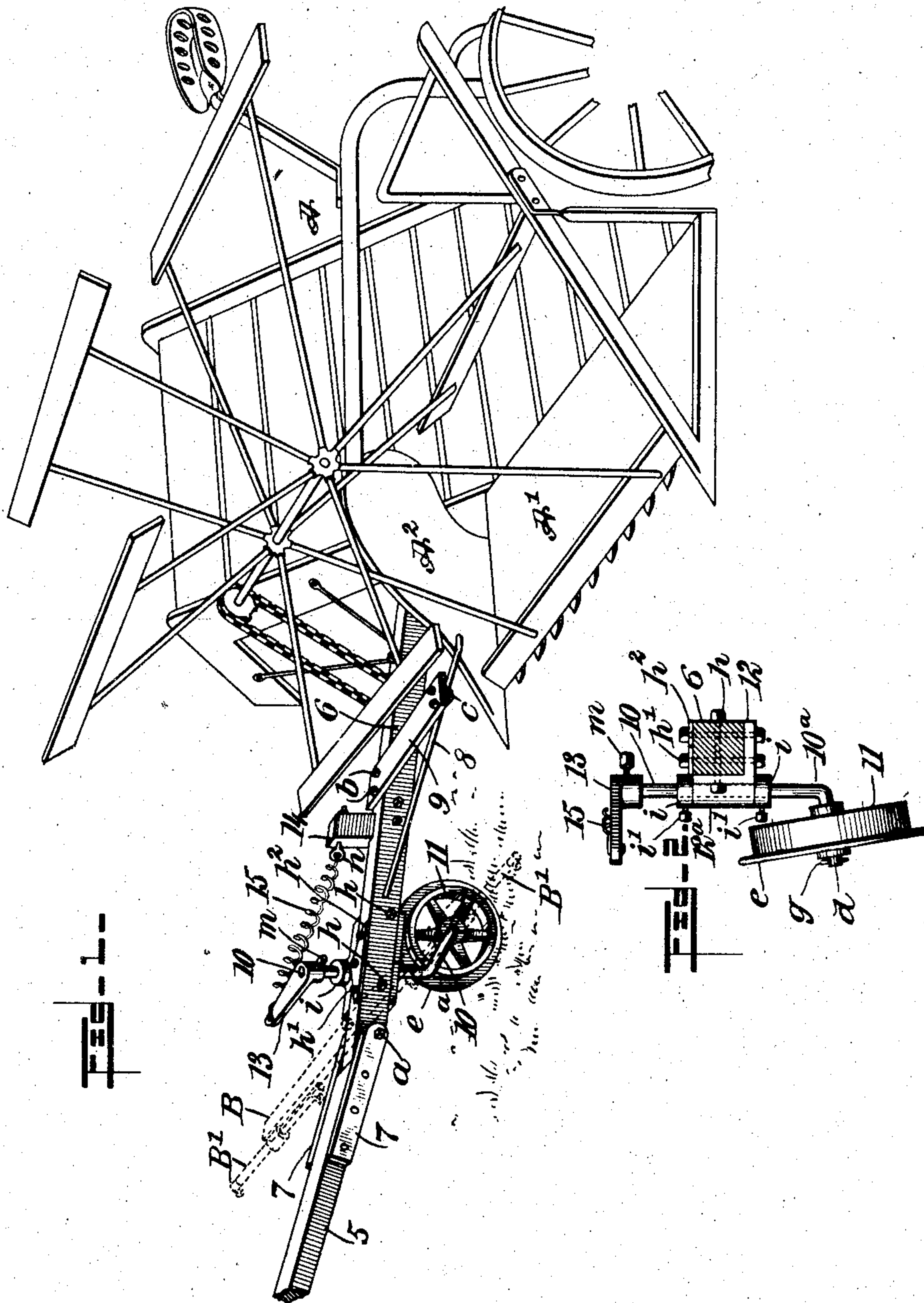


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C. F. ORTMAN.
TONGUE SUPPORT AND SIDE DRAFT CHECK FOR GRAIN OR GRASS
HARVESTERS.

APPLICATION FILED OCT. 11, 1904.



WITNESSES:

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CARL F. ORTMAN, OF MARTINTON, ILLINOIS.

TONGUE-SUPPORT AND SIDE-DRAFT CHECK FOR GRAIN OR GRASS HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 780,909, dated January 24, 1905.

Application filed October 11, 1904. Serial No. 227,993.

To all whom it may concern:

Be it known that I, CARL F. ORTMAN, a citizen of the United States, and a resident of Martinton, in the county of Iroquois and State of Illinois, have invented a new and Improved Tongue-Support and Side-Draft Check for Grain or Grass Harvesters, of which the following is a full, clear, and exact description.

This invention relates to means for supporting the tongue or draft pole of a grain harvester and binder or a wide-cutting grass-mower, and has for its object to provide novel details of construction for a device of the character indicated, and particularly for the improvement patented by me January 19, 1904, No. 750,116, which render this device more simple and effective.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the subjoined claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both figures.

Figure 1 is a perspective view of the invention applied upon a grain-harvester, and Fig. 2 is a transverse sectional view of the harvester-tongue and a front view of details mounted thereon.

In the drawings, A indicates a grain harvester and binder of ordinary construction. The tongue, that, as usual, extends forward from one side of the platform, is formed of two members 5 and 6, hinged together, as shown, by means of two elongated leaf-plates 7, secured upon opposite sides of the front section 5, and at their rear ends pivoted upon the rear section, which they loosely embrace, by a pintle-bolt *a*, so that by the fixture of the rear section 6 upon the side of the platform A' the front section 5 is adapted for rocking in a vertical plane.

