

No. 650,205.

Patented May 22, 1900.

D. E. TOWLE.
ATTACHMENT FOR GANG PLOWS.

(Application filed Dec. 28, 1899.)

(No Model.)

Fig. 1

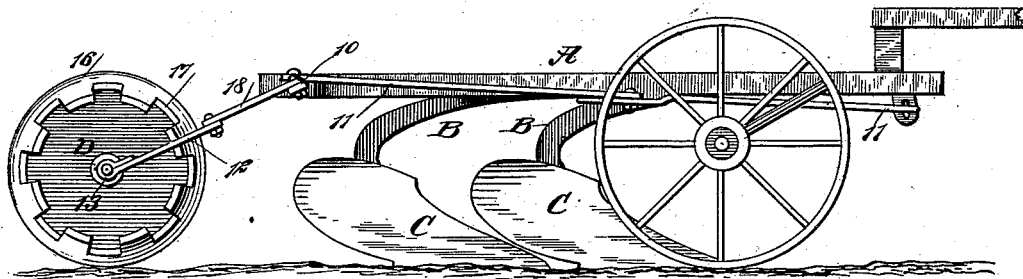


Fig. 2

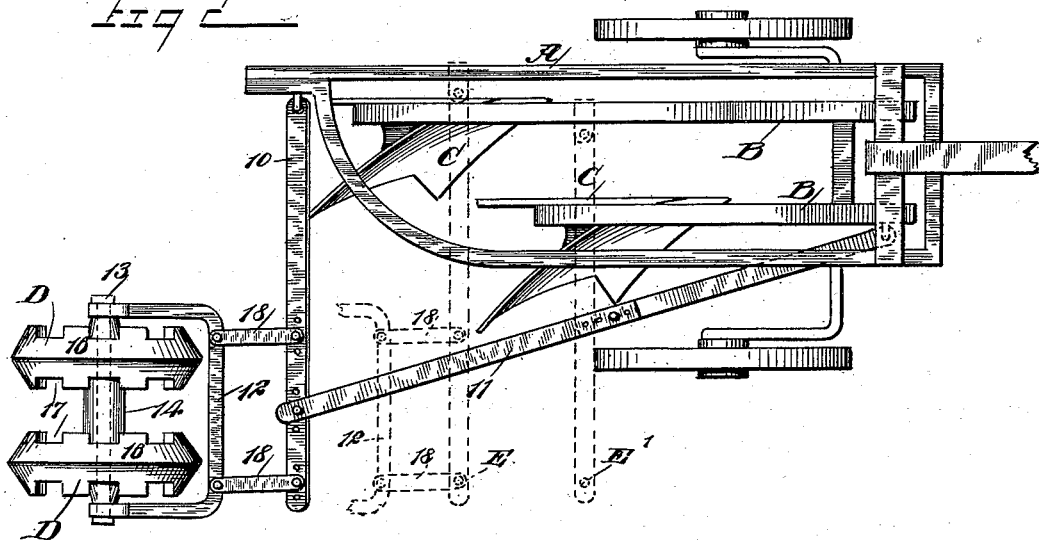
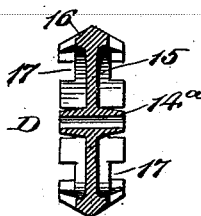


Fig. 3



WITNESSES:

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ATTACHMENT FOR GANG-PLOWS.

SPECIFICATION forming part of Letters Patent No. 650,205, dated May 22, 1900.

Application filed December 28, 1899. Serial No. 741,832. (No model.)

To all whom it may concern:

Be it known that I, DAVID EDWARD TOWLE, a citizen of the United States, residing at Park River, in the county of Walsh and State of North Dakota, have invented a new and Improved Soil-Packing Attachment for Gang-Plows, of which the following is a full, clear, and exact description.

The object of my invention is to provide an attachment especially adapted for gang-plows which will thoroughly pack the furrow-slice of the plow and at the same time roughen or corrugate the packed surface in order to prevent drifting.

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 part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a gang-plow having the attachment applied thereto. Fig. 2 is a plan view of the plow and attachment, and Fig. 3 is a vertical section through one of the packing-wheels of the attachment.

