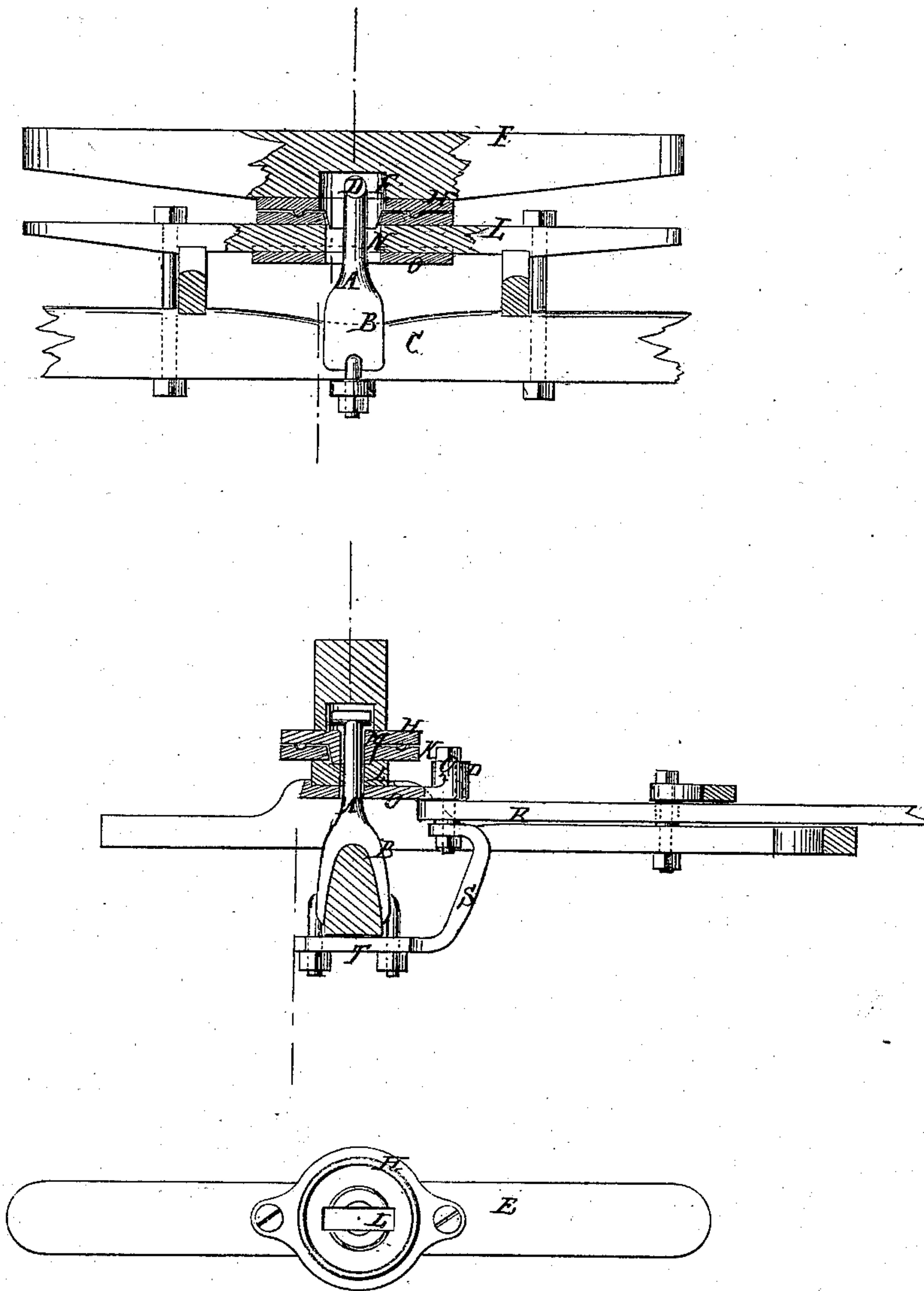


L. T. SWARTWOUT.

King Bolt.

No. 113,595.

Patented Apr. 11, 1871.



Witnesses:

Cas. Nida.
J. S. McGabe

Inventor:

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UNITED STATES PATENT OFFICE.

LEE T. SWARTWOUT, OF LOCKE, NEW YORK.

IMPROVEMENT IN KING-BOLTS FOR WAGONS.

Specification forming part of Letters Patent No. **113,595**, dated April 11, 1871.

To all whom it may concern:

Be it known that I, LEE T. SWARTWOUT, of Locke, in the county of Cayuga and State of New York, have invented a new and useful Improvement in Wagons, &c.; 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 drawing, forming part of this specification.

My invention relates to a new way of constructing a king-bolt by forming an oblong head at the top, which is lengthwise in the same plane with the prongs of a bifurcated clip formed on the lower end. By this means the head is inserted in a slot or slots elongated in the line of movement of the wagon, then turned, and the fork brought astraddle the axle, when the bolt is fixed firmly in position.

Figure 1 is a side view of the king-bolt and axle, and a section of the sand-board, bolster, and plates. Fig. 2 is a transverse section on the line *xx*, and Fig. 3 is a plan of the bottom of the bolster and the plate attached to it.

Similar letters of reference indicate corresponding parts.

A is the T-headed king-bolt, having a clip, B, at the bottom for attaching to the axle C, so as not to require a hole through it.

The T-head D enables me to make the connection with the bolster E also without making a hole through it, instead of which I make only a recess, F, in the bottom about as deep as the thickness of the T-head, thereby preserving its strength considerably. The said head is arranged with its major axis in the

direction of the transverse axis of the bolster, and it is confined in place by a plate, H, attached to the bolster, and having a slot, I, through it in the direction of the long axis of the bolster, so that the latter, being turned across the axle, will admit the head to pass through the slot to the recess, and, being turned around parallel with the axle, the T-head cannot escape.

K is a plate attached to the sand-board L, for a seat for plate H. It has a large hole for the reception of a boss, M, on the under side of plate H, which is employed to give a long bearing on the king-bolt. This hole also admits of putting the plate on the king-bolt over the T-head.

The sand-board has a slot, N, for the T-head to pass through, and to the lower side a plate, O, is attached, which has a rearward projection, P, for the support of the pivot-bolt Q for the reach R; and for the support of this bolt at the lower end I provide the extension S of the cross-bar T, as shown. This gives a very firm support to the pivot-bolt, and it prevents the vertical oscillation of the axle to a considerable extent.

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

A king-bolt for wagons, having the oblong head D and the bottom prongs, B, arranged in the same plane, as and for the purpose specified.

LEE T. SWARTWOUT.

Witnesses:

B. V. GREEN,
WM. R. HUMPHREY.