

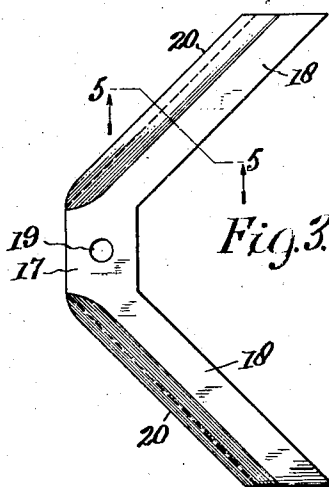
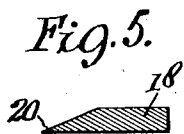
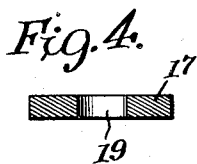
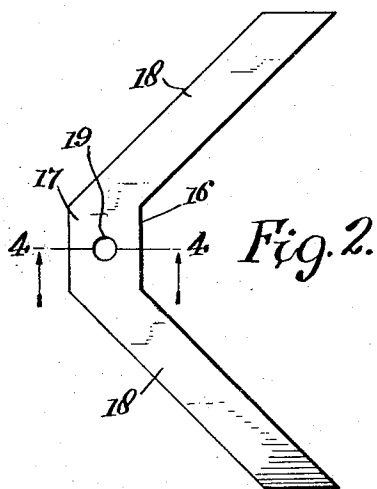
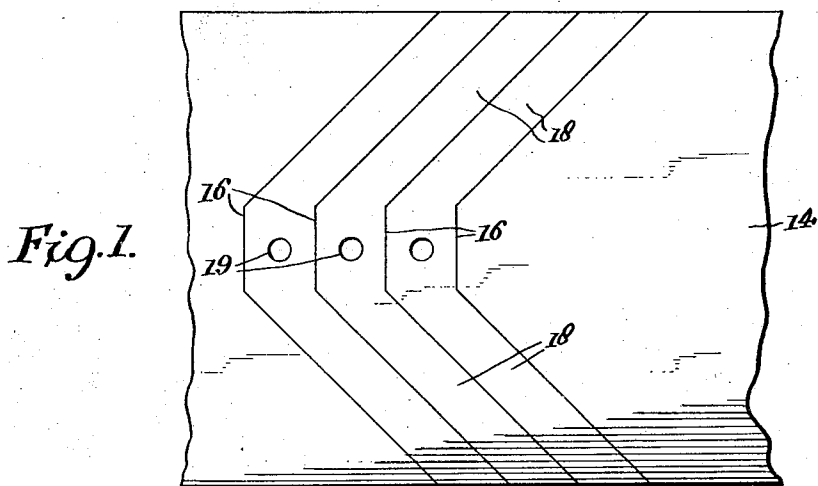
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HEEL SWEEP AND METHOD OF MAKING THE SAME

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HEEL SWEEP AND METHOD OF MAKING THE SAME.

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The present invention relates to agricultural implements, and more particularly to an improved heel sweep, and method of making the same, for use in conjunction with plows or the like.

An object of the present invention is to provide a heel sweep of such construction that it may be sheared from plate stock and in such form and manner as to obviate the necessity of subsequent edge bending of the stock to produce the final shape and construction required.

Another object of the invention is to provide a heel sweep with an intermediate attaching portion which is relatively strong and uniform in thickness throughout its width for reinforcing the heel sweep about the opening for the attaching bolt, and to provide backwardly flaring wing portions on the heel sweep which are of uniform width throughout and which are not drawn back into angular formation to weaken same at their points of mergence into the central attaching portion.

Other objects of the invention are to provide a heel sweep which may be sheared from plate stock in such manner as to make each portion of the shear lines at the front edge of the sweep identical with and parallel to the corresponding portions of the shear lines at the rear edge of the sweep; to provide the wings or rearwardly flaring portions of the sweep narrow in cross section while providing a relatively broad central attaching section for the sweep.

