Nov. 5, 1935. H. C. UNDERWOOD 2,019,749

DIE FOR CUTTING COLLARS OR THE LIKE

Filed Nov. 9, 1934

Fig. 1

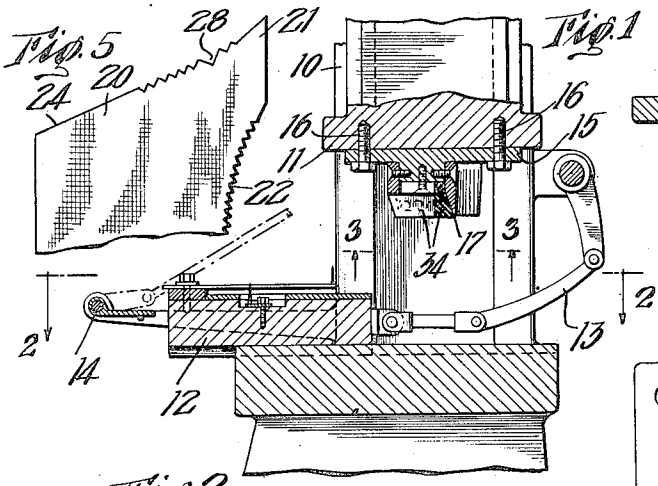


Fig. 4

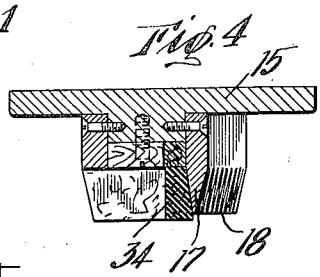


Fig. 5

Fig. 3

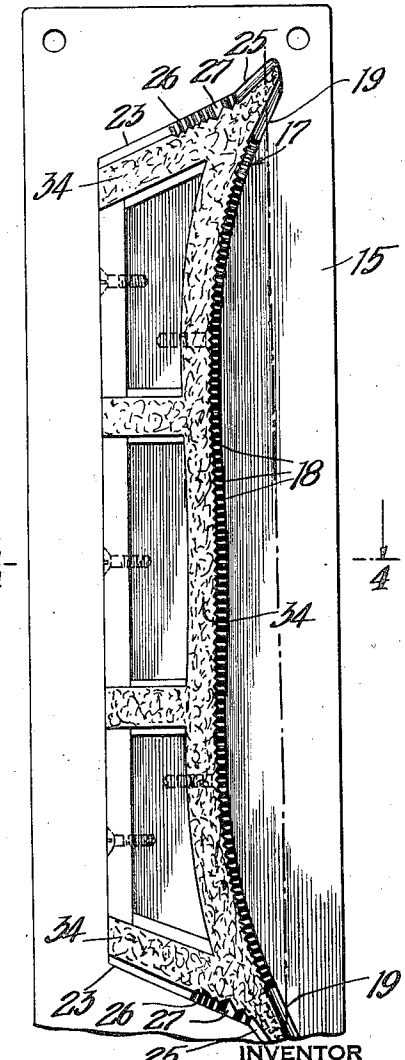
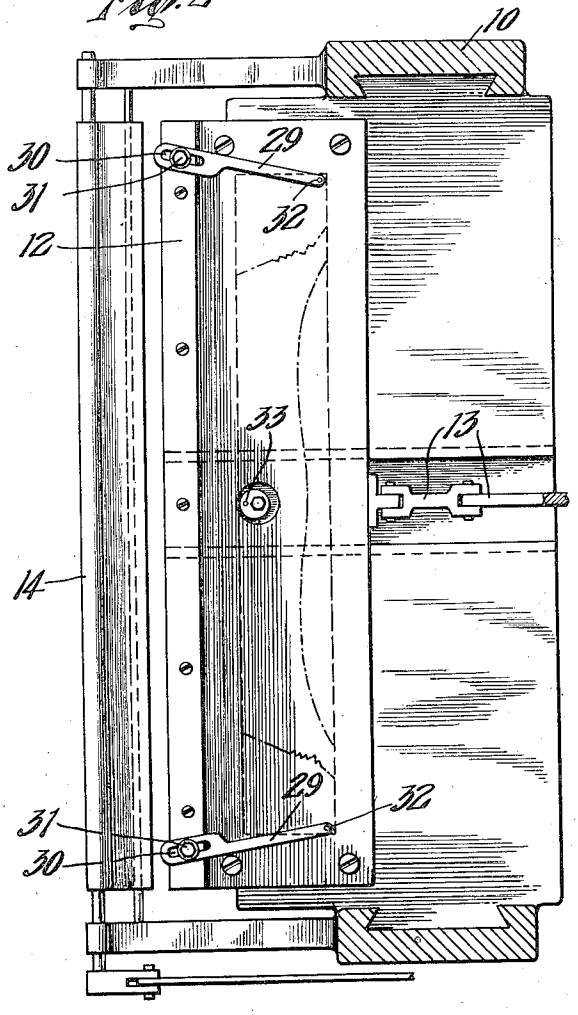


