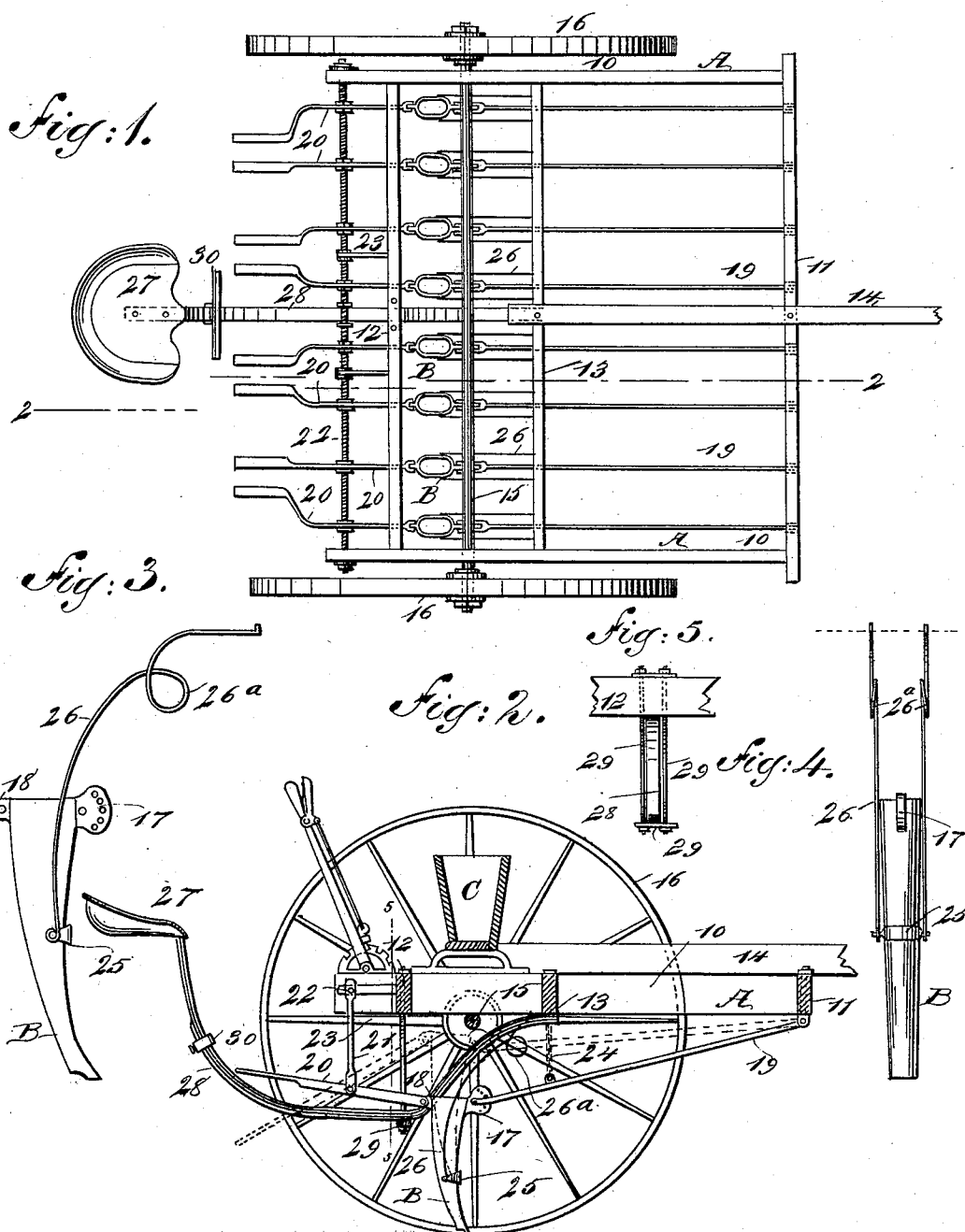


(No Model.)

E. J. KEMPER.
CLEANING ATTACHMENT FOR GRAIN DRILLS.

No. 523,212.

Patented July 17, 1894.



WITNESSES:

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CLEANING ATTACHMENT FOR GRAIN-DRILLS.

SPECIFICATION forming part of Letters Patent No. 523,212, dated July 17, 1894.

Application filed March 3, 1894. Serial No. 502,202. (No model.)

To all whom it may concern:

Be it known that I, EDWARD JOHN KEMPER, of Hermann, in the county of Gasconade and State of Missouri, have invented a new and Improved Cleaning Attachment for Grain-Drills, of which the following is a full, clear, and exact description.

