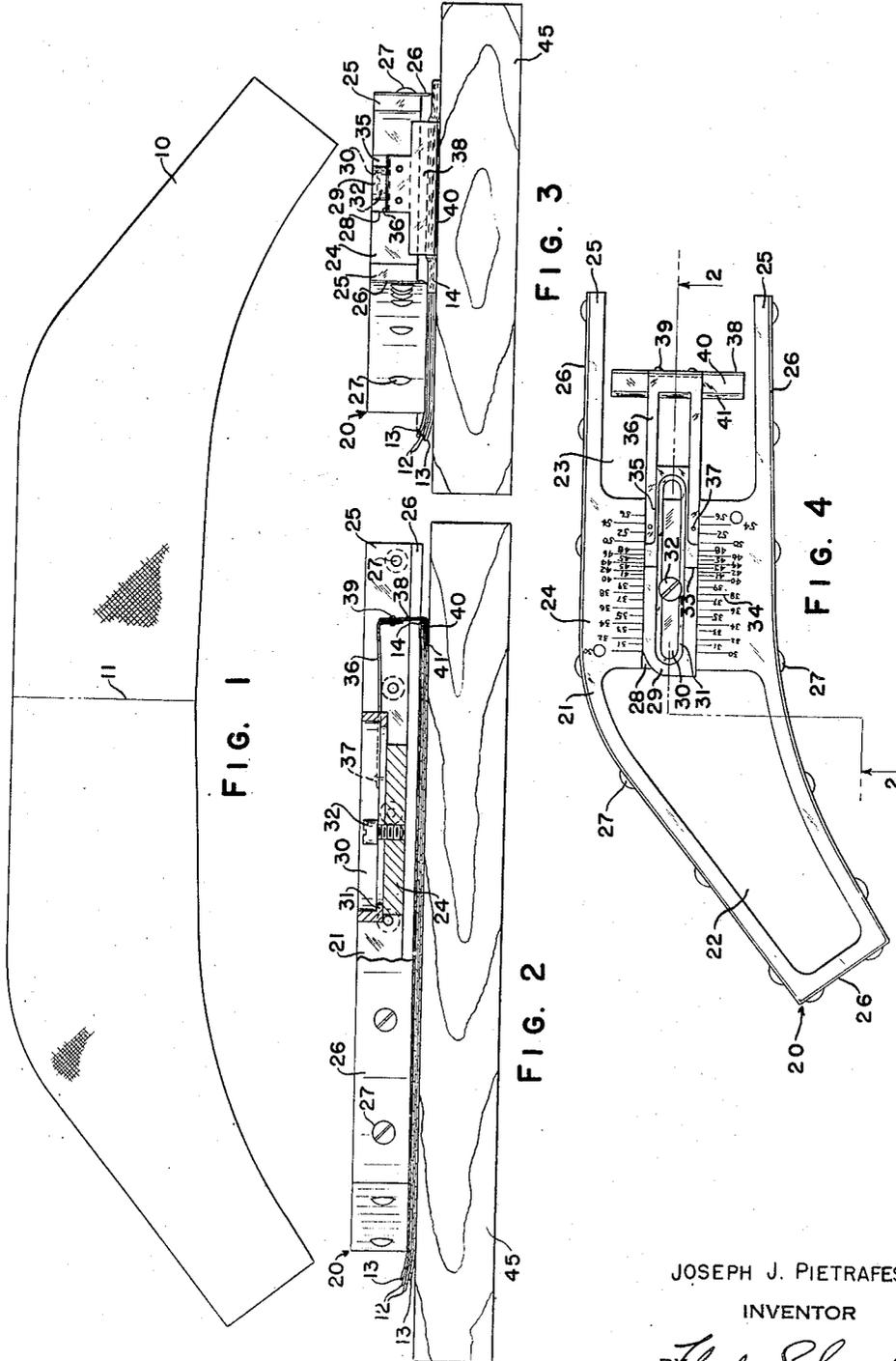
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DIE FOR CUTTING COAT COLLAR PARTS

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## DIE FOR CUTTING COAT COLLAR PARTS

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1 Claim. (Cl. 164—29)

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My invention relates to a die for cutting collar parts for coats, and more particularly, to a die for trimming or final shaping the previously roughly cut-out under-collars and collar-linings for men's suit coats.

