No. 754,449. PATENTED MAR. 15, 1904.

J. A. HERRON.

LISTER ATTACHMENT.

APPLICATION FILED JULY 17, 1903.

NO MODEL.

Fig. 1.

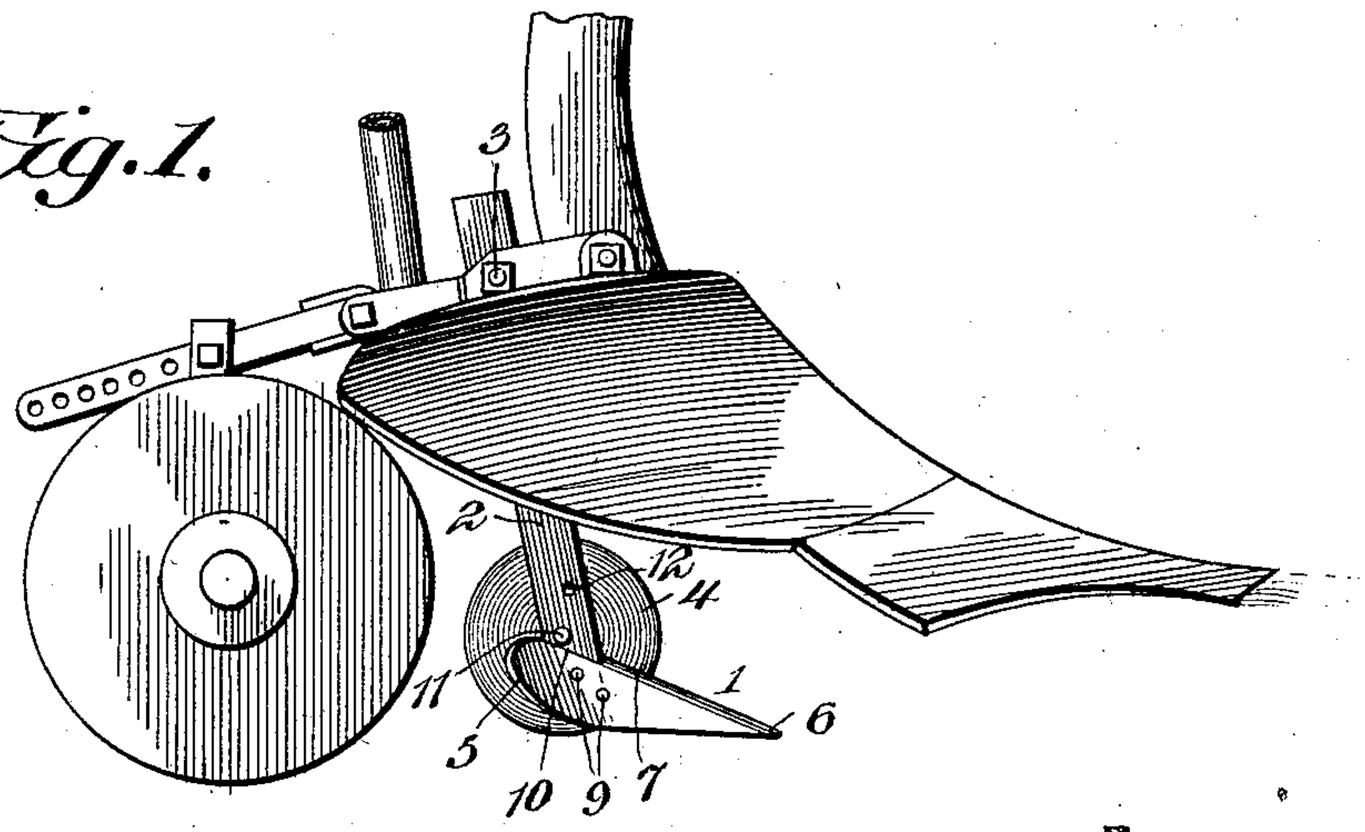


Fig. 2.

