Jan. 14, 1936. F. E. HERRING 2,027,910

REVOLVING DISK PLOW

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Fig. 1

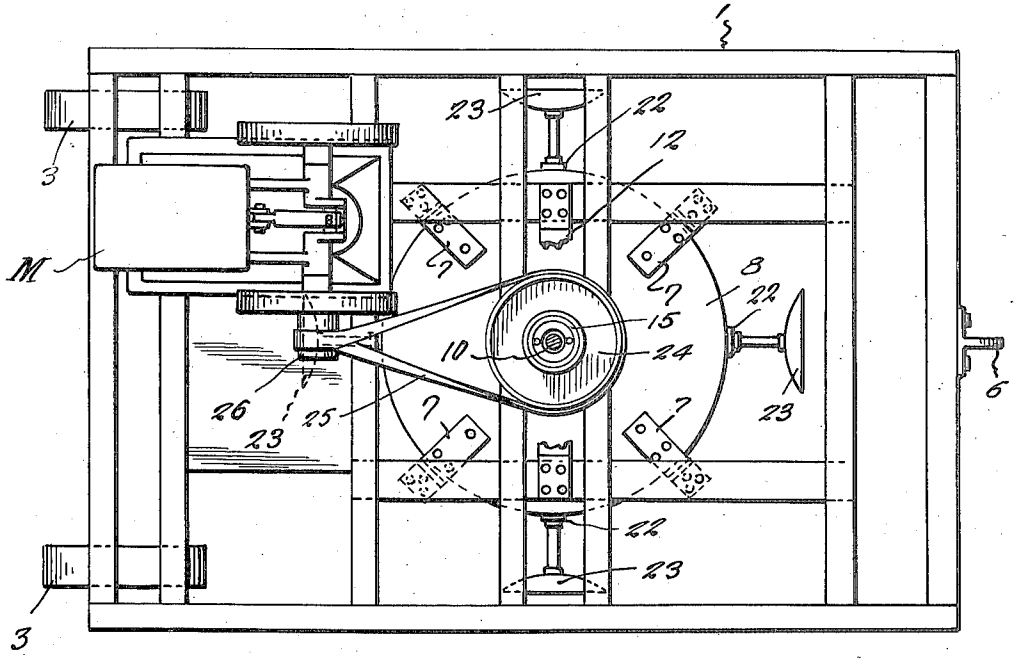


Fig. 9.

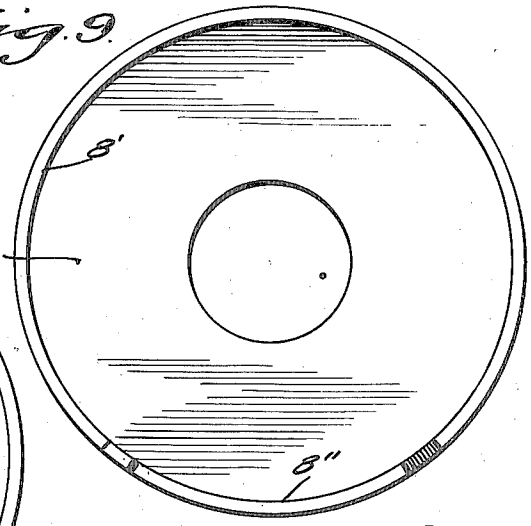
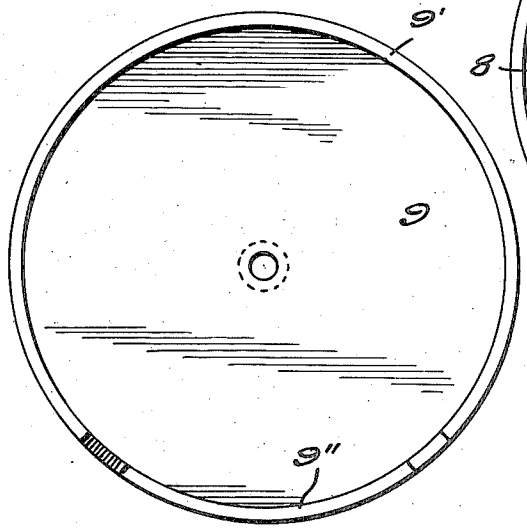


Fig. 8.



Inventor

Felix E. Herring

By Clarence A. O'Brien

Attorney

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Fig. 2.

