L. D. HARVEY.

Tongue-Support.

No. 68,983. Patented Sept. 17, 1867.

Fig. 1.

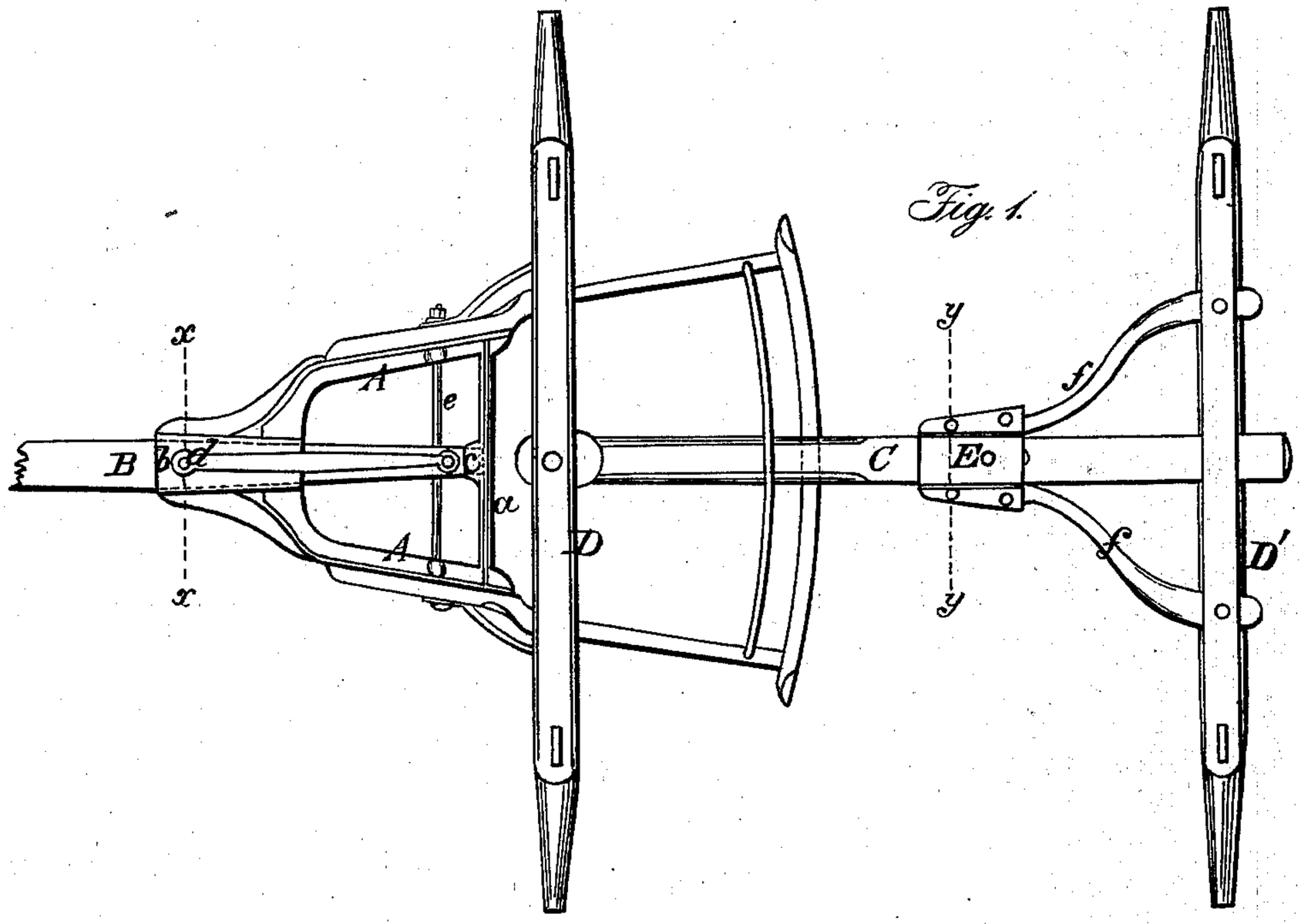

Fig. 2.