My invention relates to a cleaning attachment for grain drills, and it has for its object to provide a means whereby the hoes of a grain drill may be expeditiously and conveniently cleaned from foreign matter such as weeds or soil adhering thereto, the cleaning being accomplished by the driver of the machine, through the medium of foot levers or their equivalents, the levers being so arranged that any one of the hoes in a drill may be passed in cleaning engagement with its cleaner, without interfering with any of the other hoes carried by the drill.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a portion of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a drill having the improvement applied thereto. Fig. 2 is a vertical longitudinal section taken practically on the line 2—2 of Fig. 1. Fig. 3 is a detail side elevation of one of the hoes of the drill and the cleaning attachment. Fig. 4 is a front elevation of a hoe and the cleaner applied thereto, and Fig. 5 is a detail view illustrating the manner in which the seat support is suspended without weakening the same.

In carrying out the invention the drill may be of any approved construction. That in the drawings comprises a frame A, of substantially rectangular construction, comprising two side bars 10, a front cross bar 11, a rear bar 12, and an intermediate cross bar 13, together with a tongue or pole 14. The frame is mounted upon an axle 15, located between its intermediate bar 13 and rear bar 12, said axle carrying supporting wheels 16. The hoes B employed are those of the usual pattern, being adapted to receive the seed from the seed box C, and any

desired number of the hoes may be employed. These hoes are preferably so located that when they are elevated to a predetermined extent they will engage with the axle, or practically so. Each hoe is provided with a lug 17, at the upper portion of its forward face, and a corresponding lug 18 at the upper portion of its rear face. The forward lug 17 of each hoe is pivotally-connected with a link 19, and all of the links are preferably pivotally attached to the under face of the front bar 11 of the frame A, or to any other desired portion of said frame, while a foot or lift lever 20, is pivotally connected with the rear lug 18 of each hoe, and each lever 20 is pivotally connected with a link 21, all of the links being mounted upon a shaft 22, preferably a screw shaft, which extends from one side bar 10 of the frame to the other at the rear of said frame; and the various links are held in position upon the screw shaft through the medium of nuts located on said shaft and engaging with opposite sides of the links; or equivalent means may be employed for the purpose.

The shaft is ordinarily supported between its ends through the medium of brackets 23, projected from the rear bar 12 of the frame. The links 19 connecting the hoes with the forward portion of the frame are prevented from falling below a predetermined point, thus regulating the downward movement of the hoes, through the medium of chains 24, or like devices, attached to the links and to the intermediate cross bar 13 for example, of the frame.

Each hoe B, is provided with a cleaner, and each cleaner consists of a strap 25, curved to conform to the front and the side surfaces of the hoe, and spring arms 26, connected to the end portions of the strap, which latter is held in a horizontal position, as shown in Figs. 2, 3 and 4, the arms being curved upward and secured permanently, preferably to the intermediate cross bar 13, or other point in the frame forward of the axle, and each spring arm 26 of the strap of a cleaner is preferably provided with a loop or coil 26^a at one point in its length, preferably near its point of attachment, whereby the said spring arms will act in a manner to keep the strap of a cleaner constantly in engagement with a hoe no matter

whether the latter be elevated or lowered. Thus in practice it will be observed, by pressing downward upon one of the levers 20, the hoe connected therewith will be raised as shown in dotted lines in Fig. 2, and in being elevated the strap 25 of the cleaning attachment of that hoe will engage with the front face of the hoe from the point where it normally engages with said hoe to its extreme lower end, the hoe being sufficiently elevated, and that the front surface of the hoe will thereby be expeditiously and conveniently and thoroughly cleaned from any matter that may have adhered to it. The levers may be and preferably are arranged in pairs, whereby two of them may be simultaneously operated by the foot of the driver for example, and in order that the driver may conveniently reach the levers, the driver's seat 27, is mounted upon the rear end of a spring support 28, preferably made up of a series of leaf springs, which support is forwardly curved below the body of the frame, and is thence carried upward to an attachment therewith, and in order that the spring support may in its turn have proper support, a stirrup 29, loosely engages with said seat support, as shown in Fig. 2, rearward of the axle, the stirrup being attached to the frame. A foot bar 30, is adjustably located upon the seat support, as shown in Figs. 1 and 2, whereby it may be made to accommodate the rider.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. In a grain drill or similar machine, the combination, with the frame, of a leaf spring support extending longitudinally thereof and having its front end secured to the said frame, the support being curved downward from its front end, and then extending rearward in an essentially horizontal direction, and finally upward toward its rear end, a seat carried by the rear end of the support, a foot bar held on the said support and adjustable longitudinally thereof, and a stirrup arranged transversely of the frame and loosely engaging with the lower face of the spring support, at the central horizontal portion thereof to permit the spring to slide longitudinally in the stirrup, substantially as described

2. In a grain drill, the combination, with the frame thereof, a hoe, a link connection between the hoe and the frame, and a lift lever carried by the frame and connected with the hoe, of a cleaning attachment, the same consisting of a strap conforming to the forward transverse contour of the hoe, and spring arms each having its lower end attached to the strap and its upper end to the framing of the drill, as and for the purpose specified.

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Witnesses:

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