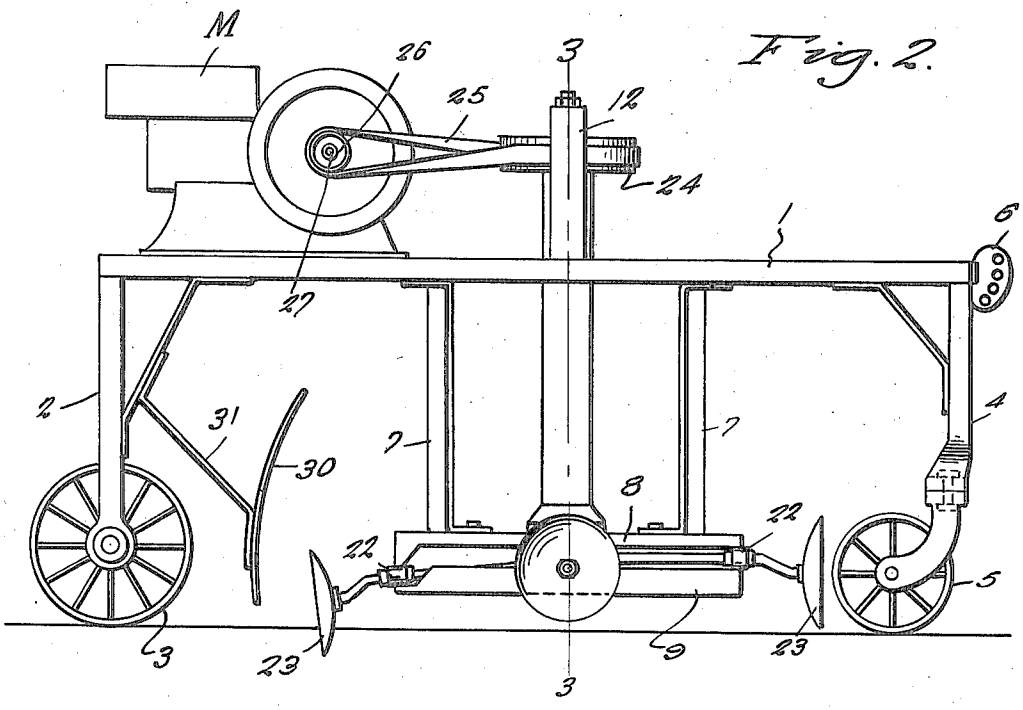


Fig. 5.

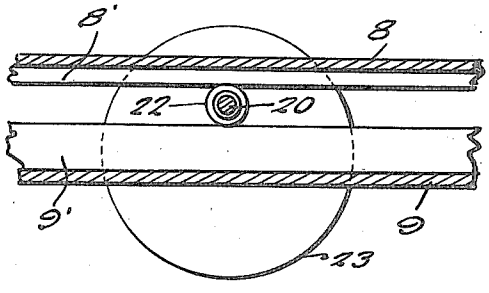


Fig. 6.

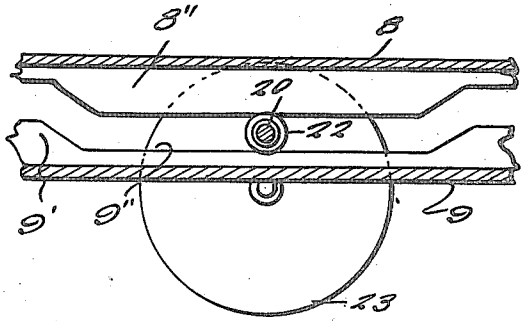
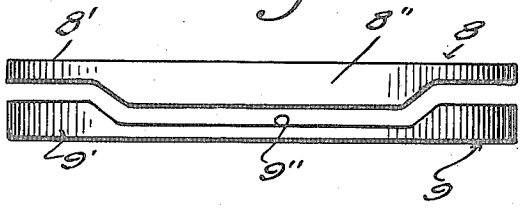


