

A.W. Tucker. Field Thrashing Machine.

72940

Fig: 1

PATENTED

DEC 31 1867

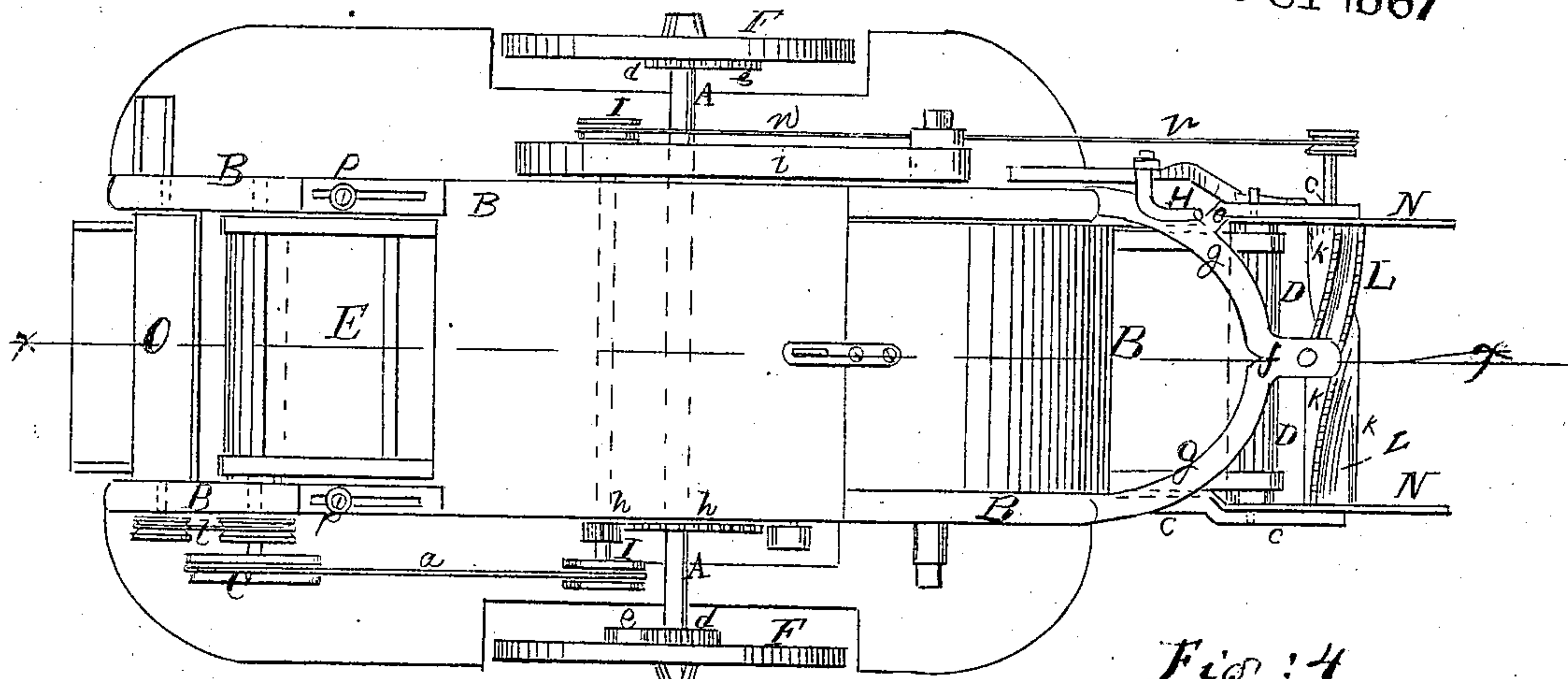


Fig: 3

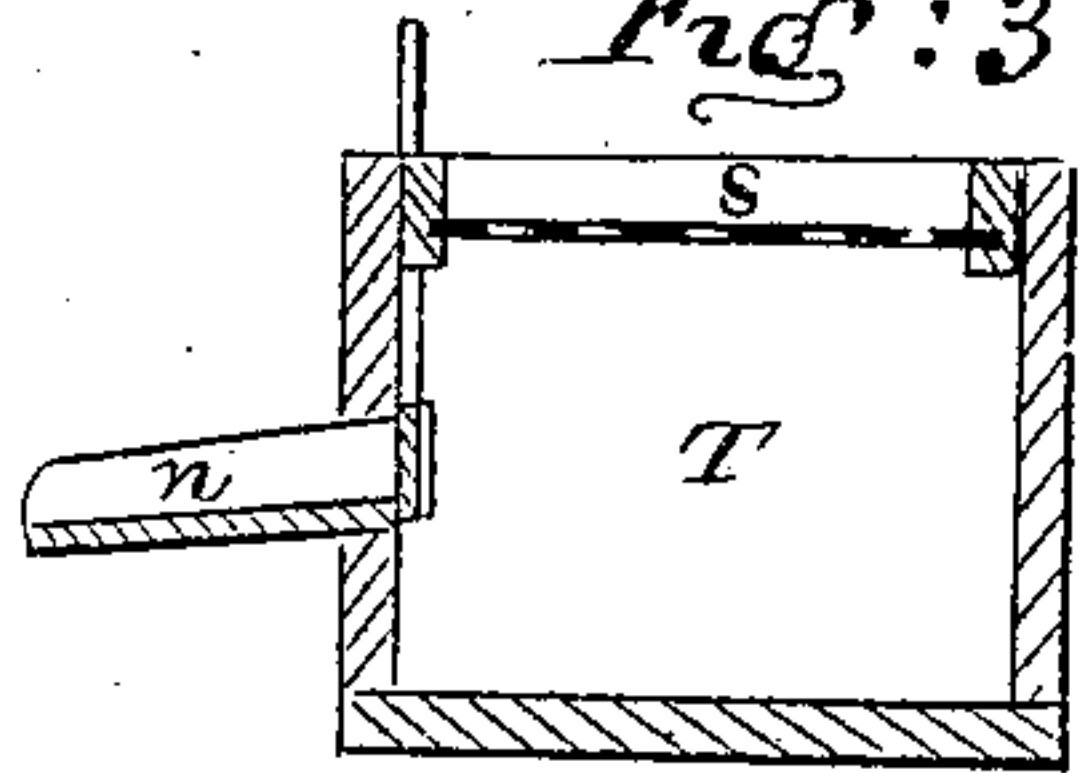


Fig: 4

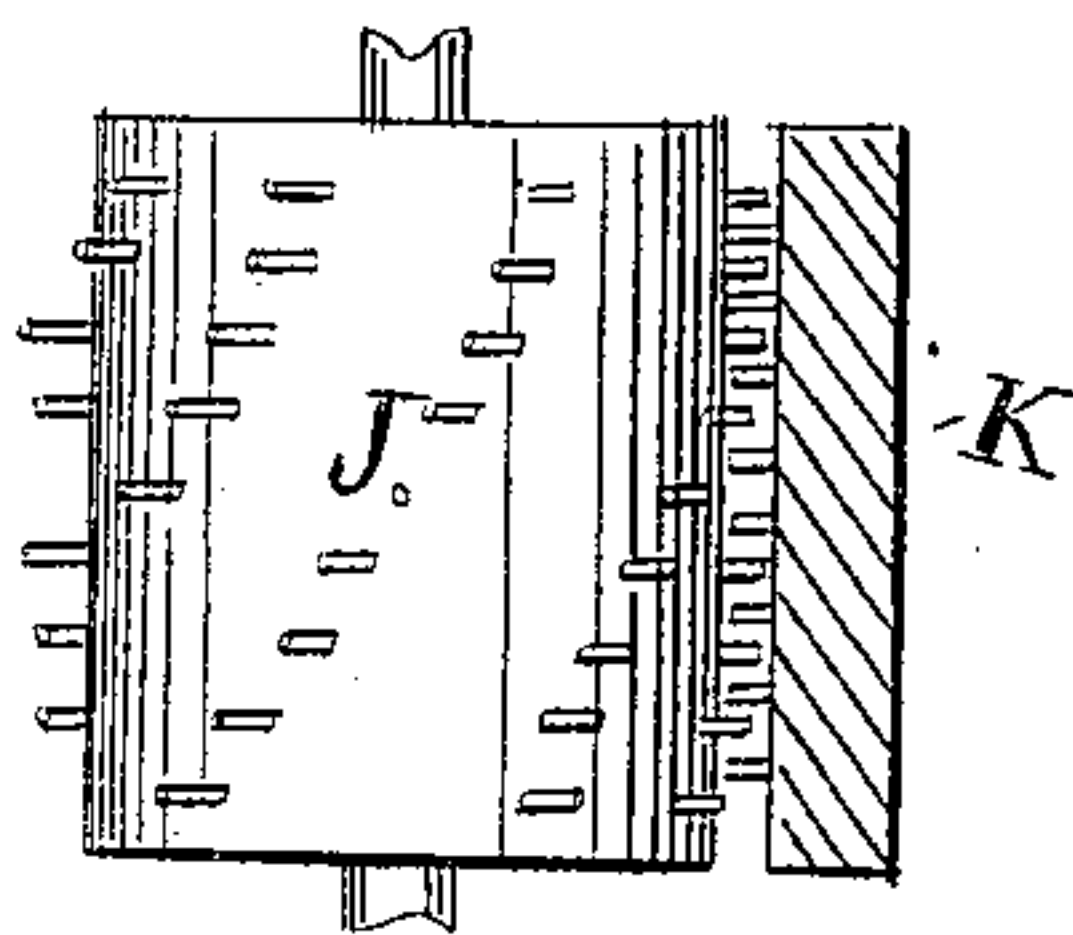
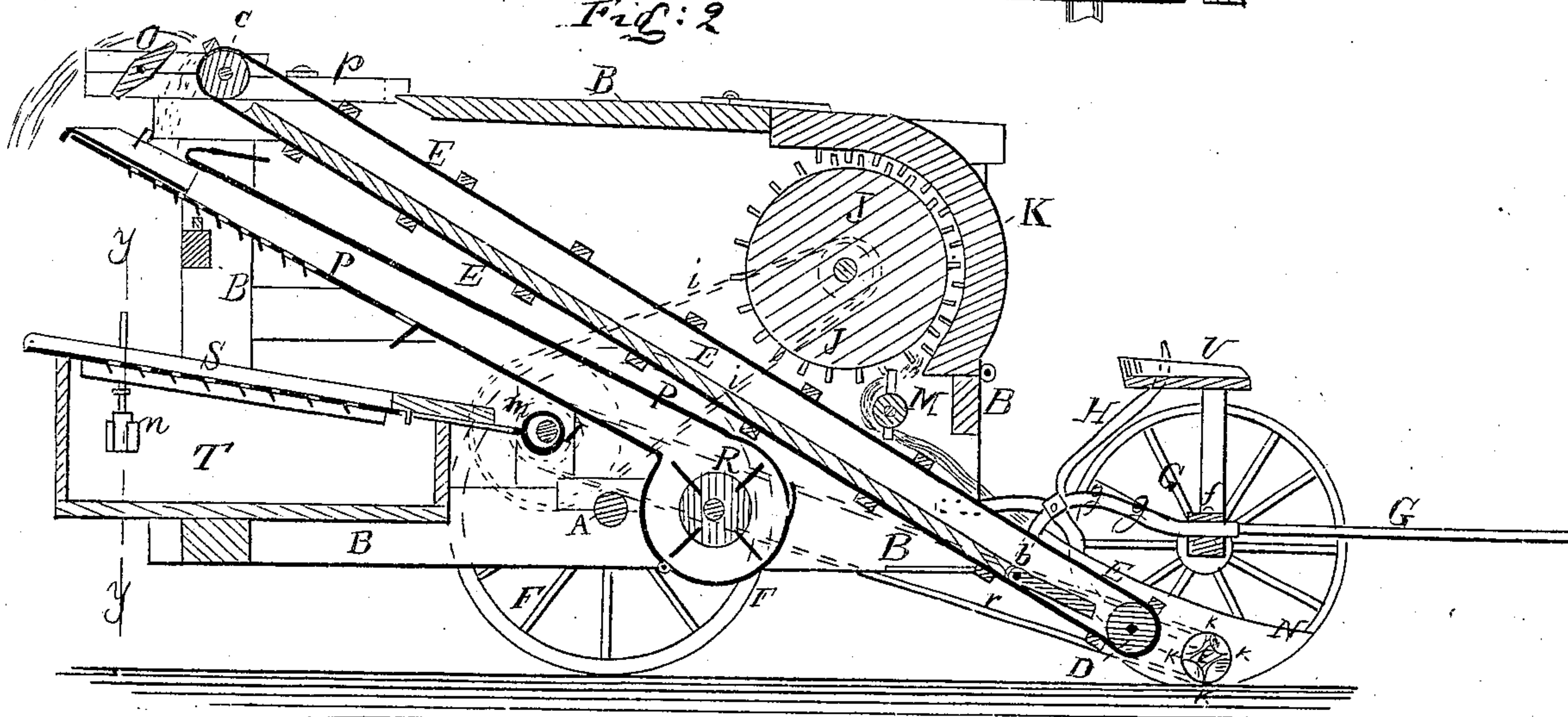


Fig: 2



Witnesses.

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A. W. TUCKER, OF WAXAHATCHIE, TEXAS.

Letters Patent No. 72,940, dated December 31, 1867.

IMPROVEMENT IN FIELD THRESHING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, A. W. TUCKER, of Waxahatchie, in the county of Ellis, and State of Texas, have invented a new and improved Field Threshing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a plan or top view of my improved threshing-machine.

Figure 2 is a vertical longitudinal sectional view of the same, the plane of section being indicated by the line *x x*, fig. 1.

Figure 3 is a detail vertical cross-section of the same, the plane of section being indicated by the line *y y*, fig. 2.

Figure 4 is a plan or top view of the threshing-cylinder.

Similar letters of reference indicate corresponding parts.

This invention relates to a new threshing-machine, which is arranged upon wheels, so that it can be drawn over the field, after the reaper has moved over the same, and so that it will take up all the straw lying in its track, and will thresh the same and discharge it, while it will retain the grain which has been freed from the straw.

