

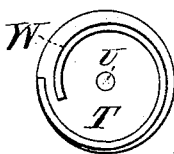
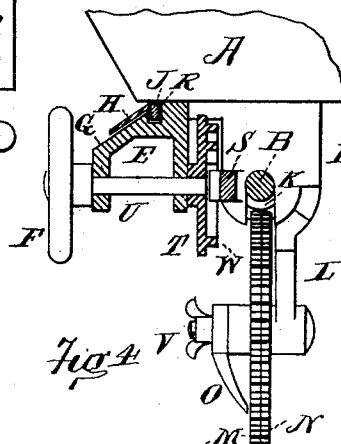
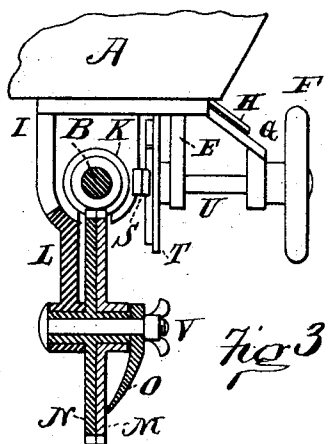
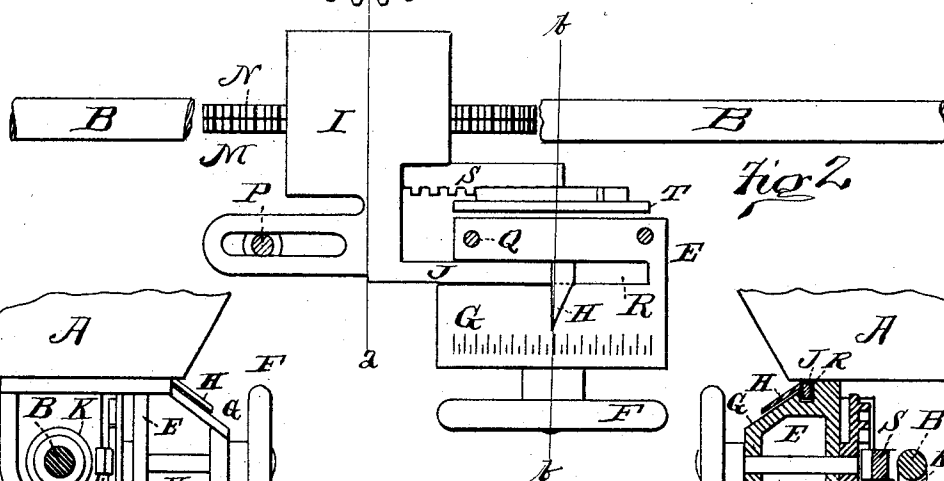
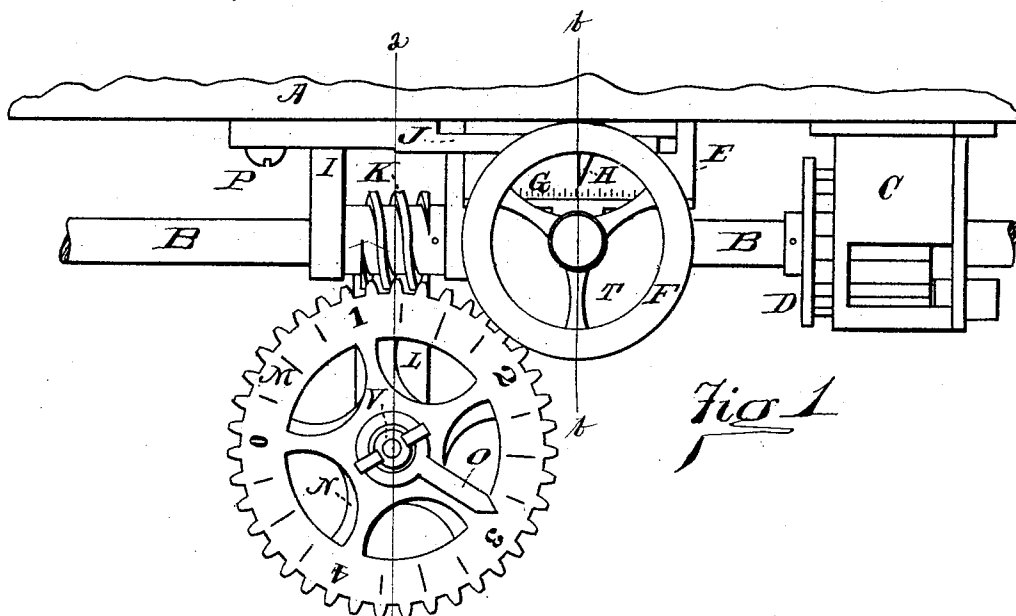
(Model.)

R. S. CARR & J. W. SEE.

GRAIN DRILL ATTACHMENT.

No. 274,459.