Fig. 7



Inventor

Félix E. Herring

By Clarence A. O'Brien

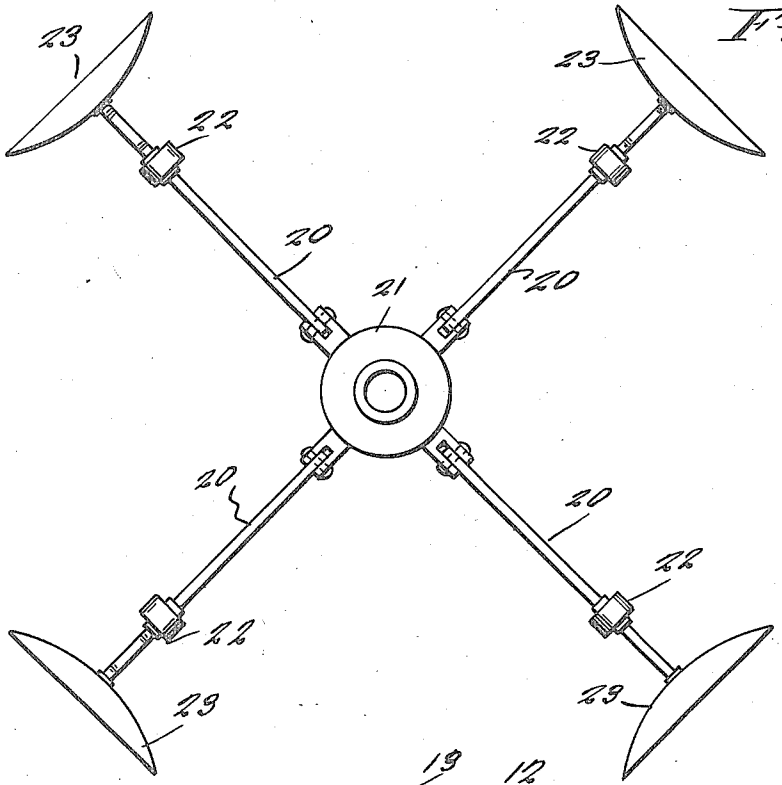
Attorney

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Fig. 4.



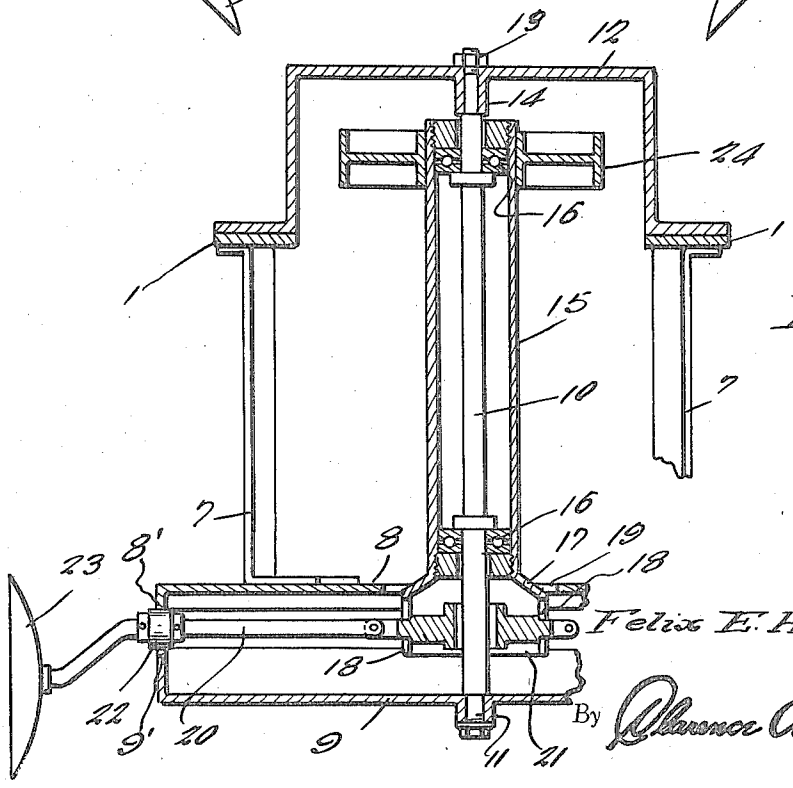


Fig. 3.

Inventor

Felix E. Herring

By Clarence O'Brien

Attorney

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UNITED STATES PATENT OFFICE

2,027,910

REVOLVING DISK PLOW

Felix Edgar Herring, Mount Airy, N. C.

Application March 7, 1935, Serial No. 9,849

2 Claims. (Cl. 97—43)

This invention relates to a revolving disk plow, the general object of the invention being to provide means whereby the plow will plow a wide swath of ground on each trip across a field, with the parts so arranged that the disks can be operated from a small motor.

This invention also consists in certain other features of construction and in the combination and arrangement of several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Fig. 1 is a top plan view of the invention with parts broken away.

Fig. 2 is an elevation of the apparatus.

Fig. 3 is a fragmentary section taken on the line 3—3 of Fig. 2.

Fig. 4 is a top plan view of the plow assembly.

Fig. 5 is a fragmentary vertical sectional view of the two track members with a roller of one plow beam engaging the high part of the track assembly.

Fig. 6 is a similar view showing the roller at the low part of the track.

Fig. 7 is a view of the two track members looking towards the rear part thereof.

Fig. 8 is a top plan view of the lower member.

Fig. 9 is a bottom plan view of the upper member.

