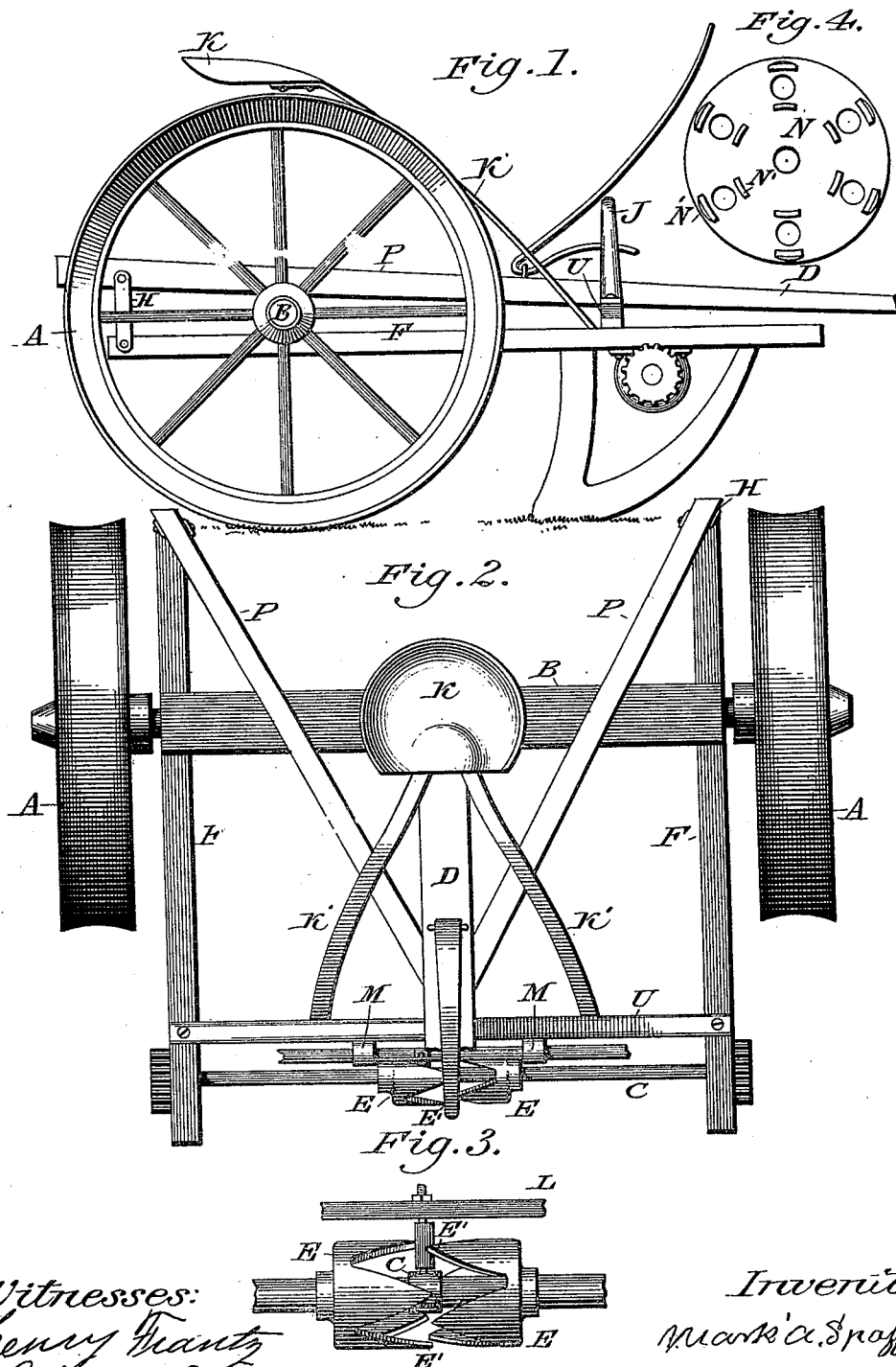


(No Model.)

M. A. SPAFFORD.
CORN PLANTER.

No. 348,536.

Patented Aug. 31, 1886.



Witnesses:
Henry Thant
Leopold Peters

Inventor:
Mark A. Spafford.

UNITED STATES PATENT OFFICE.

MARK A. SPAFFORD, OF ROCK FALLS, ILLINOIS.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 348,536, dated August 31, 1886.

Application filed August 10, 1885, Serial No. 174,051. (No model.)

To all whom it may concern:

Be it known that I, MARK A. SPAFFORD, a citizen of the United States, residing at Rock Falls, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare the following to be a full, clear, and exact description of my invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

My invention has reference to corn-planters, and pertains more especially, first, to novel mechanism for actuating the seeding devices, and, second, to short ribs or ridges placed radially on the upper surface of the seed-plate adjacent to the inner and outer walls of the seed-cups to ease the cut-off over such cups, and thus avoid injury to the seed by being crowded against the walls of the seed-cups.

