D. E. McSHERRY.

Grain Drill.

PATENTED JUL 18 1871

117191

Fig 1

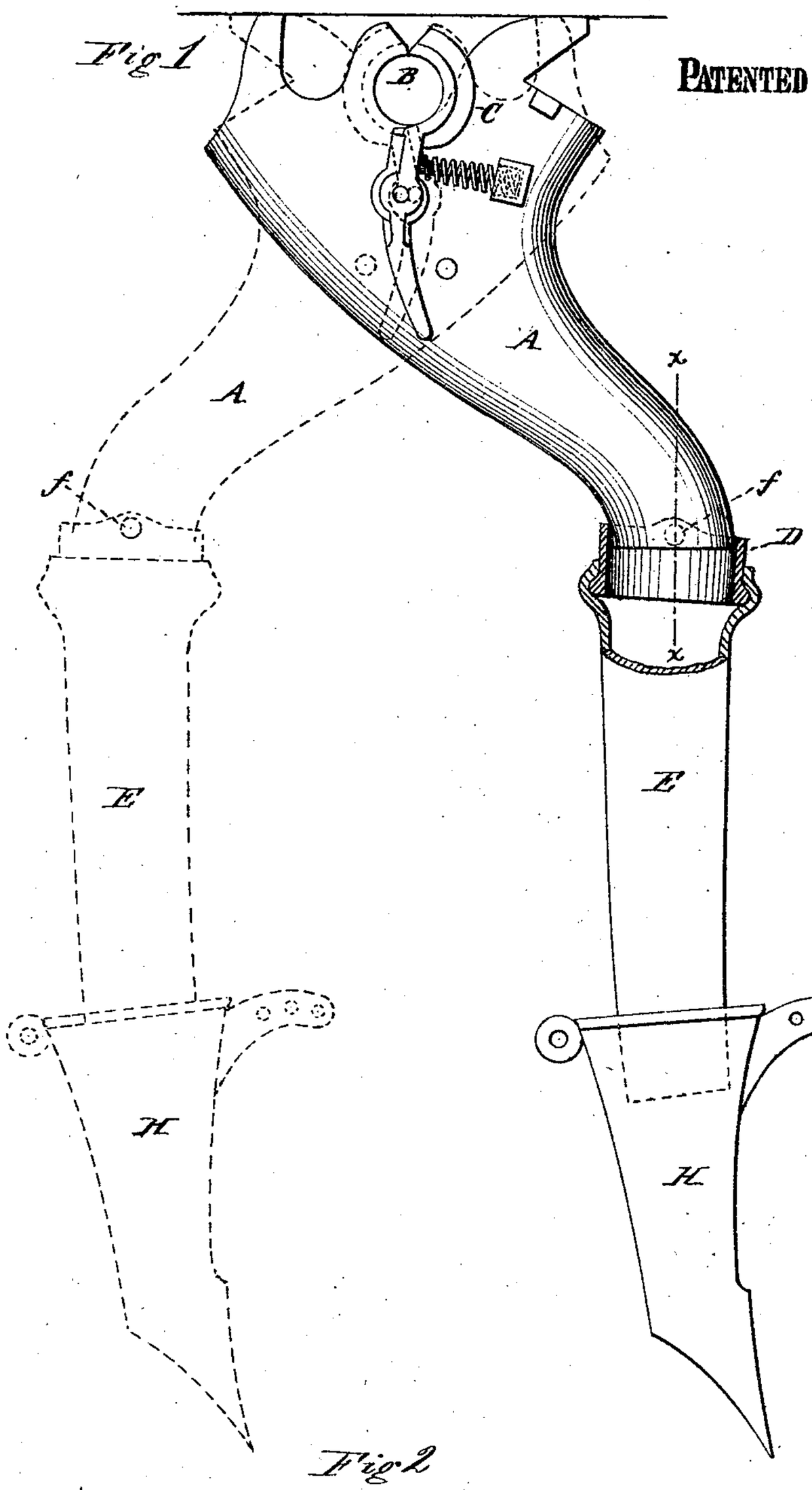
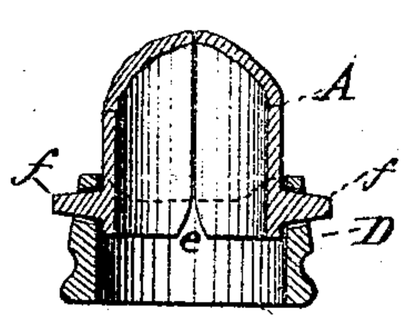


Fig 2



Witnesses.