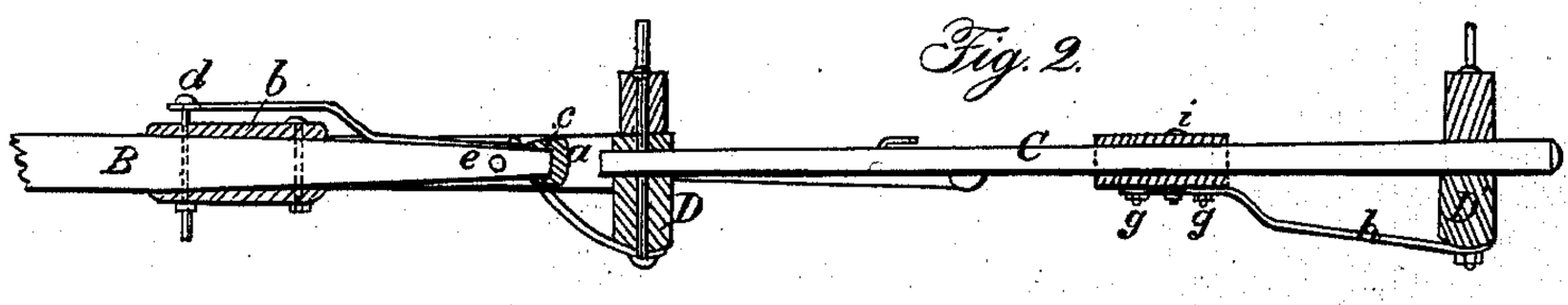

Fig. 3.

Fig. 4.

Witnesses:

Geo. P. Southern

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per

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L. D. HARVEY, OF HARVEY, MICHIGAN.

Letters Patent No. 68,983, *dated September* 17, 1867.

IMPROVEMENT IN WAGONS.

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, L. D. HARVEY, of Harvey, in the county of Marquette, and in the State of Michigan, have invented a new and useful Improvement in Wagons; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 represents a plan or top view of this invention.

Figure 2 is a longitudinal vertical section of the same.

Figure 3 is a transverse section of the tongue, the line *x x*, fig. 1, indicating the plane of section.

Figure 4 is a similar section of the reach taken in the plane indicated by the line *y y*, fig. 1.

Similar letters indicate corresponding parts.

This invention consists in making the tongue-hounds and socket for receiving the tongue all in one solid piece of cast or malleable iron, or any other suitable material, said piece being fastened to the wood-work by suitable bolts, in such a manner that a strong and durable connection between the tongue and the truck of the wagon is effected, and in case the tongue breaks it can be readily removed and replaced by a new one without much loss of time, and without expense for blacksmith's work.

It consists further in a clasp for the rear hounds, made in two pieces, either of cast or malleable iron, and provided with sockets to receive the reach and the ends of the hounds in such a manner that a firm and durable connection for the hounds is obtained, and at the same time the reach is adjustable for any required length of the wagon.

A A represent the tongue-hounds, which are connected near their rear ends by a cross-bar, *a*, and at their front ends by a tubular head, *b*, the hounds, the cross-bar, and the tubular head being all cast in one solid piece, by preference of malleable iron. The tubular head *b* forms a socket, through which the tongue B passes, and the cross-bar *a* is provided with a step, *c*, to receive the rear end of said tongue. A pin or screw-bolt, *d*, which passes through the head *b* and through the tongue, serves to retain the latter firmly in position, and, if desired, the screw-bolt *d* may also be used to form the fulcrum for the double-tree. The tongue-hounds are connected to the wood-work by a screw-rod, *e*, which also passes through the tongue, and by these means a cheap, strong, and durable support for the tongue is obtained; and if the tongue should break, it can be easily taken out and replaced by a new one, without necessitating any expense for blacksmith's work, and with little loss of time. C is the reach or perch which connects the front axle D with the rear axle D′. From said rear axle extend the hounds *f*, the ends of which are secured in the clasp E. This clasp is made of cast iron or, by preference, of malleable iron, and it is constructed of two parts, which, when put together, form three sockets, two for the purpose of receiving and retaining the ends of the hounds *f*, and the middle one to admit the reach C. The two parts of the clasp are secured together by screw-bolts *g*, which pass through the ends of the hounds and through braces *h* extending from the clasp to the rear axle. The reach passes freely through the middle socket of the clasp, and it is held in position by a pin or bolt, *i*. When this bolt is removed the reach can be easily adjusted to the length of the wagon desired. If the reach breaks, it can be easily withdrawn from the clasp and replaced by a new one.

By this arrangement great strength and economy are effected in the connections between the reach and the hind-axle, and only a shallow recess is required in said hind axle to form a guide for the reach, thus preserving nearly the entire strength of said axle.

What I claim as new, and desire to secure by Letters Patent, is—

Making the tongue-hounds A A, with the cross-bar *a* and tubular head *b*, all out of one solid piece, substantially as and for the purpose described.

L. D. HARVEY.

Witnesses:

BEN. W. WRIGHT,

W. G. BOSWELL.