Fig. 2



INVENTOR
Howard C. Underwood
BY
E. E. Murdock
ATTORNEY

Patented Nov. 5, 1935 2,019,749

UNITED STATES PATENT OFFICE

2,019,749

DIE FOR CUTTING COLLARS OR THE LIKE

Howard C. Underwood, New York, N. Y.

Application November 9, 1934, Serial No. 752,192

3 Claims. (Cl. 164—29)

Among the principal objects which the present invention has in view are: To provide a pinked die for cutting collars or the like from blank strips of material; to provide the collar blanks with pinked or notched edges; to prevent the edges of the collars from unraveling after being cut from the strip of material; to provide means on the die whereby the collar blank after being cut will not adhere to the die; to provide means for operating the die; and to obtain other advantages and results as may be brought out in the following description.

Drawing

Figure 1 is a side elevation and partly in section of a press embodying my invention;

Figure 2 is a plan view of the bed with a strip of blank material attached thereto shown as taken on the line 2—2 of Figure 1;

Figure 3 is a bottom plan view of the die shown as taken on the line 3—3 of Figure 1;

Figure 4 is a transverse sectional view of the die shown as taken on the line 4—4 of Figure 3; and

Figure 5 is a face view of a portion of the collar blank after it has been cut by the die.

Description

As seen in the drawing, I have shown a press 10 having a lowering carriage 11, a slidable bed 12 and pivotal links 13 connecting said lowering carriage and the slidable bed. It is preferable that the lowering carriage and the slidable bed operate simultaneously, so that as the bed is moved forward, the carriage will lower at the same time, and having that operation in mind, I have provided a hand control means in the form of a handle 14 suitably connected in any manner to the front end of the slidable bed 12.

In carrying out the invention, I have provided a die 15 shown as suitably mounted to the underside of the lowering carriage 11 being mounted thereto by any suitable means, such as by bolts 16. Said die 15 may be suitably provided with downwardly directed cutting edges 17 so that when coming in contact with material from which a collar blank is to be cut, the cutting edges will sever the material instantaneously and thereby provide uniform edges thereto.

The die 15 along the longitudinal cutting edge is provided with a pinked edge or a plurality of V-shaped notches 18 and shown as preferably extending substantially on an arc from adjacent one end of the die to adjacent the other end, beyond which the die terminates at each end past the edge of the selvage as at 19. By virtue of the die extending beyond the selvage edge, it will be noted that the corners or tips of a collar blank 20 will have no ragged or rough edges. Due to the die cutting across the outer edge of the selvage 21 sharp corners are obtained and the material remains flat and may be readily folded producing the corner point of the collar whereby bulkiness will be eliminated and at the same time the corner point will be reinforced as shown and described in my co-pending application Serial No. 749,190 filed October 20th, 1934. It will further be understood that when cutting a collar blank from a strip of material, the cutting edge of the V-shaped notches 18 will cut the longitudinal arcuate edge of the collar from the one selvage corner portion to the other whereby said edge will have V-shaped notches 22, thereby preventing the threads from deleteriously unraveling.