My invention is applicable to two-horse corn-planters, and, as the usual construction thereof is well known, I do not deem it necessary to show or describe anything further than the parts constituting my invention and their mode of operation and attachment.

In the drawings, Figure 1 is a side elevation of the part of a planter showing the first part of my invention. Fig. 2 is a plan thereof, exhibiting the first and second parts of my invention. Fig. 3 is a detail of the devices for intermittently rotating the shaft C. Fig. 4 is a detail of a seed-plate provided with my improvement.

A A are the carrying and covering wheels, journaled in the usual way on the axle B.

D is the tongue of the planter, which is suitably attached at its rear end to the center of the axle B. Hounds or braces P P are respectively attached at their front ends to the sides of the tongue D, a suitable distance forward of the rear end of the latter, and, diverging from the center of the machine, respectively form supports at their rear ends for the rear ends of the side plates, F F, of the seed-frame. A short post, H, is firmly attached to the under side of the rear ends of the hounds P and projects downward a distance slightly greater than the

vertical diameter of the axle B. To the lower end of the posts H are respectively pivoted in a vertical plane the rear ends of the plates F. These pivots form the hinges for the vertical adjustment of the seed-frame. By this construction the tongue D, axle B, and hounds P constitute a rigid frame, which, for convenience, I will call the "draft-frame." A standard, J, extends upward from the front end of the seed-frame, and, with a ratcheted lever or other well-known means, the front end of the seed-frame is supported adjustably on the tongue D, or by the same means raised clear of the ground in turning or transporting the machine.

The driver's seat K is supported on divergent braces K', attached at their rear ends to such seat and at their front ends to the cross-brace U of the seed-frame. Thus the weight of the driver keeps the seed-runners in the ground, thus dispensing with the usual lock or forcing lever.

By hinging the seed-frame at its rear end I allow a greater range and freedom of vertical action to the seed-runners, and at the same time preserve the horizontal position of the draft-frame as a fixed gage of the depth of such runners.

C is a shaft journaled transversely to the front end of the seed-frame.

E E are twin collars, rigidly attached at their outer ends to the shaft C, and having their inner ends open or constituted simply of their rims. This rim is cut into inwardly-projecting angular points E'. The points E' of each collar E are projected slightly into the interval between the like points E' of the adjacent or opposing collar E. Thus the intervals between the two series of points E' taken together form a zigzag path or lead around the entire rims E E.

Intermittent rotary motion is imparted to the shaft C by causing an arm, G, to be reciprocated horizontally and transversely of the machine to traverse said zigzag path between the collars E E, each half-motion of such arm causing the shaft C to rotate one-half the width of the point E' at the limit of the outstroke of such arm. In the construction shown herein I transversely reciprocate a shaker-bar, L, seated in ways M M, attached to the brace U,

by means of a handle or lever attached to such bar L. A short arm, G, is rigidly attached at one end to the bar L, and projected through the zigzag path aforesaid and sleeved loosely on the shaft C between the collars E; but a hand-lever can be suitably fulcrumed over the center of such collars E and its lower end caused to traverse such path. The outer ends of the shaft C can be geared in any suitable way to the revolving seed-plate in the bottom of the seed-hoppers, and thus the intermittent rotation of the shaft C be communicated to such seed-plates with the usual results of dropping the seed.

On the upper surface of the seed-plate N are formed, on each side of the seed-cups therein, the short ribs N', having their length in the line of the rotation of such seed-cups, and having sloping ends extending slightly beyond or above the edge of each cup. The ribs N' are in pairs in line of the radius of such seed-plate, and therefore may be described as being located at the inner and outer walls, respectively, of such seed-cups. The function of the ribs N' is to ease the cut-off over the grain in the seed-cup and avoid cracking or injuring

the grain in the latter by crowding such grain against the rear upper edge of such seed-cup, as is often the case with the ordinary construction.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In combination with the seeding devices of a corn-planter, the shaft C, collars E, provided with interprojected points E', attached to the shaft, arm G, adapted to traverse the path between such points E', and means for actuating such arm, whereby intermittent rotary motion is imparted to said shaft C and to the seeding devices, substantially as shown, and for the purpose specified.

2. In a corn-planter, a rotating seed-plate, N, provided with ribs N', located in pairs radially on such plate at the inner and outer walls of the seed-cups therein, and having inclined or sloping ends, substantially as shown, and for the purpose specified.

M. A. SPAFFORD.

Witnesses:

A. J. FRANTZ,
H. A. BOORSE.