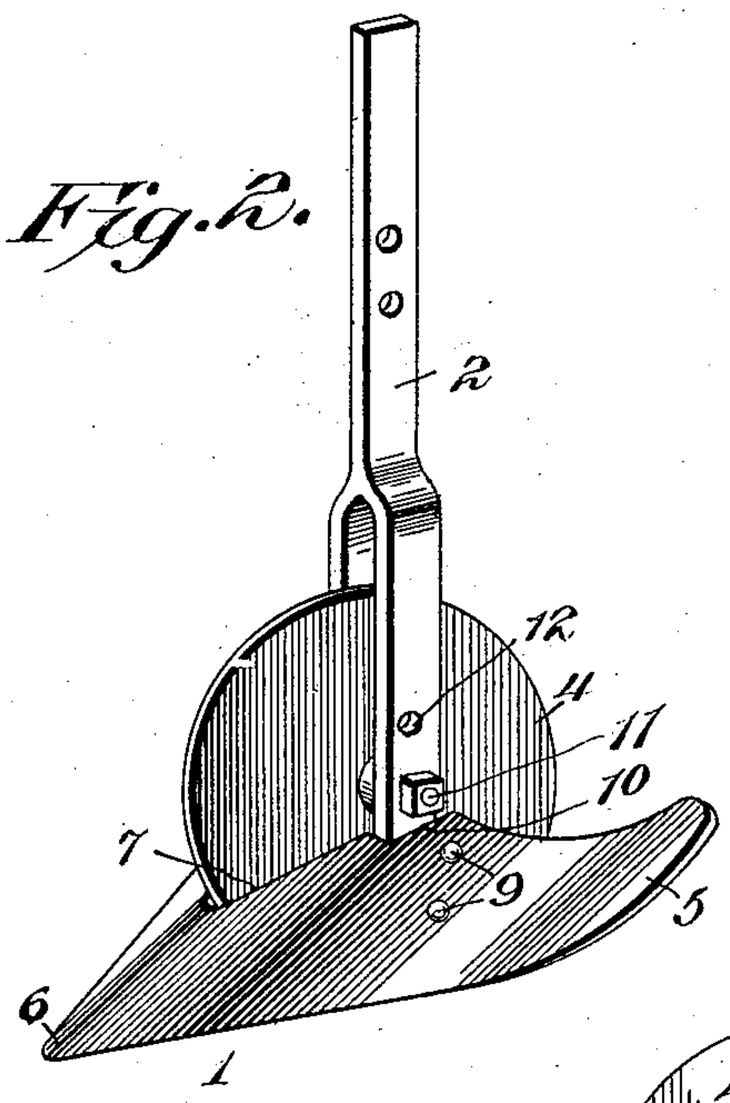


Fig. 3.