The conventional method of cutting out the component parts of a garment is by using a paper pattern. This pattern is laid on a piece of cloth and the garment part is made by cutting the cloth around the edge of the pattern with shears. This method is slow and inaccurate because it is difficult for even a skilled cutter to follow exactly the outline of the pattern. In the manufacture of garments in quantity, moreover, the necessity for making different sizes and styles complicates the problem still further in that many different patterns must be made, stored and used.

The fit of a man's suit coat depends largely upon the accuracy with which the collar is made. For good appearance, it is essential that the outline of the left side of the collar be symmetrical with that of the right side. The collar is made of three parts, (1) the collar proper, which is made of the suit material, (2) the under-collar, which is usually made of a plain material, such as melton, and (3) the collar-lining, made of a relatively stiff material, such as canvas, and disposed between the other two parts. It is customary to cut the collar-lining and the under-collar roughly to shape; next attach the two together by padding so that the stitches do not show through what is to be the exposed surface of the under-collar; and then trim or final-shape the composite material by cutting with shears around a paper pattern. The canvas is applied or attached to the melton before final shaping because the padding stitches tend to distort the melton. The resulting two-part assembly is then used as a guide or form to which the collar proper is shaped and sewed to make the complete collar. The shape and fit of the coat collar depends very largely upon the shape of the under-collar, and the under-collar should therefore be cut with extreme accuracy.

Heretofore, it has been customary to make the under-collar pattern for only one-half of the under-collar, from the middle of the neck to one side. A printed scale is provided at the neck end of the pattern so that various sizes of collars can be cut from one pattern, the larger sizes being longer at the neck end. The same pattern is used to cut the two halves of the under-collar as separate pieces. Such a procedure necessitates sewing the two halves of the under-collar together, after which the collar is com-

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pleted as above described. Even with skilled workmen, the product is apt to be inaccurate. Some improvement in accuracy has been obtained by using a pattern the size of the entire under-collar, and cutting the under-collar in one piece. This procedure has the disadvantage of requiring a large number of patterns, one for each style and size, and the under-collar is still not as accurate as could be desired, due to the difficulty of cutting precisely with shears along the edges of the pattern. Considerable expense is also caused by the necessity for frequent pattern replacement, as the paper patterns become worn and frayed in service.

According to the present invention, pieces of lining material and of under-collar material larger than and only very roughly approximating the final shape of the under-collar, are attached by padding stitches as above described. This composite material is then folded over at its middle, preferably with the under-collar material outside, and the folded edge sharply creased or pressed. The under-collar and the attached collar-lining are then trimmed in one operation by the use of the cutting die of this invention, the two halves being cut simultaneously by the same knife edges and hence being absolutely symmetrical when the cut material is unfolded. The cutting die is provided with an adjustable stop which governs the size of the finished piece, and enables the various sizes of collar parts to be made with a single die for each style of collar.

The principal object of my invention is to provide a cutting die for accurately cutting collar parts having two symmetrical halves, which die may be used for different sizes of collars. Further objects are to provide such a die which is relatively inexpensive to make, and quick and easy to use.

Other objects and advantages of the invention will become apparent from the following description, taken in connection with the accompanying drawing, in which:

Figure 1 is a plan view of an under-collar that has been trimmed by the herein-described die;

Figure 2 is a side view of my cutting die positioned on a cutting block, the die being partly in section along the line 2—2 of Figure 4, and showing the cloth to be cut between the die and the block;

Figure 3 is an end elevation thereof; and

Figure 4 is a plan view of the cutting die.

