Jan. 30, 1940. C. S. PRICE 2,188,310

SHEET OF STARS AND METHOD OF MANUFACTURE

Filed Aug. 11, 1937

Fig. 1.

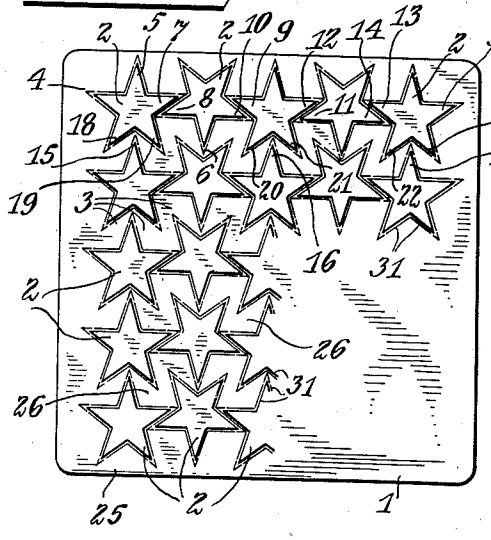


Fig. 2.

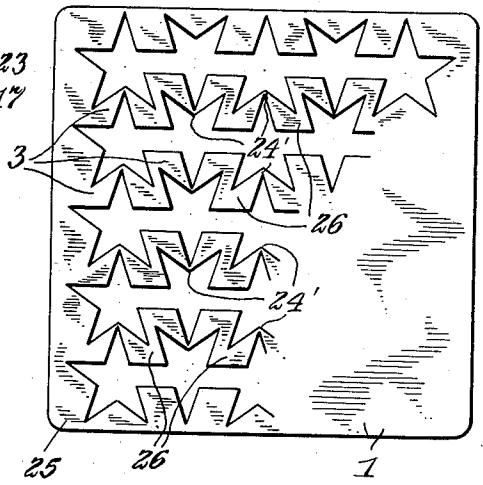


Fig. 5



Fig. 3.

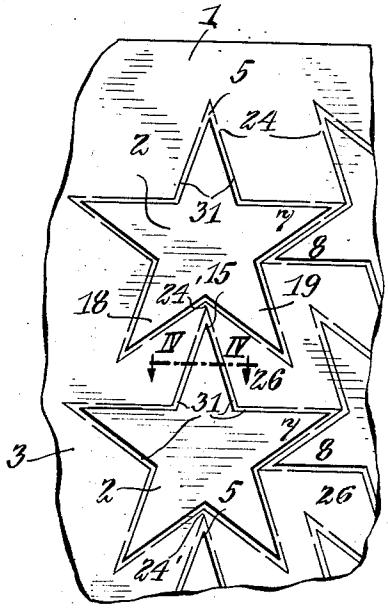
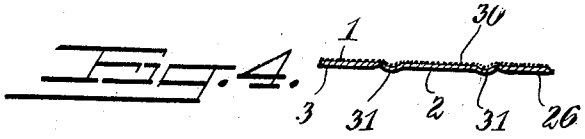


Fig. 4.



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SHEET OF STARS AND METHOD OF MANUFACTURE

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11 Claims. (Cl. 164—17)

This invention relates to stars in sheet and strip form and a method of manufacture and, more particularly, to such in which waste is avoided by a reduction in the amount of scrap.

Heretofore stars have been produced in sheet form, but due to the wasteful arrangement in each sheet, the amount of stock required in the production of such stars limited the scope of their sales.

It is therefore an object of my invention to produce stars in sheet and strip form, in which the amount of scrap or background between adjacent stars is reduced to a minimum or avoided.

Another object of my invention is the production of sheets or strips of partially severed stars positioned so that radiating points or arms of adjacent stars lies alongside one another, with no scrap therebetween.

A further object of my invention is the production of sheets of five pointed stars in which alternate stars, in rows or strips on said sheets, have upwardly and downwardly pointing arms, with the arms on either side engaging those of adjacent stars, so that the engaged sides of said arms lie in parallel lines across the sheet, with the rows so arranged that upwardly extending points of one row, fit between downwardly diverging arms of the adjacent row, and downwardly extending points on said adjacent row, fit between upwardly diverging arms of the first-referred-to row.