The invention consists chiefly in the manner of arranging a threshing-cylinder over an endless apron, so that the straw and grain, as they are discharged from the threshing-cylinder, fall upon the same apron by which they were brought to the said threshing-cylinder. Thus a very simple arrangement of parts is made possible. The invention consists also in arranging a take-up device at the front of the machine, by which the straw is thrown upon the apron. The said take-up device consists of a series of serrated flanges, arranged spirally around a horizontal-revolving shaft.

A represents the axle of the threshing-machine, having its bearings in a frame, B, of suitable material, and of such shape and strength as to enable it to support and hold the other parts of this machine, as they will hereafter be described. In the upper rear part of this frame B is a horizontal roller, C, the same having its bearings in two blocks, *p p*, which are slotted, or otherwise arranged so as to be adjustable on the frame, to keep the belt *a*, which drives the roller C, at the required tension. To the lower front part of the frame B are pivoted, by means of a rod, *b*, two bars, *c c*, one on each side of the frame. These bars *c* form the bearings for a roller, D, as shown. E is an endless apron, of suitable construction, passing over the rollers C and D, as is clearly shown in fig. 2. Upon the axle A are mounted or hung two driving-wheels, F F, which, if hung, are connected with the axle by means of ratchet-wheels *d* and pawls *e*, so that the axle will have to rotate with the same. The axle is arranged near the centre, but rather nearer to the rear end of the frame B, and the front end of the same is supported by a small two-wheel truck, G, which is connected with the frame B by means of a bolt, *f*, the said bolt passing through a hole in an arm, *g*, projecting from the front of the frame B, and through the axle of the truck G, as shown in fig. 2. The lower end of the apron being connected with the hinged bars *c*, can be raised by means of a lever, H, so as to be inoperative. The said lever is pivoted to the outside of the frame B, and has an arm connected with one of the bars *c*, as indicated in fig. 2. I is a horizontal shaft, having its bearings somewhat in rear of the axle A, in the frame B, and connected with the same by means of gear-wheels *h h*, as is shown in fig. 1. On this shaft I is mounted a pulley, over which passes the belt *a*, which drives the roller C. The space around the upper part of the apron E is, at least to some extent, cased in, and in this space is arranged a threshing-cylinder, J, being toothed, as well as the wall of the case K, in its front and top, as shown in figs. 2 and 4. The cylinder J is driven by a belt, *i*, from the shaft I. In front of the lower roller D, and so as to be on the ground when the apparatus is at work, is arranged a horizontal shaft, L, driven by a belt, *r*, from the shaft I. This shaft L is provided with four, or more or less, flanges, R R, which are arranged spirally around it, and which are provided with serrated or toothed outer edges, as shown in fig. 1. This spirally-flanged roller L will take up all the straw in its way, and that singly, as only one point of the roller touches the ground at a time. It receives motion by a belt, *r*, and from the shaft I, or otherwise. The straw thus taken up is taken by the apron E and carried up. M is a small roller, resting upon the apron, and fitting with its end through slots in the case K. Under this roller the straw must pass, and as it comes out from

under it, its ends will be bent up, as shown in fig. 2; and it will be taken by the threshing-cylinder and fed through between the teeth, so as to be thoroughly freed from all grain. The threshed grain and straw are from the threshing-cylinder reconveyed to the apron E, and are by the same carried up towards the back portion of the machine. The sides of the lower end of the apron, and of the take-up roller L, are protected by guards N N, by which the machine is confined to the straw lying in its direct course. When the lower part of the apron is raised, by means of the lever H, the roller L is also raised off the ground, and no more straw will be taken up. The straw carried up by the apron E is thrown over the end of the machine, by means of a revolving reel, O, which is driven by a belt, Z, from the roller C. The grain falls over the upper end of the apron into the open mouth of an inclined box, P, having a perforated bottom, as shown. A blast of air is blown up in this box, by a suitable fan, R, by which the chaff is thrown out, while the grain falls through the holes in the bottom of the box P, upon a perforated board, S, to which a shaking motion is imparted by means of an eccentric, m, on the shaft I. The grain falls then into a box, T, whence it can be discharged through a suitable spout, n. The driver's seat, U, is arranged on the truck G, within reach of the lever H, as shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Arranging a threshing-cylinder above an endless apron, E, of a field threshing-machine, in such a manner that the straw and grain emerging from the threshing-cylinder will fall upon the same apron by which they were conveyed to the said cylinder, substantially as herein shown and described.
2. The apron E, threshing-cylinder J, and roller M, in combination with each other, all arranged and operating substantially as and for the purpose herein shown and described.
3. The spirally-flanged serrated take-up roller L, when made and operating, substantially as and for the purpose herein shown and described.
4. The hinged bars c, in combination with the roller D, apron E, guards N, and lever H, all made and operating substantially as herein shown and described.

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Witnesses:

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