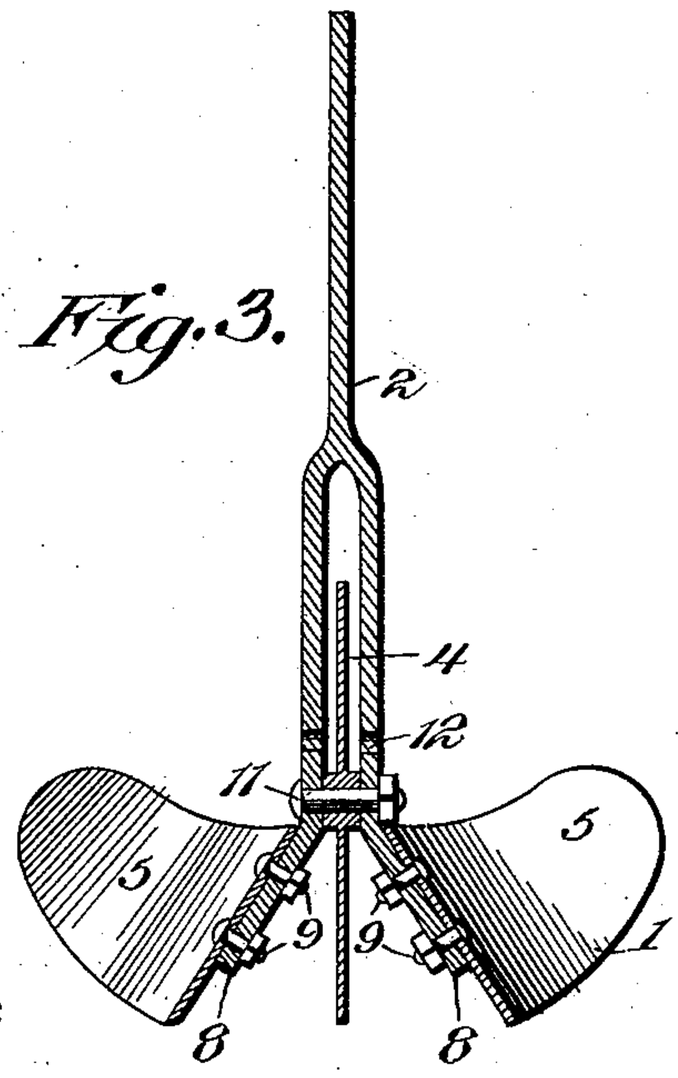
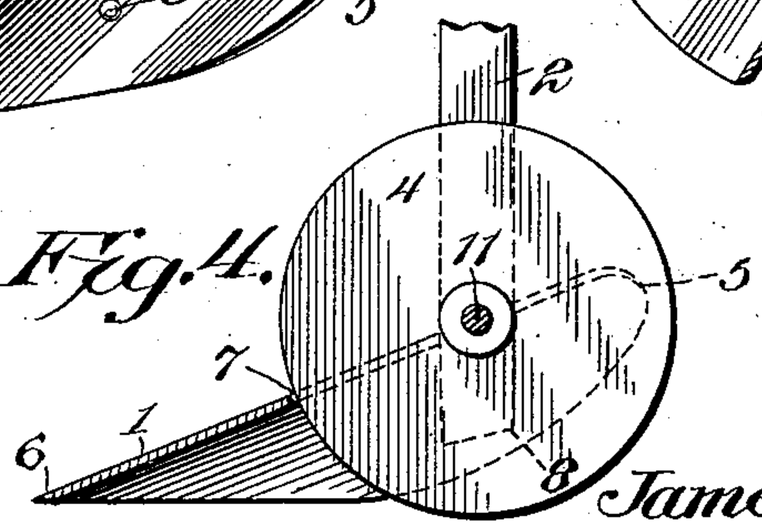


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LISTER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 754,449, dated March 15, 1904.

Application filed July 17, 1903. Serial No. 166,001. (No model.)

To all whom it may concern:

Be it known that I, JAMES ADDISON HERRON, a citizen of the United States, residing at Eskridge, in the county of Wabaunsee and State of Kansas, have invented a new and useful Lister Attachment, of which the following is a specification.

The invention relates to an attachment for lister-plows.

The object of the present invention is to provide for lister-plows an attachment of simple and comparatively inexpensive construction adapted to be readily applied to lister-plows of the ordinary construction and provided with a subsoiler and cutter, the latter being capable of readily cutting through the roots, and thereby preventing the subsoiler from becoming clogged and avoiding the necessity of cleaning the same by hand.

A further object of the invention is to provide an attachment of this character capable of reducing the draft of a lister-plow and adapted to be adjusted vertically to regulate the depth of the subsoiler and cutter in the ground.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of a portion of a lister-plow provided with an attachment constructed in accordance with this invention. Fig. 2 is a perspective view of the attachment. Fig. 3 is a transverse sectional view of the same. Fig. 4 is a longitudinal sectional view.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a subsoiler arranged at the lower end of a bifurcated standard 2, which is secured by a bolt 3 or other suitable fastening device to a lister-plow, as illustrated in Fig. 1 of the accompanying drawings, and which is provided with a plurality of perforations to permit the attachment to be adjusted vertically to raise and lower the subsoiler 1 and a rotary cutter 4 to adjust the same to the desired depth. The subsoiler and the cutter are designed to run in rear of the plow of the lister and to operate in the ordinary manner, and the upper portion of the standard is adapted to be arranged in the recess or opening usually provided in listers for the reception of the standard of the subsoiler. The bifurcated standard, which forms an opening for the reception of the cutter 4, may be constructed of any suitable material. The subsoiler, which is preferably constructed of steel, has an inclined arched front portion and laterally-extending sides or wings 5, and it is provided in rear of the point 6 with a central longitudinal slot 7 for the reception of the cutter 4. The sides or wings 5, which are curved outward, as shown, present inner inclined faces, which are fitted against lower downwardly-diverging portions 8 of the sides of the bifurcation of the standard 2. The sides of the subsoiler are perforated for the reception of bolts 9 or other suitable fastening devices, preferably arranged in pairs, as clearly shown in Fig. 3, and piercing the said downwardly-diverging portions 8. The sides of the subsoiler are provided at their upper edges at the rear end of the longitudinal slot 7 with suitable recesses 10 for the reception of the sides of the lower portion of the standard 2.

