

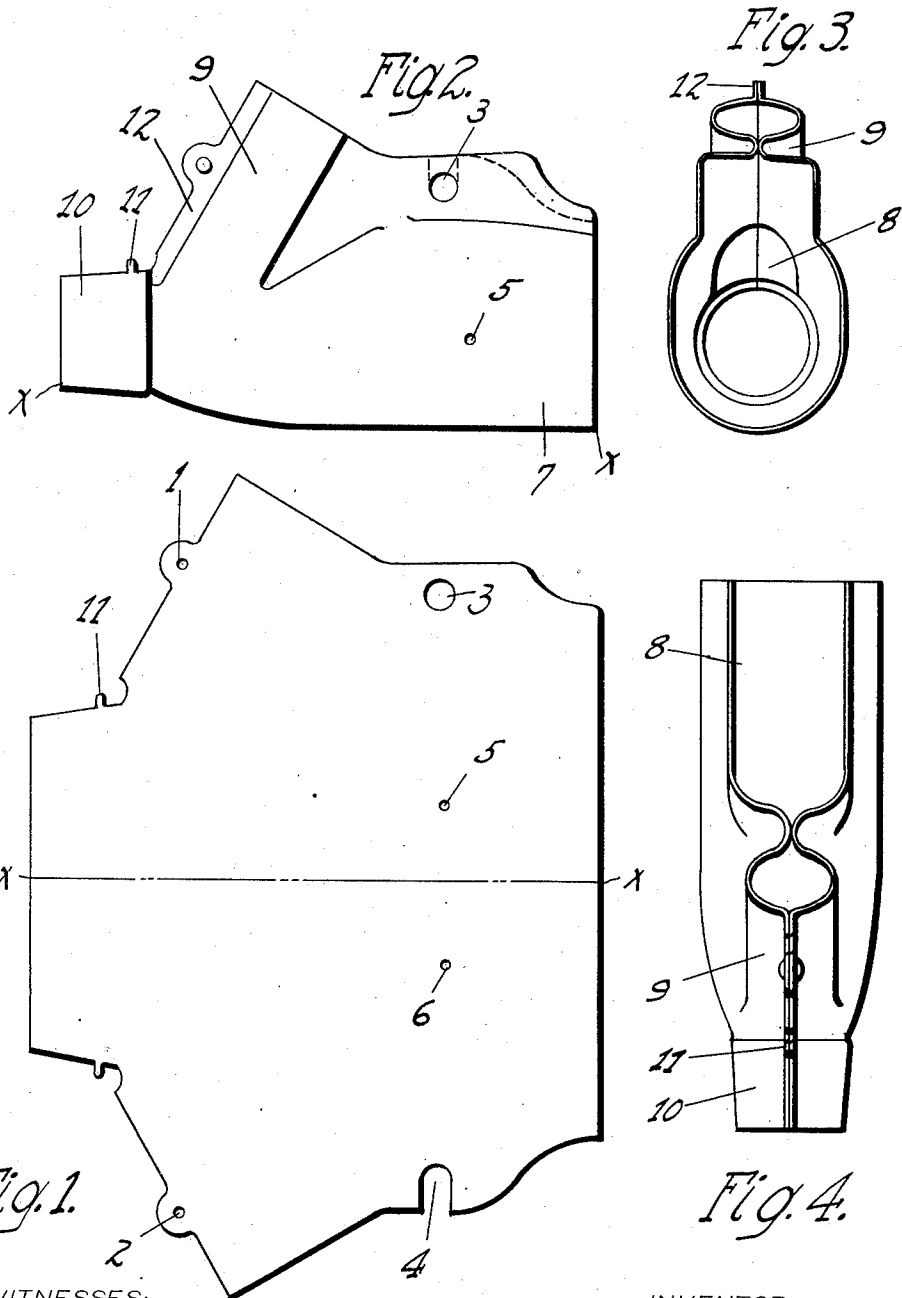
S. W. McKILLOP.

TUBE TOP.

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1,039,985.

Patented Oct. 1, 1912.



WITNESSES:
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TUBE-TOP.

1,039,985.

Specification of Letters Patent.

Patented Oct. 1, 1912.

Application filed June 21, 1912. Serial No. 705,022.

To all whom it may concern:

Be it known that I, SAMUEL W. McKILLOP, a citizen of the United States, residing at Cleveland, county of Cuyahoga, State of Ohio, have invented a certain new and useful Improvement in Tube-Tops, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to receivers or tube-tops for seeding machines or grain drills. It has for its object a new form of receiver or tube-top that is stamped from a single blank of sheet metal that has already been pierced with the necessary holes.

It has been customary heretofore to make these receivers in two stampings; each being separately stamped and the parts riveted together. This makes another seam opposite the seam shown in Figure 2, and requires piercing after the stamping which requires two additional operations. My new receiver is both a better and more efficient article, but its cost of manufacture is only about two-thirds of the two-piece tube-top because the saving of several operations as will be hereinafter described.