Referring to Figure 1, the one-piece under-collar 10 is shown as it would appear after having been cut by my die and opened out. It will

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be observed that the under-collar 10 is completely symmetrical about its transverse midline 11. Figure 1 is a plan view looking at what will ultimately be the exposed surface of the under-collar, so that the collar-lining and the padding stitches are concealed from view. In Figures 2 and 3, the folded material from which the under-collar 10 is cut may be seen. The folded material seen in these figures consists of a layer of canvas 12, which forms the collar-lining, attached by padding stitches to the layer of Melton or like cloth 13 that forms the under-collar 10. The resultant composite fabric is doubled over to form the fold or crease 14, shown at the right of Figure 2, which coincides with the midline 11 of Figure 1. It is convenient in practice to chalk the outer surface of the folded edge 14, so that the midline 11 is visibly marked when the cut collar parts are opened. This chalk line may then be used as a guide in the further manufacture of the suit.

Referring to Figures 2, 3 and 4, the die 20 comprises a metal body 21, preferably made of aluminum, the periphery of which conforms to the outline of one-half of the finished under-collar 10 of Figure 1. The body 21 is apertured at one end as shown at 22 to secure lightness and improve visibility, and the other end is cut away as shown at 23, leaving a central bridge portion 24 and a pair of side arms 25. A knife blade 26 is secured by means of screws 27 to the body 21 around the edges of its sides and closed end. As will be understood, the knife blade 26 must project beneath the body 21 at a distance at least equal to the thickness of the cloth to be cut.

The bridge portion 24 is recessed to form a groove 28 in which slide 29 is snugly accommodated for smooth axial sliding movement. The slide 29 may be made of steel, and is provided with a slot 30 having a flange 31 cooperating with the head of a screw 32 threaded into the bridge portion 24 centrally of groove 28. The screw 32 thus serves to limit the movement of the slide 29, and by tightening the screw the slide may be locked in any desired position of adjustment. In order to determine the setting of the slide 29, the slide is provided with index marks 33 cooperating with scales 34 on the upper surface of the bridge portion 24. The scales 34 are shown in Figure 4 as marked in coat sizes ranging from size 30 to size 56.

The end of the slide 29 toward the open end of the die 20 is cut away as shown at 35, and has secured thereto a bifurcated leaf spring 36, by means of rivets 37. The stop 38, which is substantially L-shaped in cross-section, is secured to a down-turned flange at the free end of the leaf spring 36 by means of rivets 39. The proportions of the parts are such that the lower flange or foot 40 of the stop 38 is normally disposed in a plane beneath the edge of the knife blade 26, so that the leaf spring 36 is deflected upward as shown in Figure 2 when the die 20 rests on a flat surface. The foot 40 is chamfered as shown at 41 to permit it to slide more easily under the fold 14 of the composite material to be cut. The vertical portion of the stop 38 serves to position the composite material with respect to the die 20. It will be observed that the straight side arms 25 forming the open end of the die are long enough to project beyond the farthest possible position of the stop 38 away from the bridge 24, so that all sizes of under-collars for which the die may be set can be cleanly cut. While it is

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convenient thus to leave open the end of the die adjacent the stop 38, it will be understood that the body 21 could be provided with a cross-bar between the free ends of the side arms 25, similar to the bar at the opposite end of the body 21, as such a cross-bar would be beyond the range of movement of the stop 38 and hence would not interfere with it.