Between the adjacent side board A² of the platform and the rear section 6 of the tongue a brace-rod 8 is extended and secured by its respective ends to said section 6 and said side board A², this being a well-known means for laterally supporting the fixed member of the tongue.

It is found in practice that the brace-rod is liable to become loosened at one end or the other, due to applied draft strain, and to obviate this I have provided a reinforcing stay-piece 9. As shown, the latter is in the form of a flat bar, preferably formed of metal, and at its ends is secured, respectively, upon the tongue-section 6 and the diagonal brace-rod 8, screw-bolts *b* serving to affix one end of the stay-piece upon the tongue, a bail-clip *c* clamping the other end of the same upon the brace-rod near the harvester-platform A'.

In the device shown in my patented improvement a bent standard is employed for the support of a traction-wheel, said standard having a rockable connection with the side of the tongue near its rear end.

The box employed in the patented construction is bolted upon the side of the tongue, and as this is not considered strong enough to withstand the strain which is imposed upon the box connection a more reliable construction has been devised, which will presently be fully described.

The standard 10 is similar to that shown in the patented device and consists of a cylindrical metal bar, the upper portion and that forming a journal for engagement with a supporting-box being straight. The lower portion of the standard, as indicated at 10^a, trends diagonally rearward and downward, and at the lower end of said diagonal member of the standard a spindle *d* projects at a right angle therefrom—to the right for a left-hand cutting-machine and to the left for a right-hand cutting-machine. A traction-wheel 11 of suitable diameter is radially flanged, as at *e*, and centrally bored to loosely receive the spindle *d*, whereon it is held to rotate by a cross-pin *g* or other means.

The improved box-bearing for the support of the standard 10 on the rear section 6 of the tongue consists of an angle-plate 12, fitted upon the tongue-section so as to have contact with one side and bottom surface thereof. It may here be explained that if the harvester or grass-cutting machine having the improvement is adapted for cutting at the left-hand side, as shown in the drawings, the angle-plate will be seated upon the tongue on the right-

hand side, as represented, but for a right-hand cutting-machine will be seated on the left-hand side of the tongue, having its upright member secured to the tongue by bolts h , the angle-plate being further secured in place forward of the diagonal brace-rod 8 by means of bolts h' , that pass vertically through the tongue and through alined holes in the bottom member of the angle-plate. It is preferred to employ a single washer-plate h^2 , which seats upon the upper side of the tongue-section 6, having properly-positioned holes therein, through which the bolts h' are inserted, so that the angle-plate will be very firmly secured in place when the nuts on the ends of the bolts are properly adjusted.

Upon the upright member of the angle-plate 12 near its center of length a box projection 12^a is formed, having a longitudinal bore therein for the reception of the journal portion of the standard 10.

Two collars i are mounted upon the standard 10, one above and one below the box-body 12^a, and secured thereon, so as to have loose contact with the ends of said box, by set-screws i' .

A rock-arm 13 is secured on the upper end of the standard 10 by a set-screw m and projects forward and outward at the right-hand side of the tongue, as shown in Fig. 1.

Upon the tongue-section 6 a post 14 is erected near the stay-piece 9, and in a perforation formed in the post near its upper end a swivel-eyebolt n is loosely secured.

A coiled spring 15 of proper tensional strength is loosely secured by its ends respectively to the outer end of the rock-arm 13 and the eye of the bolt n .

As shown in Fig. 2, the flange e on the wheel 11 is formed on the edge of its periphery farthest from the box 12^a, and, as clearly represented in said figure, the bend of the standard 10 inclines the spindle d and traction-wheel, so as to project the portion of the flange that is uppermost away from the box that supports the same.

On the tongue at a proper point a double-tree and swingletrees B B' are held as usual, these appearing in dotted lines in Fig. 1.

Assuming that draft-animals have been hitched to the swingletrees B' and that the machine has been transferred to a field for harvesting standing grain, the operation is as follows:

The tension and length of the spring 15 permit the arm 13 to project forward at an angle from the outer face of the wheel 11 and

the latter to travel in a plane parallel with that of the tongue when there is no side draft on said tongue, due to cutting grain.

When the machine is cutting, as it moves forward the embedment of the flange e in the soil will counteract the side draft, due to resistance to forward movement caused by the pressure of the sickle-bar on the standing grain, and the spring will hold the wheel for effective service in counteracting side draft.

When the machine is turned to begin another swath, the wheel 11 will travel freely in a plane parallel with the tongue and permit the free movement of the machine during the turning operation; but when the machine resumes the cutting operation the tendency of the tongue to veer to the left is effectively prevented by the improved tongue-support and side-draft check.

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

1. The combination with a harvester-tongue, a bent standard held to rock on the tongue, and a flanged wheel rotatably mounted on the bent lower portion of the standard, of a rock-arm on the upper end of the standard, and a check-spring adapted for controlling the rocking movement of the arm.

2. The combination with a harvester-tongue, a bent standard having a straight upper portion held rotatably and upright on the tongue, and a flanged wheel rotatably mounted on a spindle projected laterally from the lower end of the standard, of a rock-arm on the upper end of the standard inclined outward and forward at one side of the tongue, a post on the tongue near its rear end, and a spring extended taut between the post and outer end of the rock-arm.

3. In a device of the character described, the upright standard held to rock on the harvester-tongue, the laterally and forwardly projected arm on the upper end of the standard, the flanged traction-wheel held to rotate on a spindle laterally projected from the lower end of the standard, and the coiled retracting-spring extended taut between the outer end of the arm and the rear portion of the tongue.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL F. ORTMAN.

Witnesses:

EUGENE VANDERPOORTEN,
L. H. BARON.