The cutter 4, which is arranged in the slot 7 and in the bifurcation of the standard 2, consists of a disk, of steel or other suitable material, provided with a suitable cutting edge and mounted on a bolt 11, which forms a shaft or spindle on which the cutter 4 rotates; but any other suitable means may be employed for mounting the cutter, and the sides of the lower portion of the standard are provided with a plurality of perforations 12 for the reception of the bolt 11 to permit the cutter to be adjusted. The cutter, which is pivoted above the subsoiler, is adapted to rotate on its axis, and it is thereby capable of cutting through the roots and of preventing the same

from collecting on the subsoiler, and it thereby enables the same to run much easier and obviates the necessity of cleaning the subsoiler by hand. The rotary cutter also greatly reduces the draft of the lister-plow and lessens the labor incident to the operation of the same.

It will be seen that the attachment, which is exceedingly simple and inexpensive in its construction, possesses great strength and durability and that it is adapted to be readily applied to the ordinary lister-plow. Furthermore, it will be clear that it is adapted to reduce the draft of the same and that it obviates the necessity of cleaning the subsoiler by hand.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a turning-plow, and a roller, of a lister attachment located between the plow and the roller and comprising a subsoiler having an opening, and a rotary cutter operating in the opening, substantially as described.

2. A lister attachment comprising a subsoiler having a central longitudinal slot or opening and a rotary cutter operating in the slot or opening, and located in rear of the point of the subsoiler, substantially as described.

3. A lister attachment comprising a subsoiler having a slot or opening, a standard having sides connected with the subsoiler at opposite sides of the slot or opening thereof, and a rotary cutter mounted between the sides of the standard and operating in the slot or opening of the subsoiler, substantially as described.

4. A lister attachment comprising a subsoiler having a longitudinal slot or opening and provided at opposite sides thereof with inclined portions, a standard provided at its lower portion with sides having diverging terminals connected with the inclined sides of the subsoiler, and a rotary cutter operating between the sides of the standard and in the slot or opening of the subsoiler, substantially as described.

5. A lister attachment comprising a subsoiler having an arched front portion and provided with inclined sides or wings, and a rotary cutter operating between the sides or wings of the subsoiler in rear of the point thereof, substantially as described.

6. A lister attachment comprising a subsoiler having an arched front portion or point and provided with laterally-extending sides or wings, said subsoiler being provided between the sides or wings with a slot or opening, and a rotary cutter operating in the slot or opening, substantially as described.

7. A lister attachment comprising a subsoiler having an arched inclined front portion and provided with laterally-extending curved sides or wings, said subsoiler being also provided with a central longitudinal slot or opening, and a rotary cutter operating therein, substantially as described.

8. A device of the class described comprising a subsoiler consisting of an arched front portion arranged at an inclination, and outwardly-extending curved side portions or wings, said subsoiler being provided with a central longitudinal slot or opening, a standard having an opening at its lower portion, the sides of the latter being diverged and connected with the sides of the subsoiler at the inner faces thereof, and a rotary cutter mounted on the standard between the sides thereof and operating in the longitudinal slot or opening, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES ADDISON HERRON.

Witnesses:
MOSES HAY,
W. TRUSLER.