#### Operation

The composite material to be cut is prepared and folded as above described, and laid on the cutting block 45, which may be made of hardwood or other suitable material. The die 20 is prepared for cutting the desired size of under-collar by loosening the screw 32, adjusting the slide 29 until the index marks 33 are aligned with the desired size marks on the scales 34, and the screw tightened to lock the slide in that position. The die 20 is then placed on top of the folded material, and the foot 40 of the stop 38 slid under the fold 14, care being taken to see to it that the material is smoothly disposed beneath the die with the fold 14 snugly against the stop 38. The resilience of the leaf spring 36 insures that the foot 40 will be held snugly against the cutting block 45, so that the foot 40, which is quite thin, produces practically no distortion of the material. Next, the die is struck a heavy blow, for example by the head of a conventional die stamping machine, whereupon the knife blade 26 cuts entirely through the folded composite material. The die is then lifted, and the cut piece removed and unfolded. The result is an under-collar with collar-lining attached, that is perfectly symmetrical about its midline 11, as shown in Figure 1.

The advantages of cutting under-collars and collar-linings as described above, will be evident to those skilled in this art. The collar-lining material being attached to the under-collar material before these parts are trimmed to their final shape, and these two parts being die-cut simultaneously from the composite material, their edges are always in perfect alignment. The two halves of the under-collar, being cut simultaneously by the same knife blade 26, are necessarily perfectly symmetrical. The open construction of the die 20 permits maximum visibility, so that the operator may see that the material lies smooth and flat before the trimming operation. The simplicity of operation insures speed and accuracy without highly skilled operators.

Since the stop 38 is adjustable for different sizes, a single die 20 may be used for all sizes of the same collar style. Because the same collar style is often used on various styles of coats that differ only in other details, a few basic dies 20 will ordinarily suffice to cover a clothing manufacturer's entire line of men's suits.

While there is herein described and in the drawings shown an illustrative embodiment of the invention, it is to be understood that the invention is not limited thereto, but may comprehend other constructions, arrangement of parts, details and features, without departing from the spirit of the invention. I desire to be limited, therefore, only by the scope of the appended claim.

I claim:

A die for cutting coat collar parts, comprising a body, the periphery of which conforms to the outline of the collar part when folded double along a transverse midline at the back of the neck, said body comprising a central substantially rectangular portion with two parallel side arms extending from one end thereof defining an open-

ing at one end of the body, an angularly directed extension at the other end of the central portion of the body, a knife blade extending around the outer sides of the parallel arms, central portion of the body and the angularly directed extension 5 on the body and projecting below said body, said central portion of the body having a longitudinally recessed guideway in its upper face midway the side edges thereof, a slide mounted in said recessed guideway for movement longitudinally 10 of said body with its upper side substantially flush with the upper face of the body, collar size indicia and an index mark located one on said body and the other on said slide whereby said slide may be adjusted for cutting collar parts of 15 different sizes, means positioned below the upper surface of the slide for releasably locking said slide in adjusted position, a leaf spring secured to said slide and longitudinally extending into the opening between said side arms and a stop carried 20 by the free end of said leaf spring and adapted to be resiliently held thereby with the bottom of the stop contacting a flat surface on which said die may be placed, whereby a doubled piece of cloth may be placed under said die with its fold 25 abutting said stop and said cloth may be cut by said die to form a one-piece collar part exactly

symmetrical with respect to said fold and of a size corresponding to the setting of said slide and stop, and said stop being of angle formation to provide a horizontal foot portion extending toward said central rectangular body portion and adapted for placement under the adjacent folded end of the cloth to be cut.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
374,306	Keene	Dec. 6, 1887
426,685	Safford	Apr. 29, 1890
1,054,127	Lund	Feb. 25, 1913
1,320,602	Cisor	Nov. 4, 1919
1,402,540	Rybicki et al.	Jan. 3, 1922
1,541,188	Salt	June 9, 1925
1,553,378	Harper	Sept. 25, 1925
1,690,503	Rhodes	Nov. 6, 1928
1,870,055	Kline	Aug. 2, 1932
1,974,203	Collins	Sept. 18, 1934
2,028,848	Roscoe	Jan. 28, 1936
2,335,145	Diller et al.	Nov. 23, 1943
2,388,115	Brooks	Oct. 30, 1945