IMPROVED CORN-PLANTER.

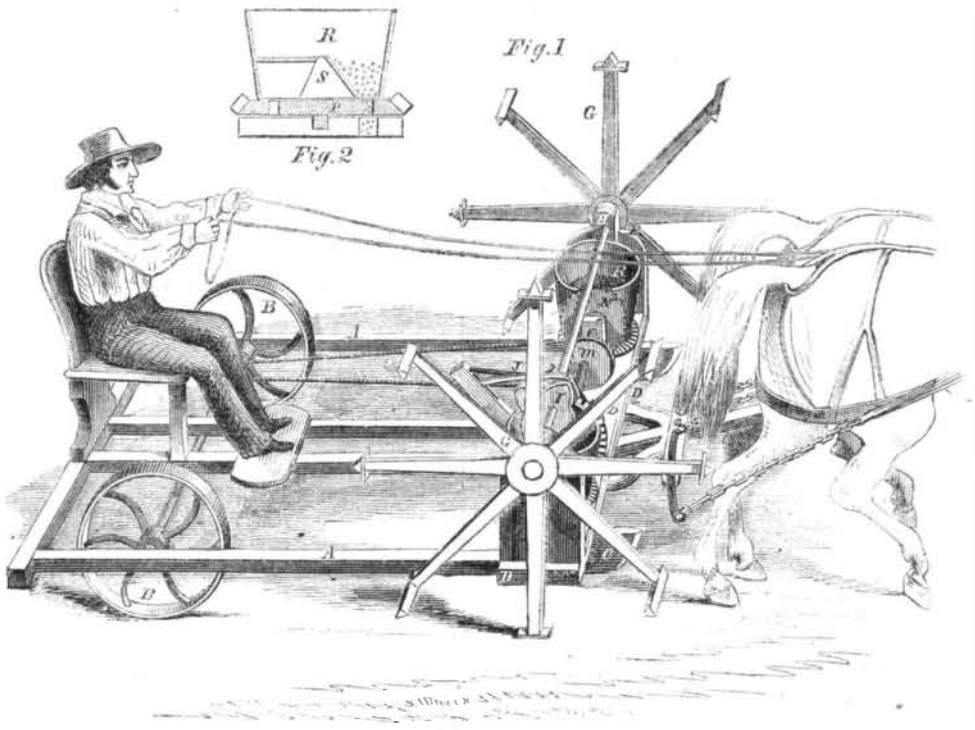
We here illustrate a machine for planting corn, either in drills or rows, which is claimed to have advantages over all other planters.

The frame, A A, is supported at its back part by the wheels, B B, and has the runners or plows, C C, at its forward end. These plows are furnished with two diverging wings in the rear for opening the furrow to receive the seed which drops between the wings. These plows are supported by the cross-piece, D, which is hinged to the forward part of the frame, so that it may receive a slight vibration. The uprights, E E, rise from the cross-piece, D, near its ends, and between these are standards, F, which are connected with a cross-piece, D', which rests upon cross-piece, D. The wheels or markers G G, are connected with the axle or shaft, H, which they cause to rotate. These wheels are furnished at the ends of their spokes or arms with small shovels which take hold of the ground and prevent all slipping; thus measuring or spacing the distance between the hills with great precision. Fastened upon the shaft, H, is the rose cam, I, which actuates the lever, J, and by means of a hooded pawl, turns a ratchet wheel which is fastened upon the lower shaft, *o*. The shaft, *o*, has beveled gears at its ends which gear into the bevels on the periphery of the rotating bottoms of the hoppers, so that the said bottoms are caused to rotate by the turning of the wheels, G G. The hoppers are constructed, as shown in Fig. 2, with a cone, S, rising in the middle to direct the seed to the side of the bottom, where it passes through holes as they are opened by the rotation of the bottom.

When it is desired to plant corn in drills a more rapid motion is imparted to the shaft, *o*, by connecting the cone of pulleys, *m*, with a similar cone on the shaft of the wheels, B, by means of a belt, as shown; this belt is removed when the machine is used for planting in hills. The broad wheels, B B, follow in the line of drills or rows and press the earth upon the planted seed.

There are three advantages claimed for this planter by the inventor:—1st, The wheels or markers, G G, space the ground so accurately as to obviate the necessity of "laying off" the ground at right angles as usual; 2d, The sudden motion imparted to the hopper bottoms by the cam and ratchet arrangement secures a more certain filling of the holes, and, consequently, a better measuring of the seed than in other machines; 3rd, The runners for opening the furrows are so formed as to leave a broad surface at the bottom of the furrow, and thus allow the seed to spread properly in the hill or drill.

The patent for this invention was issued through the Scientific American Patent Agency, Oct. 18, 1859, and persons desiring further information in relation to it may address the inventor, A. Kirlin, at New Boston, Ill.

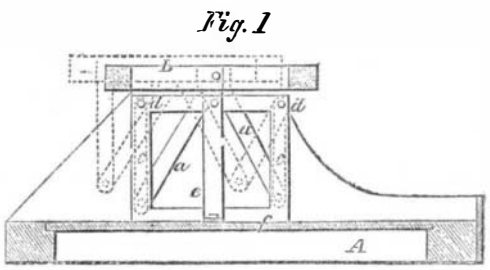


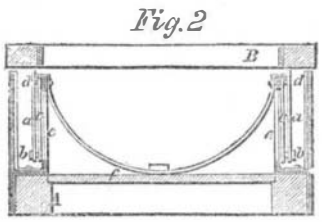
KIRLIN'S IMPROVED CORN-PLANTER.

HARRIS' CARRIAGE SEAT.

The annexed cuts represent in section a new plan of hanging carriage seats, the object of which is to prevent the persons riding in the carriage from being thrown from the seats in case of a sudden stopping of the carriage, or from receiving an unpleasant jerk in the case of a sudding starting of the vehicle. This is accomplished by hanging the seat in such a manner that it may have an upward motion either forward or backward, and thus accommodate itself to the inertia of the bodies upon it.

Fig. 1 is a longitudinal section, and Fig. 2, a cross section, the full black lines showing the position of the parts in their usual place, and the dotted lines showing the position of the parts when the seat is thrown forward by the sudden stopping of the carriage. B is the seat, supported by the metal plates or bars, *a a*, which are fastened rigidly at their tops to the seat, and are hung at the bottom upon the swinging plates or rods, *c c*, by pivots. The rods, *c c*, are suspended at their upper ends from the firm, upright supports, *e e*, by pivots, *b b*. It





will thus be seen that the seat may swing forward or backward with a slightly rising motion, so that when the carriage starts or stops suddenly, the seat swings with the persons sitting upon it, who are thus saved from being thrown from it or from receiving the unpleasant jar often experienced when a carriage is very suddenly started.

The patent for this invention was secured through the Scientific American Patent Agency, Nov. 28, 1859, and persons desiring further information in relation to it may address the inventor, E. H. Harris, at Palmetto, Ga.

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Your obedient servant, J. HOLT.

Communications and remittances should be addressed to

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