A represents the frame of a gang-plow, B the beams, and C the shares. A spreading-bar 10 is pivoted to the left-hand side of the frame A of the plow near the rear, and the said spreading-bar extends at right angles to the left-hand member of the frame in direction of the right-hand side beyond the right-hand supporting-wheel, and the spreading-bar 10 is connected with the clevis of the plow or with the frame of the plow at the line of draft through the medium of a draft-bar 11. This draft-bar is usually made in adjustable sections, as shown in Fig. 2, and is likewise adjustably connected with the spreading-bar 10.

The packing attachment consists of a yoke 12, which carries a shaft 13, and packing-wheels D, usually of cast metal, mounted to revolve on the shaft 13, are supported by a sleeve 14 or its equivalent. Each packing-wheel is preferably constructed as shown in Fig. 3, comprising a hub 14^a, a disk or spoke-body 15, and a rim 16, which rim extends beyond the sides of the body and is inclined in opposite directions at its outer face from

a circumferential central point. The rim 16 is likewise provided with a series of recesses 17 in each side edge, and these recesses may be opposite each other or they may be arranged so that the recesses on one side will be opposite the plain portion of the rim at the opposite side. The peculiar formation of the rims of the wheels D tends to corrugate or roughen the surface of the ground, while the wheels act to pack the soil. These wheels are so placed that they will be at the right-hand or furrow side of the furrow-plow C of the gang, and their position should be such that they will rest firmly on the center of the furrow-slice.

The attachment of the device to the spreading-bar is effected through the medium of links 18, pivotally attached to the yoke 12 of the attachment and adjustably pivoted to the spreading-bar. Thus it will be observed that the attachment may be applied to any form of plow.

By pressing or packing the soil as it is plowed the moisture in the ground is retained to a greater extent than when the soil is left loose. Furthermore, when the furrow-slice is packed it brings said furrow-slice in very close relation with the subsoil, thereby assisting the ascent of moisture from below, as no air-space is left between the furrow-slice and subsoil over which it is turned. The decay of waste vegetable matter turned down is likewise hastened, increasing the amount of available plant-food in the soil. As stated, the corrugations made or the roughening of the packed surface prevent the soil from drifting when subjected to the action of high winds, which occur in level stretches of country. The corrugations or ridges made by the attachment are readily leveled by the harrow, leaving a fine seed-bed and dust-blanket to prevent evaporation.

The benefit of the firm footing obtained through the use of the attachment and consequent packing of the earth is very evident in harvesting and it materially reduces the draft of the harvester and makes it easier for the team. In loose and sticky soil the advantage of packing is very marked, as the plow works and cleans very much better in subsequent plowing. When the spreading-bar is to be attached to a walking-gang con-

sisting of two or more connected plows, the spreader-bar is clamped or otherwise attached to preferably the left-hand plow-beam, as shown in dotted lines E' in Fig. 2, as this style of implement is not provided with a frame, and when a spreading-bar is to be attached to a gang of plows provided with a frame it may be connected to the frame over the rear left-hand share, as shown at E in dotted lines in Fig. 2, instead of at the rear of the implement, as shown in positive lines in the said figure.

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

1. A packing attachment for plows, consisting of a frame, a wheel mounted to turn in the said frame; the rim of the wheel being inclined and provided with recesses in its side edges the rim being solid between opposite recesses, and means for attaching the frame of the attachment to the frame of a plow, as described.

2. A packing attachment for plows, consisting of a frame, means for adjustably attaching said frame to the frame of a plow, and a wheel mounted to revolve within the

said frame, which wheel is provided with a rim tapering in opposite directions from its center, and also with recesses in its side edges, as set forth.

3. The combination, with a plow-frame, a spreading-bar attached to the frame at or near its rear, and a draft-bar connecting the spreading-bar with the forward portion of the frame at the draft-line, of a yoke connected with the spreading-bar, and wheels mounted to turn in the said yoke, the said wheels having rims tapering in opposite directions from a central line, the rims being also provided with recesses in their side edges, for the purpose set forth.

4. A wheel for packing soil, provided with a rim tapering in opposite directions from a central line and provided with side recesses, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID EDWARD TOWLE.

Witnesses:

GEO. E. TOWLE,
FRANK SWBODA.