In the drawings:—Fig. 1, is a view of the blank. Fig. 2, is a side elevation of the tube-top or receiver after it has been formed up and in the position in which it is stamped out. Fig. 3, is an end elevation of the receiver or tube-top. Fig. 4, is a side elevation of the receiver or tube-top after it has been revolved ninety degrees from the position shown in Fig. 2 and turned up into vertical position.

Fig. 1 shows the blank as it is cut out by the stamping operation just after the piercing which is done on the way to the blanking dies and while the preceding tube-top is being blanked. The piercings 1 and 2 are rivet holes. The piercings 3 and 4 are holes that are used in connection with the feeding cup, (not shown.) The holes 5 and 6 are used for pivoting the receiver. The blank is then fed to a stamping machine such as I have shown in my application, Serial No. 705,021 filed June 21, 1912, and formed up into a receiver of the shape shown in Figs. 2, 3, and 4. The tube portion 7 receives one kind of seed and is provided with a large opening 8 in its side. As already

explained, this opening is to receive the feed cup. The tube portion 9 is located forward of the tube portion 7 when the receiver is in position upon the machine and this is fed with a different kind of seed from a separate compartment in the seed box. The nipple portion 10 is inserted in the top of the rubber or flexible tube (not shown) and the lugs 11 bend over the tube to fasten it to the nipple.

In the old method of stamping in two pieces there was necessarily left a seam opposite the seam 12. Inasmuch as the receiver is slightly inclined to the rearward when on the machine the seam that I have done away with is directly in the path of the seed being discharged into the receiver at both tube portions. It has been found impossible in practice to rivet these half portions together sufficiently tight so as not to leave a crevice. Some of the crevices are very small and others are quite large resulting in the spilling of the finer seeds upon the ground outside of the furrow, so that stray seeds are sown all over the plot at places where they were not intended.

In the operation by which the one piece receiver is formed, the blank may be grasped at its center line *x, x*, by any suitable gripping device and the metal is folded and gathered up, but not drawn by the gathering-dies over the form. The absence of drawing of the metal is evident because of the free ends of the blank on either side of the line of grip. The perforations 1, 2, 5, and 6 and the openings 3 and 4, therefore, locate in the finished receiver at substantially the points where they were intended and the rivet holes 1 and 2 come into substantial registry so that a rivet may be placed therethrough. This is not true when the receiver is made in two pieces. In stamping the two pieces, the metal is held at the edges by a blank-holder with an adjustable tension and it is, therefore, drawn from the edges to the center, the amount of drawing being dependent upon the tension to which the blank-holder has been adjusted. This results in the drawing of the piercings out of their intended locations when they are cut in the blank. Nor is it possible to allow for the drawing of the metal in placing the piercings for the metal does not draw uniformly due to different compositions of steels. It is, therefore, customary and necessary when the receiver is made in

the two piece stamping operation to do all the piercings after the stamping of the two halves. This, of course, requires two extra operations, while in my form of receiver, the piercings may be made while the sheet steel is passing along to the blanking dies, and while a preceding piece is being blanked. Inasmuch as there are two blanking operations for each receiver in the old form or manufacture, there is, besides the extra operations, a double waste of metal.

It is true receivers have been made of cast iron in one piece, but such receivers are very unsatisfactory as they are heavy, adding material weight to the machine when the number of receivers is considered, they are fragile and break and chip both in shipment and in use. Single tubes have been made from a single piece of sheet metal, but they can be rolled into shape and do not require stamping that draws the metal. The saving in cost of manufacture of my single piece tube-top is approximately one-third of the cost of manufacture of the tube-tops that are made in two pieces, due to a single piercing operation while the metal is on the way to the blanking dies, a single blanking operation and a single stamping operation.

What I claim is:—

1. A tube-top, comprising a plurality of

tube portions uniting to form a single discharge tube portion; the said entire tube-top being constructed of a single piece of sheet metal, substantially as described. 35

2. A tube-top, comprising a plurality of tube portions uniting to form a single discharge tube portion, the said entire tube-top being constructed of a single piece of sheet metal whose edges are fastened together in a single seam, substantially as described. 40

3. A tube-top, comprising a plurality of tube portions uniting to form a single discharge tube portion, the said entire tube-top being formed by folding and gathering the metal of a single blank, substantially as described. 45

4. A tube-top, comprising a plurality of tube portions uniting to form a single discharge tube portion, the said entire tube-top being formed by folding and gathering the metal of a single blank that has already been pierced with the necessary holes, substantially as described. 50 55

In testimony whereof, I sign this specification in the presence of two witnesses.

SAMUEL W. McKILLOP.

Witnesses:

STUART C. BARNES,
VIRGINIA C. SPRATT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."