The object of this invention is to provide a simple, durable and inexpensive means for removing burrs from sheet metal stampings wherein the stampings are retained in the form of a ribbon or strip, as the strip is advanced through suitable supporting guide.

More specifically it is the object of my invention to provide a series of steel brushes with means for mounting the same in operative relation with a moving strip of stampings whereby the brushes may be mounted in such a manner as to engage all four corners of the strip for removing burrs therefrom, and in connection therewith improved means for mounting the brushes whereby they may be adjusted both laterally and longitudinally of the strip.

A further object is to provide in connection with a device of the type above described improved means for rotating the brushes so that the particles of material loosened from the strip will be thrown in one general direction.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a side elevation of my improved device.

Figure 2 is an end elevation of same with one of the supporting posts broken away.

Figure 3 is a diagrammatical detail view showing the manner in which the brushes engage the corners of the strip of stampings.

Figure 4 is a top view of Figure 3.

Referring to the accompanying drawing, I have used the reference numeral 10 to indicate a base on which an upright 11 is mounted, said upright being designed to carry guides 12 and 13 for supporting a strip of stampings 14. The inner ends of the guides 12 and 13 are spaced apart a slight distance to permit the brushes, hereinafter described, to engage the corners of the strip 14.

A bracket 15 is provided to which a pivoted bar or tongue 16 is secured. Said bar is designed to rest on top of the strip 14 to support the same in a groove 17 in the guide 13, in which the strip 14 travels.

Secured to one end of the support 11 is a pair of horizontally extending shafts 18, one of which is designed to support uprights 19 and 20, and the other shaft 18 is designed to support upright members 21 and 22.

The lower end of each of the upright members is slotted and provided with a set screw 23 whereby the upright members may be adjusted longitudinally on the shafts 18, and also whereby the free ends of the said uprights may be rocked on said shafts. The members 19 and 21 are supported ahead of the members 20 and 22 in the manner clearly shown in Figure 1.

The upper ends of the upright members are provided with rotatively mounted shafts 24, 25, 26 and 27. The outer end of each of said shafts is provided with a pulley 28, while the inner end of each of said shafts is provided with a steel brush 29. Said brushes 29 are locked to their respective shafts by means of nuts 30. The brushes carried by the shafts 24 and 25 are mounted ahead of the brushes carried by the shafts 26 and 27 and in such a manner that their peripheries will engage the corners of the strip 14.

The support 21 is shorter than the support 19 to permit the brush carried by the shaft 26 to engage the lower corner of one edge of the strip 14, while the support 19 is longer than the support 21 to permit the brush carried by the shaft 24 to engage the upper corner of the opposite edge of said strip. The support 22 is longer than the support 20 to permit the brush carried by the shaft 27 to engage the upper corner of the first mentioned edge of said strip, while the brush carried by the shaft 26 engages the lower corner of the second mentioned edge of said strip in the manner clearly illustrated in Figure 3.

By providing one long support and one short support for the front and back set of brushes, means is provided whereby the front set of brushes will overlap the back set of brushes, as viewed from the front, without one brush interfering with the other.

For rotating the brushes, I have provided a stand 31 in which is carried a bracket 32 for supporting a shaft 33. The stand 31 is also provided with a motor 34 for driving said shaft. The shaft 33 has a double pulley 35 for receiving belts 36 and 37. The belt 36 is designed to drive the pulley 18 carried by the shaft 24, while the belt 37 is crossed and designed to operate the shaft 25, so that the respective brushes carried thereby will be rotated in opposite directions.

A double pulley 38 is also provided for the shaft 33, supporting belts 39 and 40 by means of which the shafts 26 and 27 are also driven in opposite directions. Thus means is provided whereby all of the brushes will be simultaneously driven and in such a manner that particles of material loosened from the strip of stampings will be delivered in one general direction away from the shield 41, which is provided to protect...
the operator against particles delivered to the front of the machine. The brushes 29 are designed to operate through the space between the adjacent ends of the guide members 12 and 13 as illustrated in Figure 4. Thus it will be seen that I have provided a very simple and rigid means whereby the burrs and foreign projections of the sheet metal strip caused by the stamping operation may be easily and quickly removed as the strip of stampings are passed through the guide members 12 and 13, and whereby the brushes may be mounted in a compact space and in such manner that they may be easily and quickly removed or replaced. Means is provided whereby the oppositely arranged brushes may be adjusted toward and from each other as required for the best working position, and also to overcome a decrease in the diameter of the brush, due to wearing away of the ends of the bristles.

I claim as my invention:

1. In a device for removing burrs from sheet metal strips, the combination of a guide for supporting a strip of sheared sheet metal to move longitudinally therethrough, a set of brushes above a strip of material being fed through said guide, a second set of brushes below said strip, all of said brushes being mounted on axes parallel to said strip, each of said brushes being adapted to engage a respective corner of said strip, means for rotating both brushes of one set of brushes in one direction and both brushes of the other set of brushes in the opposite direction, whereby particles of material removed by all of said brushes from said strip will be delivered in one general direction.

2. In a device for removing burrs from sheared sheet metal strips, the combination of a guide for supporting a strip of sheared sheet metal to move longitudinally therethrough, a set of brushes above a strip of material fed through said guide, a second set of brushes below said strip, all of said brushes being mounted on axes parallel to said strip, each of said brushes being adapted to engage a respective corner of said strip and to have its bristles move laterally and diagonally of said strip, and means for rotating both of the brushes of one set of brushes in one direction and both brushes of the other set of brushes in the opposite direction, whereby particles of material removed by all of said brushes from said strip will be delivered in one general direction.

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