Sept. 28, 1943. J. W. ORENDORFF 2,330,308

COVERING WHEEL FOR PLANTING EQUIPMENT

Filed Feb. 13, 1942

Fig. 1.

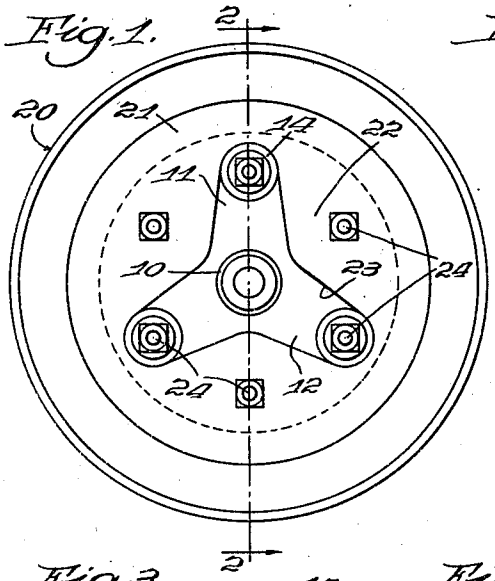


Fig. 2.

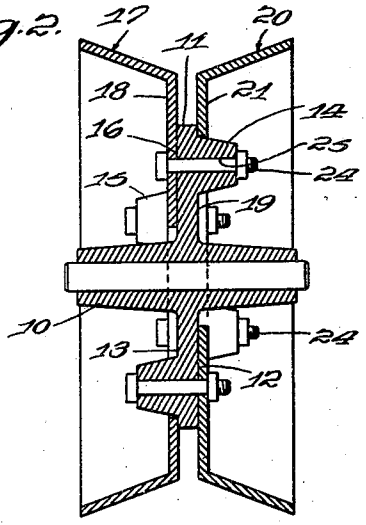


Fig. 3.

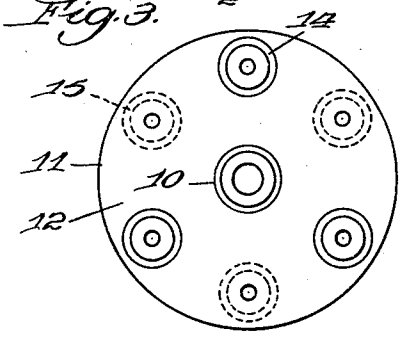
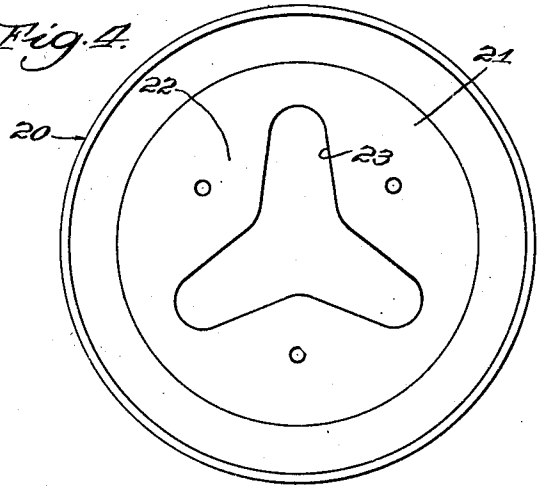


Fig. 4.



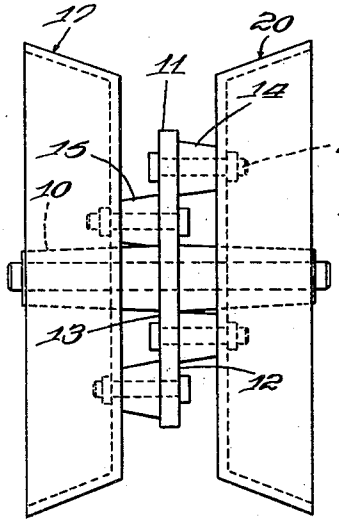


Fig. 5.

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Patented Sept. 28, 1943 2,330,308

UNITED STATES PATENT OFFICE

2,330,308

COVERING WHEEL FOR PLANTING EQUIPMENT

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Application February 13, 1942, Serial No. 430,797

3 Claims. (Cl. 97—56)

This invention relates to covering and press wheels for planting equipment.

It is an object of the present invention to provide in a covering and press wheel for planting equipment, of a type adapted to be adjusted laterally to open or closed position, parts so fashioned and constructed that the covering wheel can be readily adjusted without necessity of additional parts.

It is another object of the invention to provide in an adjustable covering wheel, of a type wherein covering wheel elements can be arranged in closed or open relationship on a central hub element, a construction wherein the adjustment is effected by means of axially spaced attaching portions located on the hub element.

According to the present invention, there are provided on a hub element, axially extending projections radially removed from the center of the hub. These projections are formed on a radially extending web portion of the hub and are circumferentially spaced on the both faces of the same. The respective projections on one face of the web portion alternate with the projections on the opposite face. Each covering wheel element can be connected directly to the attaching portions flush with the face of the web portion, or it can be adjusted for attachment to the axially extending projections.

If both covering wheel elements are set so that their attaching portions are upon the attaching portions on the web portion face, the covering wheel will have its elements adjusted in the closed position, whereas when the covering wheel elements are fastened to the outer ends of the axially extending projections, the covering wheel will be arranged with the covering wheel elements in their open positions.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a plan view of the covering wheel assembly;

Figure 2 is a sectional view of Figure 1 taken along the lines 2—2 thereof;

Figure 3 is an end view of the hub element;

Figure 4 is a plan view of a single covering wheel; and

Figure 5 is a view in elevation of the covering wheel elements connected to the axially extending projections and thus with the same being in open relationship on the hub element.

