(No Model.)

W. D. ARNETT.

GRAIN DRILL.

No. 347,982. Patented Aug. 24, 1886.

Fig. 1.

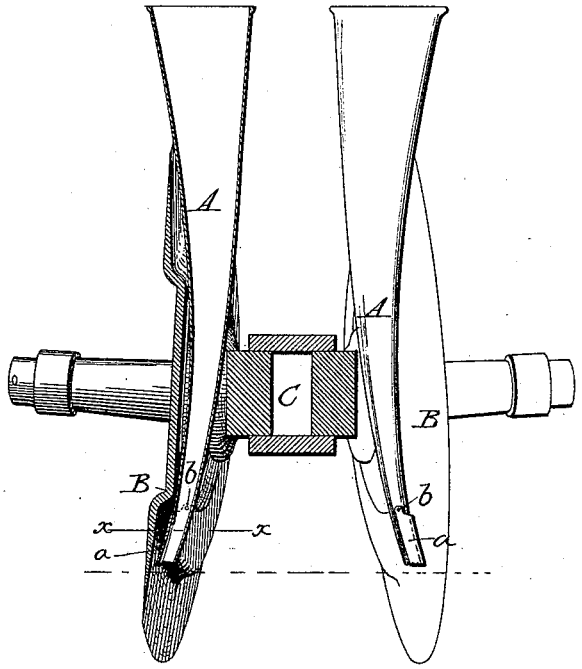


Fig. 2

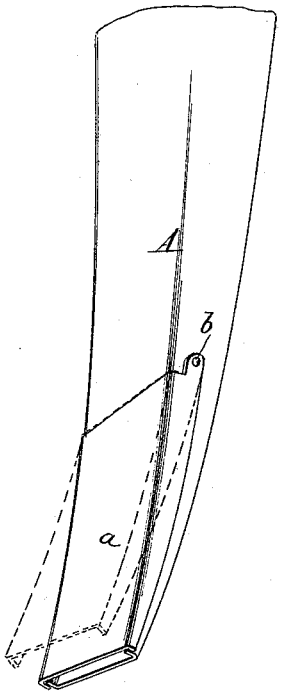
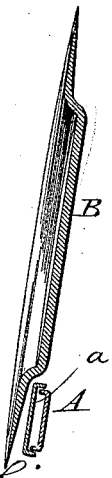


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM D. ARNETT, OF DENVER, COLORADO.

GRAIN-DRILL.

SPECIFICATION forming part of Letters Patent No. 347,982, dated August 24, 1886.

Application filed June 22, 1886. Serial No. 205,878. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. ARNETT, of Denver, in the county of Arapahoe and State of Colorado, have invented certain Improvements in Grain-Drills, of which the following is a specification.

My invention relates to seed-delivering spouts or conductors for grain-drills and seeders, and although applicable to other machines is more properly designed for those in which rotary disks arranged in planes oblique to the line of travel are used to open the furrows, as represented—for example, in several patents heretofore granted and in applications now pending in my name.

The aim of the invention is to make the mouth or delivery end of the conductor as narrow as possible, and, at the same time, to guard against the lodgment of seed therein; and to this end it consists, essentially, in a conductor having a flattened end with one side hinged or jointed in place in such manner that it may yield, in the event of seed accumulating therein, to permit its escape.

I prefer to construct my conductor of sheet metal with its lower end curved to one side and to hinge the movable side thereto in such position that it will remain normally closed by reason of its gravity; but the details may be modified to some extent without passing beyond the limits of the invention.

I am aware that corn-planters have been provided with delivery-spouts closed by a valve or by a spring-plate, the construction being such, however, that the seed was retained therein and required to be forcibly delivered. My device differs therefrom in that its mouth is at all times open for the delivery of seed, and that the yielding side simply permits the mouth to expand beyond its ordinary size in the event of unusual charge accumulating therein.

In the accompanying drawings, Figure 1 represents a vertical transverse section through my improved feed-spout in position at the side of a furrow-opening disk, which is also shown in section. Fig. 2 represents in perspective the lower end of the spout. Fig. 3 is a cross-section on the line *x x* of Fig. 1.

In the drawings, A represents the spout or conductor; B, the furrow-opening disk, and C a drag bar or beam to which the disk and spout may be connected, as represented in my patent dated July 13, 1886, No. 345,403, or in any other appropriate manner. The seed-spout, which may be made of sheet metal or other suitable material, and of any appropriate form at its upper end, is flattened or reduced in width at its lower end in order to present a narrow delivery-orifice. This orifice may be of any desired length in the direction of the line of travel; but is to be reduced laterally to the least width which will permit the free escape of the seed. The end of the spout being thus formed will travel in a narrow furrow and deliver the seed centrally therein in a narrow line. Its use is advantageous in that it will distribute the seed in a straighter and more uniform line than when it is delivered from the large circular conductors as usual and, second, in that it permits the formation of a narrow furrow, which, particularly in sod-land for grass-seeding, is highly advantageous, as it permits the machine to be operated with much less power than those of ordinary construction. The lower end of the conductor is preferably, but not necessarily, curved outward toward the face of the disk in order that it may be the more conveniently fixed in position to deliver the seed in close proximity to the disk. Its outer side—that is to say, the side nearest the disk—is formed by a plate, *a*, mounted at its upper end on pivots *b*, so that it is normally maintained by gravity in the position shown in Fig. 1. In the event, however, of the seed accumulating or choking within the tube its pressure will be sufficient to lift the pivoted plate, whereupon the seed may descend freely into the furrow. If desired, a gentle spring or a weight may be applied to assist in holding the plate in operative position; but under ordinary circumstances this is unnecessary.

Having thus described my invention, what I claim is—

1. A spout or conductor for a seeding-machine having its lower end flattened laterally and formed with a delivery orifice elongated in the direction of the line of travel, whereby the spout is enabled to deliver the seed centrally in a narrow furrow.

2. A conductor-tube for seeding-machines having at its lower end a constantly-open delivery-orifice elongated in the direction of the

line of travel, and the laterally-yielding plate forming one side wall of said orifice, as and for the purpose described.

3. In combination, with a furrow-opening disk, B, a conductor-tube lying adjacent to the inner rear face of said disk, its lower end flattened and curved toward the disk and provided with a yielding side plate, as described.

In testimony whereof I hereunto set my hand, this 18th day of June, 1886, in the presence of two attesting witnesses.

WILLIAM D. ARNETT.

Witnesses:
W. J. ACHESON,
W. F. HALLOWELL.