May 1, 1928. 1,668,462

R. W. OSWALD

DISK FAN WHEEL

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Fig. 1

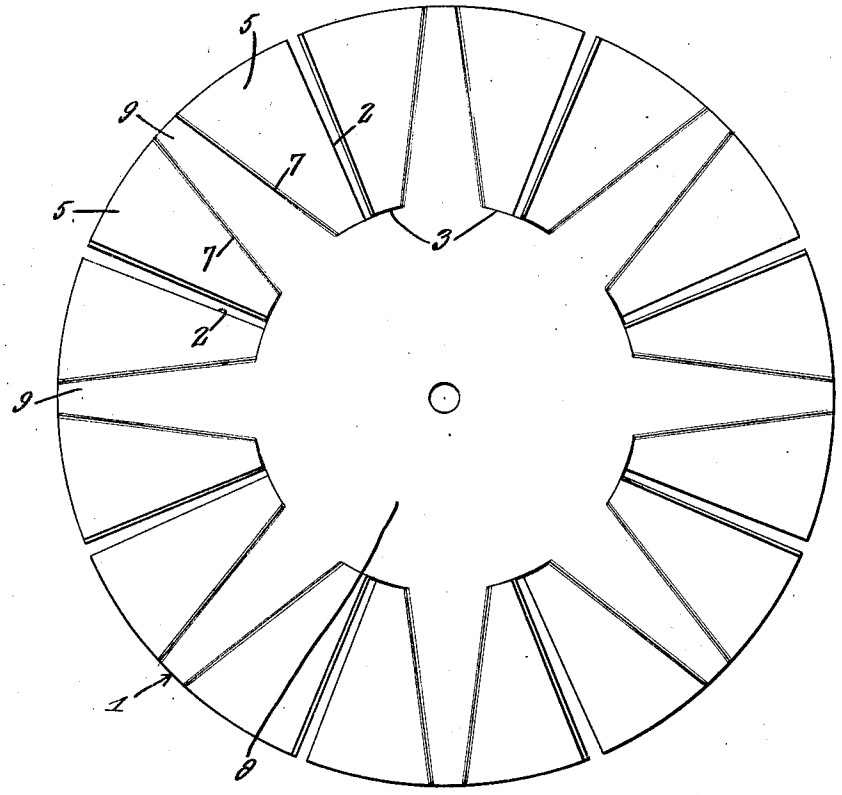

Fig. 2.

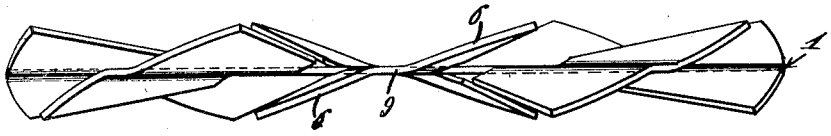

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Fig. 3.

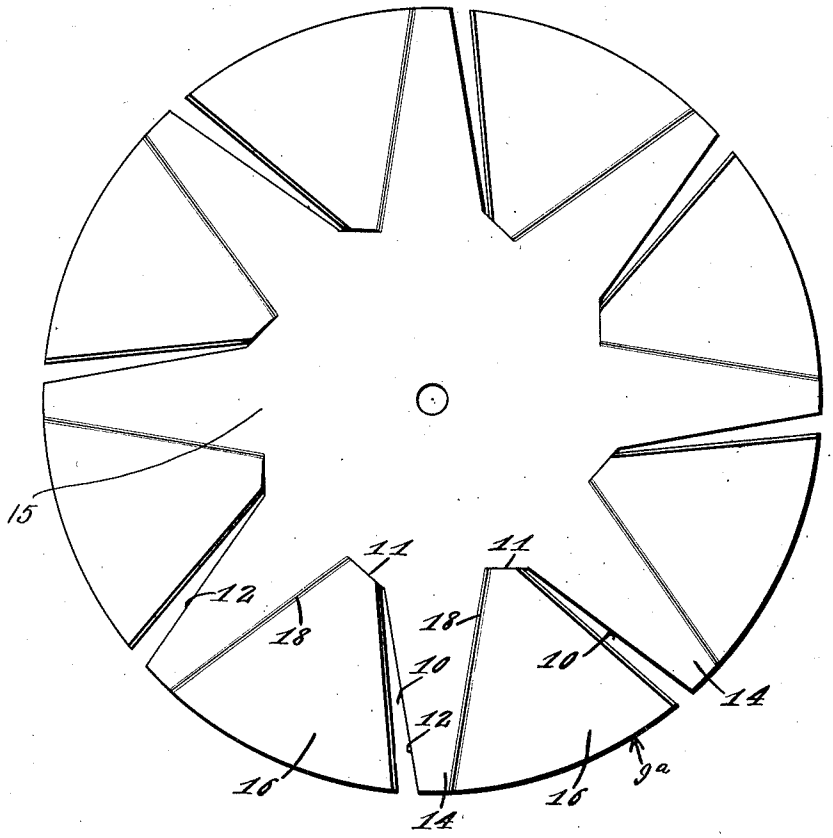
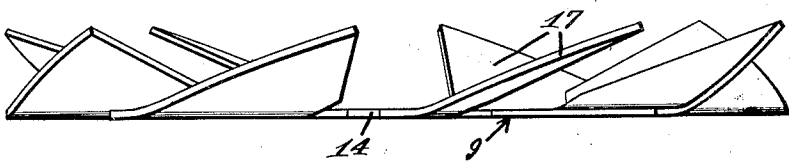


Fig. 4.



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DISK FAN WHEEL

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Fig. 5.