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UNITED STATES PATENT OFFICE.

DANIEL E. McSHERRY, OF DAYTON, OHIO.

IMPROVEMENT IN GRAIN-DRILLS.

Specification forming part of Letters Patent No. 117,191, dated July 18, 1871.

To all whom it may concern:

Be it known that I, DANIEL E. McSHERRY, of Dayton, in the county of Montgomery and State of Ohio, have invented certain Improvements in Grain-Drills, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to grain-drills; and the invention consists in pivoting a ring to the bottom of the curved metal spout, through which the grain passes from the seed-cups or hopper of the hoe, to which ring the rubber or other flexible tube is fastened; the object being to so arrange these latter tubes that they will adjust themselves to the movements of the hoes, and thus prevent undue wear of the tubes, as hereinafter more fully explained.

Figure 1 is a side elevation of the seed-tube with my improvement applied thereto, a portion being broken away. Fig. 2 is a vertical section of the lower end of the tube with the pivoted ring applied thereto.

This invention is an improvement upon the device for which a patent was recently granted to me, and in which was a full description of the detachable curved spout used in this, and which, therefore, need not be herein further described.

As described in my former patent, the curved tubes A are made detachable, so as to be turned forward or backward, or both, to accommodate them to the use of hoes, standing in two ranks, or in one rank, forward or backward, as may be desired. As formerly constructed, I attached the rubber or flexible tubes E directly to the lower end of the spouts A, from which they extended downward within the hoes H, which are made tubular to receive them, and conduct the grain to the drill or furrow below. As the hoes rise and fall more or less in their passage over the field there is a constant rubbing of the tube E within the hoe, and as the hoe changes its relative position in thus rising and falling the tube E frequently becomes jammed therein, thereby kinking or bending the tube, and preventing the regular and even flow of the grain through them. Of course when this occurs there will be a space in the furrow in which no seed is deposited, the seed accumulating during this time in the tube E, and then, when the tube is again released or straightened, the accumulated grain will all pass down at once, thus producing what is known as "bunching" of the seed in the drill or furrow. Another and equally serious difficulty is the excessive wear of the tubes E by their rubbing and chafing against the interior of the hoes, caused by their inability to adapt themselves to the changing positions of the hoes, and this arises from the fact that, as previously constructed, the tubes E are attached rigidly to the ends of the spouts A.

To remedy this difficulty I now construct a separate ring, D, to which I attach the tubes E, and then pivot this ring to the ends of the spouts A, as shown in Figs. 1 and 2. As a convenient means of doing this, I construct the ring with two small holes through it, one at each side, and then cast the spout A with a small stud or pin, *f*, projecting from its outer face, on opposite sides, to fit in the holes in the ring D, as shown in Fig. 2, and by dotted lines in Fig. 1. As the spout A is cast in two parts, it being divided longitudinally at right angles to the projecting ears or pins *f*, it follows that the parts can have their lower ends placed within the ring D, the pins *f* inserted in the holes of the ring, and the parts be thus hinged or pivoted together without difficulty and without the use of a pin extending through or across the spout A, which would tend, if used, to close the passage and cause the grain to clog or choke up within the spout. As shown in Fig. 2, the lower inner corners of the parts of the spout A are rounded or beveled off, as shown at *e*, by which means their ears or pins *f* can be inserted in the holes in the ring D by spreading their upper ends apart, and then, when inserted, the parts are brought together and secured, thus holding all in position. By this method of uniting the tubes E to the spouts A the tubes are left free to move or swing to and fro on the pivots or ears *f*, and thereby to adapt themselves readily to the varying positions or movements of the hoes as the machine passes along; and by this improvement I obviate the bunching of the seed, and also prevent the excessive wear or chafing of the flexible tubes.

Having thus described my invention, what I claim is—

1. The tube A, composed of the two sections,

divided longitudinally, having their inner lower corners *e* beveled or rounded off, and each section having a stud, *f*, formed thereon, whereby the parts can be inserted within the ring and then united with the ring attached, substantially as described.

2. The combination of the rigid spout A, pivoted ring D, and tube E, all constructed and arranged to operate substantially as and for the purposes herein set forth.

DANIEL E. McSHERRY.

Witnesses:
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