F. KALTEIS.

SOIL PULVERIZER.

APPLICATION FILED JULY 20, 1918. RENEWED JAN. 23, 1920.

1,333,492. Patented Mar. 9, 1920.

Fig. 1.

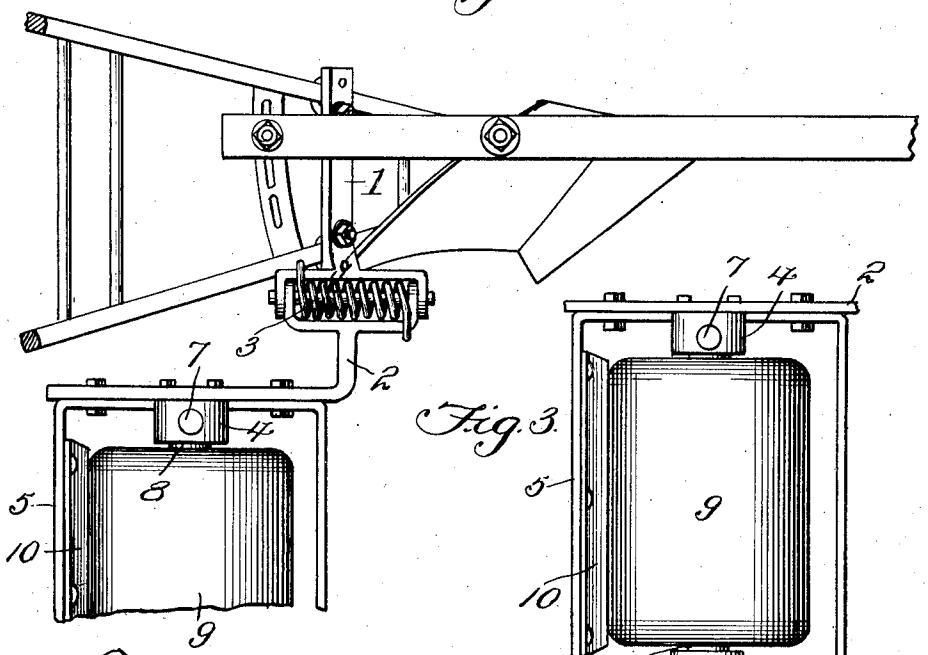
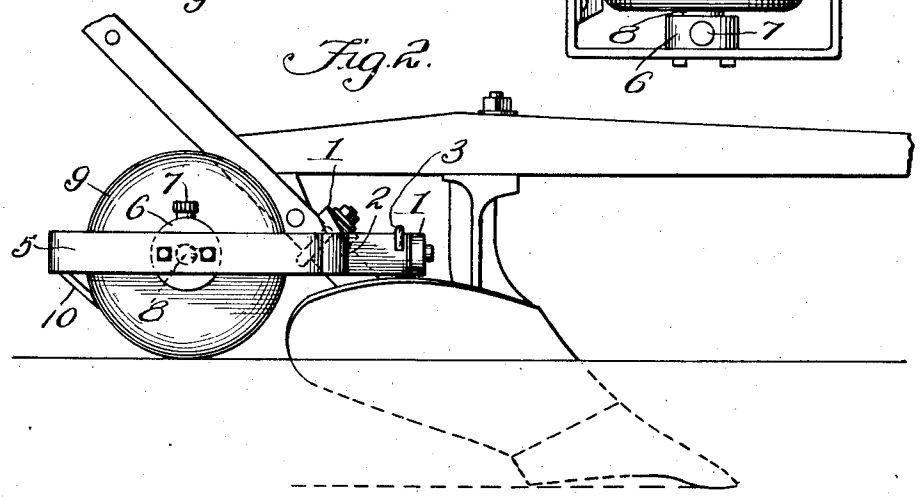


Fig. 3.

Fig. 2.



Witnesses
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SOIL-PULVERIZER.

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To all whom it may concern:

Be it known that I, FRANK KALTEIS, a citizen of Germany, residing at Appleton, in the county of Outagamie and State of Wisconsin, have invented new and useful Improvements in Soil-Pulverizers, of which the following is a specification.

This invention relates to soil pulverizers adapted to be attached to plows and it consists in the novel features hereinafter described and claimed.

An object of the invention is to provide a pulverizer in the form of an attachment, the same being of simple and durable structure and adapted to be easily and quickly applied to the handles of the plow or detached therefrom.

With this object in view the pulverizer comprises a clip member adapted to be connected with the handles of the plow and having a bracket hingedly attached thereto. A spring is located at the hinge joint between the clip member and the bracket and serves to hold the bracket resiliently toward the ground. A journal box is carried at the free end of the bracket and a yoke member connects the said box with a second similar box and a shaft is journaled for rotation in the boxes. The said shaft carries a roller and the yoke is provided with scrapers which bear against the periphery of the roller and serve as means for keeping the roller free of the accumulation of soil. The said journal boxes are provided with suitable grease cups whereby the end portions of the shafts which are received in the boxes may be properly lubricated.

In the accompanying drawing:—

Figure 1 is a top plan view of a plow with the pulverizer applied.

Fig. 2 is a side view of the same.

Fig. 3 is a detail plan view showing the roller and the yoke or frame in which the same is carried.

The soil pulverizer comprises a clip member 1 adapted to be applied to the handles of a plow and secured thereon by any suitable means. A bracket 2 is hingedly connected to the clip member 1 and a spring 3 is located at the end which connects the bracket with the clip member. One end of the said spring bears against the clip member and the other end against the bracket and the spring is under tension with a tendency to resiliently hold the free end portion of the bracket toward the surface of the soil.

A journal box 4 is fixed to the free end of the bracket and one end of a yoke 5 is fixed to the said journal box. The other end of the yoke 5 carries a journal box 6 and the boxes 4 and 6 are provided with grease cups 7 adapted to hold a lubricant for lubricating the end portions of a shaft which is journaled in the said boxes.

The said shaft is indicated at 8 and its end portions are journaled in the boxes and the said shaft extends approximately parallel with the intermediate portion of the yoke 5. A roller 9 is carried by the shaft 8 and is adapted to rest upon the surface of the soil when the pulverizer is in use. Scraper blades 10 are attached to the intermediate portion of the yoke 5 and the free ends of the scraper blades bear against the periphery of the roller 5.

When the device is applied to the handles of the plow and during the plowing operation the furrow opener of the plow will cast a furrow slice to one side in the usual manner. The roller 9 moving behind the furrow opener will travel over the said furrow slice and owing to the weight of the roller 9 and its attached parts the furrow slice is pulverized and consequently the soil is prepared for planting or other uses.

The spring 3 holds the roller 9 resiliently against the furrow slice consequently the roller may move in an upward direction to pass over obstructions which might lie in its path of movement.

Having described the invention what is claimed is:—

1. A soil pulverizer comprising a clip member, a bracket hingedly connected with the clip member, a spring engaging the clip member and the bracket and serving to hold the bracket in a lowered position, a box carried by the bracket, a yoke attached to the box, a box carried by the yoke, a shaft journaled in the boxes and a roller carried by the shaft.

2. A soil pulverizer comprising a clip member, a bracket hingedly connected thereto, a spring bearing upon the clip member and bracket, a box carried by the bracket, a yoke attached to the box, a box carried by the yoke, a shaft journaled in the boxes, a roller mounted on the shaft, and scraper blades attached to the intermediate portion of the yoke and bearing against the periphery of the roller.

In testimony whereof I affix my signature.

FRANK KALTEIS.