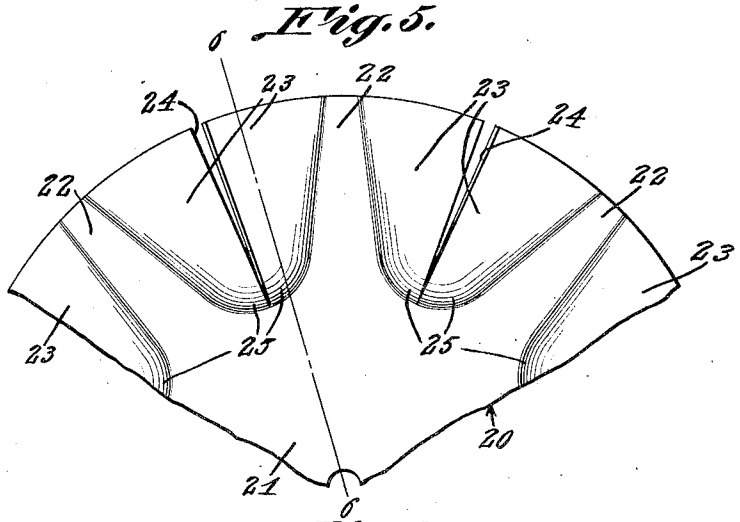


Fig. 6.

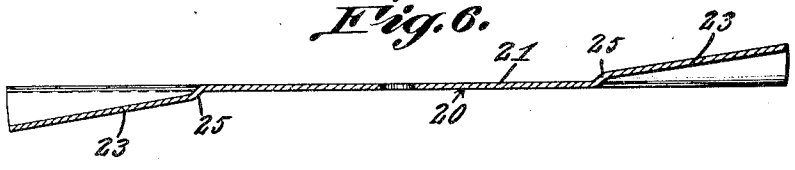
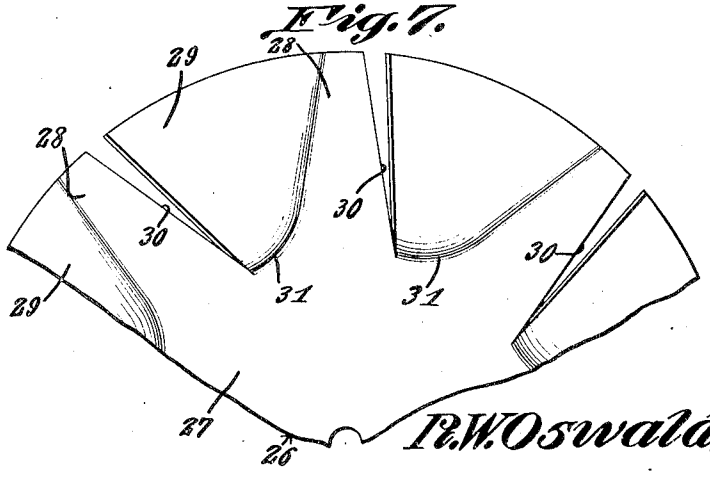


Fig. 7.



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Patented May 1, 1928. 1,668,462

UNITED STATES PATENT OFFICE.

RICHARD W. OSWALD, OF PITTSBURGH, PENNSYLVANIA.

DISK FAN WHEEL.

Application filed May 9, 1924. Serial No. 712,105.

This invention aims to provide a simple means whereby a fan wheel can be made cheaply out of a single disk of metal.

In the drawings:—Figure 1 is an elevation showing the fan wheel constructed in accordance with the invention; Figure 2 is a plan of the wheel; Figure 3 is an elevation showing a modification; Figure 4 is a plan of the structure shown in Figure 3. Figure 5 is a plan showing a modification, Figure 6 a section on the line 6—6 of Figure 5, and Figure 7 a plan showing another modification.

In the form shown in Figure 1, the wheel embodies a disk 1 of metal, having radial slits 2 and circumferential slits 3 extending toward each other from the inner ends of the radial slits 2, to form a central hub 8 and arms 9 in the same plane with the hub, the material 5 freed in the formation of the slits 2 and 3 being inclined laterally in opposite directions to form vanes 6 which are joined integrally to the opposite edges 7 of the arms 9.

In Figures 3 and 4, there appears a disk as 9^a having radial slits 10, and a single circumferential slit 11 communicating with the inner end of the radial slit 10, each slit end forming one edge 12 of an arm 14 which is located in the same plane with the hub 15 of the wheel, the material 16 freed in formation of the slits 10 and 11 being laterally inclined to form vanes 17 projecting in a common direction, laterally, with respect to the disk, the vanes 17 being joined integrally with those edges 18 of the arms 14 which are opposite to the edges 12 of the arms.

In Figures 5 and 6, the disk is designated by the numeral 20, the hub by the numeral 21, the arms by the numeral 22, and the oppositely inclined vanes by the numeral 23. The radial slits are shown at 24. This form is a modification of the form shown in Figure 1, and the modification consists in omitting the circumferential slits 3 of Figure 1, the material being bulged or distorted, as at 25, to replace the slits 3.

In Figure 7, the disk is marked by the numeral 26, the hub appears at 27, the arms at 28, and the vanes at 29, the radial slits being shown at 30. Figure 7 shows a modification of the form disclosed in Figure 3, and the modification consists in bending or distorting the constituent material of the disk, as at 31, in place of forming the circumferential slits 11 of Figure 3.

I claim:—

In a device of the class described, a disk having radial slits extended inwardly from its periphery, and circumferential slits extending away from the inner ends of the radial slits, to form a central hub and arms in the same plane with the hub, the material freed in the formation of the radial and circumferential slits being inclined laterally in opposite directions from said plane to form vanes which are joined integrally to the opposite edges of the arms.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

RICHARD W. OSWALD.