Extending inwardly at an angle from the opposite corners of the die 15 is a transverse cutting edge 23, 23, which in practice may be utilized for cutting the throat portion 24 of the collar 20. It is to be noted that at the corner 25, said edge is at a more acute angle with the edge 21 than the angular cutting edge 23, the purpose of which is to permit cutting the selvages at a more acute angle. Said cutting edge 23 likewise may be provided with a plurality of V-shaped notches 26 preferably extending from the meeting point of the more acute and less acute angles of the end edge, said notches extending along the edge to approximately midway thereof. In this respect it will be further noted that one of said V-shaped notches preferably the one towards the corner 25, is materially larger, as at 27, than the others, so that when in practice the collar blank may be provided with an enlarged V-shaped notch 28 to be substantially the depth of the hem after the edges have been folded.

As seen in Figure 2, the bed 12 is substantially rectangular and provides means for securely holding thereto a strip of material from which the collar is to be cut. Such means may preferably be adjustable arms 29 detachably mounted to the outside corners of the bed next adjacent the blank position. Said arms where attached to the bed are provided with a slot 30 through which the shanks of large-head bolts 31 pass into the bed. These arms may conveniently be adjusted by loosening the bolts whenever desired depending on the positioning of the strip of material. On the extreme outer ends of the arms, pins 32 are provided in an upstanding position and it is to these pins that the outer ends of the strip of

material are held securely to the bed. A third upstanding pin 33 is attached to the bed itself and is positioned centrally from end to end of the strip and slightly inward of one longitudinal edge of said strip of material. However, when the bed with the material thereon is moved inwardly towards the lowering carriage 11 with the die 15, and as the material is being cut by the die, it is to be understood that the said pins will in no way interfere with the cutting operation, since it is preferable that the pins holding the material are clear of the die at all times.

In order that the collar blank may be held firmly while being cut, or otherwise should not adhere to the cutting edges 17 and 23 of the die 15 after having been cut, I have provided cushioning means in the form of a substantially soft rubber 34 fitted to the inside of the cutting edges of the die along the entire cutting edges thereof. As more clearly seen in Figures 1 and 4, the said rubber protrudes slightly below the cutting edges. In practice and owing to the resiliency of the rubber, as the die is lowered and the cutting edges sever the collar blank from the strip of material, the rubber will contract under pressure so as not to interfere with the cutting operation. However, as the lowering carriage starts to raise and the die becomes disengaged after cutting the material, obviously then the rubber cushioning means will expand to again protrude slightly below the cutting edges 17 and 23, thereby preventing any of the material from accidently adhering to the die 15.

I claim:

1. A die as characterized for cutting collar blanks and the like from a strip of material, said die at its longitudinal edge having a plurality of V-shaped cutting notches and terminating towards its outer ends thereby providing straight cutting edges, and transverse V-shaped cutting notches at its transverse ends and terminating towards its outer transverse ends at an acute angle and substantially meeting the outer ends of said longitudinal straight cutting edges adapted to cut the collar blanks from the strip of material thereby providing the cut collar blank with V-shaped cut-out notches and straight corner edges.

2. A die as characterized for cutting collar blanks and the like from a strip of material, said die at its longitudinal edge having a plurality of V-shaped cutting notches and terminating towards its outer ends thereby providing straight cutting edges, and transverse V-shaped cutting notches at its transverse ends and terminating towards its outer transverse ends at an acute angle and substantially meeting the outer ends of said longitudinal straight cutting edges adapted to cut the collar blanks from the strip of material thereby providing the cut collar blank with V-shaped cut-out notches and straight corner edges, one of said notches at the transverse ends being deeper than adjacent notches.

3. A die as characterized for cutting collar blanks and the like from a strip of woven material, said die providing longitudinal and transverse cutting edges with said longitudinal cutting edge having a plurality of arcuately disposed V-shaped notches extending adjacent one corner end to adjacent the other corner end, said longitudinal corner ends having a substantially straight cutting edge, said transverse cutting edges likewise providing a plurality of V-shaped notches with one notch substantially larger than the others and terminating adjacent the ends nearest the said longitudinal straight cutting edges thereby providing substantially acute angular transverse straight cutting edges whereby in cutting the collar blank the longitudinal and transverse edges are provided with a plurality of V-shaped cut-out notches and the corners with straight edges.

HOWARD C. UNDERWOOD.