Referring now to the figures, there is shown a hub element 10 having a web portion 11 centrally located with respect to the ends of the hub elements. On the web portion 11 there is provided on each of its faces 12 and 13 sets of axially extending projections 14 and 15. As viewed particularly in Figure 3, it will be noted that there are provided three projections to each set. The projections of the one set alternate with the projections of the other set on the opposite face of the web portion.

On the opposite face of the web portion 11 and in alinement with the projections 14 on the face 12 of the web portion are provided attaching portions 16. These attaching portions 16 serve for attachment of a covering wheel element 17 when its radially extending web portion 18 is fastened directly upon the face 13 of the web portion as when the covering wheel elements are to be arranged in closed relationship on the hub element 10. Likewise, there are provided on the face 12 of the web portion 11, attaching portions 19 to permit the attachment of a second and opposing covering wheel element 20 by means of its radially extending web portion 21. Both of the radially extending web portions 18 and 21 of the covering elements have thereon attaching portions 22 and further is provided therein centrally of the same, a three sided slot 23 adapted to fit over the sets of axially extending projections when the covering wheel elements are arranged on the hub element in the closed position, as viewed in Figure 1. As viewed in Figure 2, the covering wheel elements are arranged in this closed relationship on the hub element 10, and the attaching elements 22 of the respective covering elements 17 and 20 are directly connected with the attaching portions 16 and 19, respectively, of the web portion.

When it is desired to arrange the covering elements 17 and 20 in their open relationship on the hub, such as when the covering wheel element is to be used for the covering of seed planted in clayey soil, and at such time that it is not desired to press such soil over the seed so as to cause caking of the same as it is dried out, the elements are removed from their present location, as viewed in Figure 2, and are arranged so that their attaching portions 22 are respectively connected to the outer ends of the axially extending projections 14 and 15, these projections thereby serving as attaching portions for the attachment of the wheel elements to the hub element when this open relationship of the wheel elements is desired. The covering wheel elements are merely removed by unfastening bolts 24 used for securing the covering elements to the web portion 11. It will be noted that there extends through the

axially extending projections an opening **25** which extends through to the attaching portion on the opposite face of the web portion. These bolts are of the same length and always used regardless of whether the covering elements are connected in closed or open relationship.

To effect this arrangement of the covering wheel elements **17** and **20** in their open relationship, the same are connected to the outer ends of the axially extending projections on the respective faces of the web portion **11**, as viewed in Figure 5. The same fastening bolts **24** are reinserted through the openings **25**, and the wheel elements are there retained in open relationship. The attaching portions **22** of the respective covering wheel elements **17** and **20** have bolt openings **26** therein which are merely alined with the openings **25** on the attaching portions of the web portion.

It should now be apparent that there has been provided a construction which is simple and wherein the elements serving to make up the entire covering wheel assembly can be formed with the least effort. The hub element **10** is of such shape that it can be readily and easily cast and the covering wheel elements **17** and **20** can be readily shaped by a pressing and stamping operation. The fastening bolts are of standard design and only one set is needed.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

What is claimed is:

1. In a covering and press wheel for planting equipment, a hub element having a radially extending web portion, circumferentially spaced attaching portions on opposite sides of the web portion, axially extending projections provided at each side of the web portion to serve as other attaching portions and alternately disposed with respect to the circumferentially spaced attaching portions, the said projections on one side being also alternately disposed with respect to the projections on the other side of the web portion, the said projections and their alined attaching portions having an opening therethrough, a pair of wheel elements respectively having openings adapted to register with either the openings in the attaching portions or the openings in the projections, and fastening bolts for securing the wheel elements to either the attaching portions or to the projections by passage through alined openings of the hub and wheel elements, whereby the same fastening bolts may be used in either setting of the wheel elements.

2. In a covering and press wheel for planting equipment, a hub element having an annular radially outwardly extending web portion, circumferentially spaced openings on opposite sides of the web portion, the openings on each side being alternately disposed with respect to the openings on the other side, alternately disposed circumferentially spaced axially extended projections affixed to opposite sides of said web portion and having bolt-receiving axial bores in registry with said openings, a pair of wheel elements adjustable axially on said hub element to vary the width of said wheel, each said wheel element having circumferentially spaced sets of openings, one set of said openings being adapted to fit over the projections on one side of said web portion, and the other set being adapted to register with the openings in said web portion when one width of wheel is desired, and the last mentioned set of openings in said wheel elements being adapted to register with the ends of said projections when another width of wheel is desired, and fastening bolts extending through the projections and the openings for securing the wheel elements to the hub element.

3. In a covering and press wheel for planting equipment wherein wheel elements are attachable to a hub in different positions axially thereof to vary the width of the wheel, a hub element having an annular radially outwardly extending web portion, circumferentially spaced opening on opposite sides of the web portion, the openings on each side being alternately disposed with respect to the opening on the other side, alternately disposed circumferentially spaced axially extending projections affixed to opposite sides of said web portion and having bolt-receiving axial bores in registry with said openings, means for affixing said wheel elements in juxtaposition with opposite sides of said web portion, and means for affixing each said wheel element to the ends of the projections on opposite sides of said web portion.

JOHN W. ORENDORFF.