Other objects and advantages of the invention relating to the particular arrangement and construction of the various parts will become apparent as the description proceeds.

Referring to the drawing illustrating my invention,

Figure 1 is a partially uncompleted face view of a sheet of stars embodying my invention.

Fig. 2 is a similar view of the scrap remaining after the stars individually or in strips, have been removed from the sheet.

Fig. 3 is an enlarged detail view illustrating the precise construction of the stars, and showing how they are held to the background or scrap portion of the sheet.

Fig. 4 is a still further enlarged sectional view on the line IV—IV of Fig. 3, looking in the direction of the arrows.

Fig. 5 is a strip of stars taken from the sheet of Fig. 1, as one of the steps in separating said stars from the scrap shown in Fig. 2.

Referring to the drawing in detail, there is shown in Fig. 1 a sheet 1 of material of paper, foil, thin metal, or the like, the back or side, opposite to that shown, being desirably coated with remoistening adhesive. Partially severed from the sheet 1 are stars 2, desirably identical in size, embossed around the edges as indicated at 31, and so positioned with respect to one another that a minimum amount of scrap 3 remains therebetween.

A preferred method of manufacture consists in placing a roll of material cut to proper width on what is known in the art as a seal or embossing press, so that the stars in the sheet are automatically embossed and partially severed from the background. During this process the press imprints the color on the stars and background. The stars may be printed one color and the background another, or both may be printed the same color. If the latter, paper or other sheet material of a desired color may be fed to the press and the stars merely embossed and partially severed from the sheet.

It will also be understood that if sheet material of a particular color is fed to the press, the stars or background, as desired, may be imprinted with a different color, as the stars are being embossed and only partially severed from the sheet.

In order to conserve material the stars are desirably disposed on the sheet in rows or strips as follows. In the present embodiment I partially show five rows or strips 4, each consisting of five stars 2. Each row, starting from the left may begin with a star arranged in what might be termed upright position, having a point 5 extending vertically upward. The star next thereto has a point 6 extending vertically downward, and said star is positioned so close to the first star that the arm 7, of the first star, overlies and touches the arm 8 of the second star, with the point of the arm 7 extending, at least approximately, and preferably, to the vertex of the angle between the arm 8 and next arm extending diagonally upward and to the left, above it, with no scrap intervening therebetween, as shown.

The third star is desirably positioned like the first star, and has an arm 9 overlying the arm 10 of the second star and engaging the same in a similar manner, as shown, with no scrap intervening therebetween. Likewise the fourth star is arranged like the second star and has an arm 11 underlying the arm 12 of the third star, and engaging the same with no scrap intervening therebetween. The fifth or last star in the row is positioned like the first and third stars, and has an arm 13 overlying the arm 14 of the fourth star, and engaging the same with no scrap intervening therebetween.

The stars of the remaining rows are desirably arranged exactly like the stars in the first row with respect to one another, said remaining rows, however, being so closely disposed with respect to one another and the first row, that the upwardly extending points or arms 15, 16 and 17, of the first, third and fifth stars, thereof, extend, at least approximately, and preferably, as illustrated, to the notch or junction between the

downwardly flaring arms or points 18 and 19, 20 and 21, and 22 and 23.

In a similar manner the downwardly pointing arms of the second and fourth stars of the first, second, third and fourth rows fit between the upwardly flaring arms of the adjacent second and fourth stars of the second, third, fourth and fifth rows, extending, at least approximately, to the vertices of the angles or junctions therebetween. The stars are partially cut apart, so as to be weakly held together by shreds or strands 24. If the upwardly and/or downwardly extending points of some or all of the stars 2, do not quite meet the junctions between the adjacent flaring arms of the stars of the next row or rows, then the corresponding scrap portions 26 will be weakly held together by the shreds or strands 24'.