Patented Mar. 27, 1883.



WITNESSES:

John Lorenz
Ed Strecker.

Fig 5

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James W. See

by James W. See

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UNITED STATES PATENT OFFICE.

ROBERT S. CARR AND JAMES W. SEE, OF HAMILTON, OHIO, ASSIGNORS, BY
MESNE ASSIGNMENTS, TO THE SOHN RIDGE IMPLEMENT COMPANY, OF
SAME PLACE.

GRAIN-DRILL ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 274,459, dated March 27, 1883.

Application filed August 14, 1882. (Model.)

To all whom it may concern:

Be it known that we, ROBERT S. CARR and JAMES W. SEE, both of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Grain-Drill Attachments, of which the following is a specification.

This invention relates to the construction of an attachment for grain-drills, to furnish a means for adjusting the usual seed-wheel shaft longitudinally, and for indicating the position of the shaft and also its progress of rotation.

In the accompanying drawings, Figure 1 is a front view of the attachment; Fig. 2, a plan; Fig. 3, a section on line *a a*; Fig. 4, a section on line *b b*, and Fig. 5 a face view of the scroll-disk T.

This device is intended for attachment to that class of grain-drills in which a series of seed-cups fixed under a hopper have their internal seeding-wheels rotated by a shaft passing through all the seed-cups, the rate of feed being altered by moving the shaft endwise, and thus affecting in a certain degree the seeding-wheels, which are attached to the shaft. The shaft being operated by gearing connected with the traction-wheels of the machine, the progress of rotation of the seed-wheel shaft will indicate the progress of travel of the entire machine over the field, and this progress may be expressed in acres traversed over. Measuring the land in this manner by means of a counter on the grain-drill is a very common practice.

In the drawings, A represents a portion of the bottom of the hopper or seed-box of a common seed-drill; B, the usual seed-wheel shaft, located beneath the hopper; C, one of the usual seed-cups; D, the seed-wheel, fitted to revolve in and be adjusted longitudinally in the seed-cup by proper motions of the shaft B, to which it is fixed; E, a casting bolted by bolts Q to the hopper A, and furnishing bearings for shaft U; F, a hand-wheel on shaft U; G, a graduated tablet on the housing E; H, an index-pointer for the tablet G; I, a housing-casting receiving shaft B and arranged to slide freely, being attached to the hopper A loosely by bolt P, seated in a slot in the housing-casting I;

J, a stem from casting I to index-pointer H, also serving as a guide by fitting in slot R; K, a worm fixed to shaft B and seated in the housing I; L, a hanger pendent from and formed with housing-casting I; M and N, two worm-wheels supported by hanger L and engaging with worm K, the worm-wheel N having a less number of teeth than the worm-gear M—say one tooth less; O, a pointer attached to the hub of worm-gear N and adjustable around the axis of the worm-gears; S, a rack rigidly attached to casting I and projecting to the rear of housing E; T, a disk fixed on the rear end of shaft U; W, a scroll-thread on the rear face of disk T, adapted to engage with the teeth of the rack S; and V, a bolt through the hubs of the worm-wheels M and N.

When hand-wheel F is rotated the scroll-thread W, engaging with the teeth of rack S, will move the housing I longitudinally, and will thus adjust the shaft and seed-wheels, the degree of movement being indicated by pointer H on tablet G.

The revolving shaft B, through worm K, rotates both worm-gears M and N in the same direction; but as the rear wheel, N, has one tooth more or less teeth than the front gear, M, it follows that the rear wheel, N, revolves somewhat faster than wheel M, and that this superior diligence on the part of wheel N will be indicated by the pointer O gradually traversing the indications on the face of the gear M. In the drawings the parts are assumed as so proportioned with reference to the main wheels of the grain-drill that while the grain-drill traverses five acres of land the rear worm-gear, N, will gain one complete revolution over the front worm-gear, M.

In starting in the field the pointer O may be set at zero by hand, as it is held to the hub of gear N by the friction-nut V only. This form of land-measurer is especially adapted to the rough and cheap constructions generally embodied in grain-drills, the lost motion of the parts having little or no effect, as the zero also moves and will be affected by the same influences, which would tend to give slight erratic movements to the pointer on the gear N. The

gear N has a hub each side, as shown in Fig. 3. The rear hub runs in hanger L, the front hub supporting wheel M and projecting slightly through it, so that the wheel M will not be
5 pinched by the pointer O. The bolt o unites the parts.

We claim as our invention—

1. The combination, substantially as set forth,
of worm-counter M N, worm K, housing I, rack
10 S, housing E, hand-wheel F, shaft U, and
scroll-disk T W.

2. The combination, substantially as set forth,
of housing I, having hanger L, worm K, worm-
wheels M and N, pointer O, and bolt V.

ROBERT S. CARR.
JAMES W. SEE.

Witnesses:

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NELSON WILLIAMS.