In these drawings, the numeral 1 indicates a horizontal frame which has the depending parts 2 at its rear end which carry the ground wheels 3 and the centrally arranged depending part 4 at its front end which carries the caster wheel 5, said front end of the frame being provided with the usual clevis 6. Braces 7 extend from the frame intermediate the ends thereof and the upper track member 8 is supported by these braces, the braces holding the track member in a horizontal position. A lower track member 9 is spaced from but parallels the upper track member, both track members being of circular shape and a shaft 10 has its lower end connected to the tubular central portion 11 of the lower track member, the shaft passing upwardly through a yoke 12 carried by the frame with its upper end connected with the yoke by the nut 13 and a shoulder formed on the shaft engages the lower end of a bushing 14 depending from the yoke. As will be seen, this shaft 13 supports the lower track member 9. The upper member 8 is provided with a depending flange 8' and the lower member 9 is provided with an upstanding flange 9', these flanges being spaced apart and the flange 8' of the upper member 8 has a depending part 8'' at its rear formed with flaring ends while immediately under this depending part 8'', the flange 9' of the lower member 9 is formed with a recess 9'' provided with flaring ends. These flanges form cam tracks for a purpose to be hereinafter described. A hollow vertically arranged shaft 15 surrounds the major portion of the shaft 10 and is provided with the anti-friction bearings 16 between itself and the shaft 10 and the lower end of this shaft 15 is enlarged as at 17 with the enlargement being provided with the notches 18, the enlarged lower end of the shaft 15 extending through the centrally arranged opening 19 in the upper track member 8. A plurality of radiating beams or shafts 20 have their inner ends pivoted to the arms of a hub 21 which is located in the enlargement 17 of the shaft 15 and the arms pass through the notches 18 in the enlarged part of the shaft 15 so that when the shaft 15 is rotated, the shafts 20 with the hub 21 will be revolved. The shafts are arranged between the upper and lower track members and carry the rollers 22 adjacent their outer ends which engage the cam edges of the flanges of the two track members. The other ends of the beams or shafts 20 curve downwardly and have the disks 23 attached to their extremities.

A pulley 24 is attached to the upper end of the shaft 15 and a belt 25 engages the pulley and passes over a pulley 26 on the crank shaft 27 of a motor M. Thus the shaft 15 is driven from the motor. However, I wish it to be understood that any suitable means can be used for driving the shaft 15 from a motor.

Thus it will be seen that the beams or shaft 20 with the disks 23 are revolved when the shaft 15 is rotated and the cam edges of the track members will cause the disks to enter the ground as the disks pass around the rear portions of the track members and will pass from the ground and rise above the same as the disks pass around the side and front portions of the track members. Thus, the disks will plow a wide swath of ground as the apparatus moves over a field with the plows forming comparatively short arcuate-shaped furrows and as the disks only enter the ground as they travel over a small portion of the circumference of the track members, the device can be driven by a comparatively small motor as all the discs are not in the ground at the same time as in gang plows as now constructed.

A shield 30 is supported in rear of the path of the disks by a bracket 31 for preventing the dirt turned up by the plows from spreading out too far rearwardly.

With the parts arranged as shown in the drawings, the beam and disk assembly can be moved to a position where all the disks will be engaging the high parts of the track members so that none of the disks will be in the ground and thus the apparatus can be moved from one field to another though if desired suitable means can be provided for raising the entire assembly to position the plows well above the ground so that the device can be readily passed through a field and along roads.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

I claim:

1. A plow of the class described comprising a wheel-supported frame, an upper track member supported in horizontal position upon the frame, a lower track member supported from the frame and parallel with the first track member, said members forming a cam slot between them, the rear portion of which is lower than the rest of the slot with the ends of the lower portion sloping upwardly and outwardly to the rest of the slot, radiating plow beams passing through the slot and having their outer ends curving downwardly, plows connected to said outer ends, a roller on each beam engaging the walls of the cam slot, a hub member to which the inner ends of the beams are pivoted for movement about horizontal axes, and means for rotating the hub member.

2. A plow of the class described comprising a wheel-supported frame, braces depending therefrom, an upper track member held in horizontal position by the lower ends of the brace members and having a depending flange having a depending part at its rear, said track member being of circular shape, a lower track member of circular shape parallel to the frame and having an upstanding flange spaced from the flange of the first member, the flange of the second member having a recess in its rear part, the two flanges forming a cam slot, radiating shafts or beams located between the two track members and passing through the slot, rollers on the shafts or beams engaging the walls of the slot, the outer ends of the beams being curved downwardly, disks connected to said ends, a hub to which the inner ends of the beams are connected for pivotal movement about horizontal axes, means for rotating the hub member and a shield supported from the frame in rear of the path of the disk plows.

FELIX EDGAR HERRING.