The invention still further aims to provide an improved construction and method for making heel sweeps wherein a heel sweep may be sheared from plate stock in such a way as to provide a series of shear cuts with one set of shear blades cutting out a complete blank at each cut, leaving the sweep broad in cross section at the central part and narrow at the wing ends without the necessity of making extra shear cuts or wasting material.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols

refer to like or corresponding parts throughout the several views.

Figure 1 is a plan view of a plate of stock material, showing a number of shear lines thereon for forming the heel sweeps of this invention.

Figure 2 is a plan view of one of the heel sweep blanks cut from the plate stock.

Figure 3 is a similar view showing the blank with the forward edge portions of the wings of the heel sweep drawn to a bevel and sharpened.

Figure 4 is a transverse section taken on the line 4—4 of Figure 2 through the broad intermediate portion of the sweep.

Figure 5 is a transverse section taken on the line 5—5 of Figure 3 through one of the wings of the sweep, showing the drawn and beveled edge and showing the narrow portion of the sweep.

Referring to the drawing, a plate of stock material 14 of the width of the sweep is sheared or cut on lines 15 to the exterior configuration of the heel sweep as shown in Figure 1. These lines 15 lie in parallel relation throughout the length of the blank and are so proportioned as to length that a continuous shearing action on these straight lines produces the rear edge of one heel sweep and the forward edge of the other heel sweep which adjoins the first heel sweep in the blank formation.

The shear lines 15 are relatively close together at the opposite sides of the plate of stock material 14, while at the central portion of the plate 14 the lines 15 merge into short transverse lines 16, which are spaced apart a distance greater than the distance between the lines 15 to form a relatively broad central section 17 to the heel sweep. A blank thus cut from the plate 14 is shown in Figure 2, wherein the wings 18 are relatively narrow and wherein the central portion 17 is relatively broad and provided with the opening 19 therethrough for attachment to a plow standard or the like in the usual manner.

It will be noted from Figure 4 that the transverse or cross sectional configuration of the central portion 17 is rectangular and of even thickness throughout its width, so that the central portion 17 is effectively braced

and reinforced about the attaching opening 19. Thus the wings 18 are firmly and solidly connected together by an intermediate portion which is not liable to breakage under ordinary uses of the implement.

Instead of drawing out and beveling the entire forward edge of the heel sweep, the cutting edges 20 of the wings 18, which comprise the forward edges of the wings, are drawn out and beveled as shown in Figure 5, but such drawing and beveling terminates at the inner ends of the wings 18 and does not extend through the central portion 17. The central portion is thus left intact and of full strength and the cutting edges 20 of the wings are merely drawn therefrom in the usual manner without weakening the structure of the heel sweep.

By this method of making the heel sweep, there is produced a structure which is sheared from plate stock in such a way as to make the wing ends 18 of the sweep on straight lines 15 and of a uniform width from the outer ends up to the points where the wings 18 join the central portion 17 of the sweep, and the central portion 17 of the sweep is also sheared on straight lines 16 and is of uniform width between the points where it merges or connects to the wings 18 of the sweep.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this inven-

tion without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:—

1. An improved heel sweep comprising an enlarged perforated intermediate portion and angularly extending wing portions stamped from the metal stock into angular relation with the wing portions narrower than the intermediate perforated portion, the forward longitudinal edges of said wing portions being drawn out and beveled to sharpened edges, the original stamped cross section of said intermediate portion being left untouched.

2. The hereindescribed method for the production of heel sweeps which consists in cutting from the metal stock the intermediate and wing portions forming each sweep with the wing portions originally cut at rearwardly extending angles to the intermediate portion and with the intermediate portion originally cut wider as compared with the wing portions, both said intermediate and wing portions being cut rectangular in cross section and with the intermediate portion perforated, and subsequently drawing out and beveling to sharpened edges the forward edges of the wing portions only, leaving the intermediate portion in its original rectangular cross section.

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