In view of the foregoing it will be seen that, with the exception of the border or margin 25, there is preferably no scrap between the adjacent stars except the small Z or S-shaped pieces 26, shown most clearly in Fig. 2. It will therefore be seen that it is very easy to separate the stars 2 from one another, and from the background or sheet 1 of material from which they are cut, by merely tearing the attaching strands 24, and removing the stars one by one or in rows or strips from the sheet.

As contra-distinguished from my invention above described, the old form of star sheet comprises stars, each entirely surrounded by portions of the background or scrap. In such a sheet, to cite a specific example, it required nine square inches to make twenty-five stars of a given size, while in accordance with my invention I make twenty-five stars of the same size from four square inches of material, resulting in a saving of over 55%, besides producing an arrangement in which the stars may be much more readily separated, either individually or in strips, from the sheet than heretofore, as it will be obvious that it is easier to sepaarte two stars when they are formed contiguous, than it is to separate both from a third piece of material, such as the scrap therebetween.

Fig. 5 shows a strip of stars detached from a sheet of stars as in Fig. 1, as would occur if all five stars in a row were detached from the sheet while still connected to each other. On account of being able to detach the stars in strips as well as individually, I am enabled to more conveniently use said stars in applying them to any desired background. For example, I may detach a strip of stars from the sheet and then apply said stars one at a time from said strip, like stamps are applied individually from a strip to letters, as by moistening one star at a time and pressing it on the desired background, and then withdrawing the rest of the strip therefrom.

Although a preferred embodiment of my invention has been disclosed, it will be understood that modifications may be made without departing from my invention as defined by the following claims.

I claim:

1. A sheet of partially severed stars, positioned so that radiating points or arms of adjacent stars lie alongside one another with no scrap therebetween.

2. A sheet of partially severed stars, said stars having arms overlapping with no scrap therebetween, closely spaced, and a background of a color different from that of the stars.

3. A sheet of partially severed five pointed stars, positioned so that radiating points or arms of adjacent stars lie alongside one another with no scrap therebetween, the stars in each row having arms alternately pointing upwardly and downwardly, with the arms on either side engaging those of adjacent stars, so that the opposite sides of the engaged arms lie in parallel lines across the sheet.

4. A sheet of partially severed five pointed stars, positioned so that radiating points or arms of adjacent stars in each row lie alongside one another with no scrap therebetween, adjacent rows being arranged so that each star is staggered with respect to the adjacent star in its row, with upwardly pointing arms of alternate stars of one row fitting between and extending approximately to the junction at the bases of the downwardly diverging arms of the adjacent stars of the next row.

5. A sheet of partially severed stars positioned so that each star inwardly of the series at the periphery of the sheet has two arms lying alongside arms of stars on either side thereof with no scrap therebetween, the arm between said arms extending approximately to the point of intersection between the sides of a pair of arms of another star, and the remaining two arms flaring, with sides at the bases thereof approximately meeting at the point of the arm of another star.

6. A sheet consisting of a background with stars partially severed therefrom, and so closely spaced that the only scrap inside of the border are generally Z or S-shaped pieces, each disposed between four stars, the points of which approximately touch one another.

7. The method of manufacturing stars in sheet form comprising partially severing stars from a sheet of material so that the lines of severance divide arms of adjacent stars without scrap intervening therebetween.

8. The method of manufacturing stars comprising partially severing said stars from a sheet of material in such a manner that three points of each star approximately engage adjacent stars without any scrap therebetween.

9. The method of manufacturing stars comprising partially severing the same from a sheet of material in such a manner that they lie in rows with alternate stars reversed in position, so that each star has a point fitting between and approximately engaging the junction between arms of a similarly arranged star in the next row.

10. The method of manufacturing stars comprising partially severing them from a sheet of material in rows in such manner that alternate stars in a given row are angularly disposed with respect to one another, so that points of adjacent stars lie alongside each other with no scrap intervening.

11. A strip comprising a series of five point stars with corresponding radiating points extending in the same direction, said stars being connected by a star between each of the series, reversed in position, so that corresponding arms or points overlap, and each star connected to the adjacent star by unsevered parts of the overlapping arms.

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