

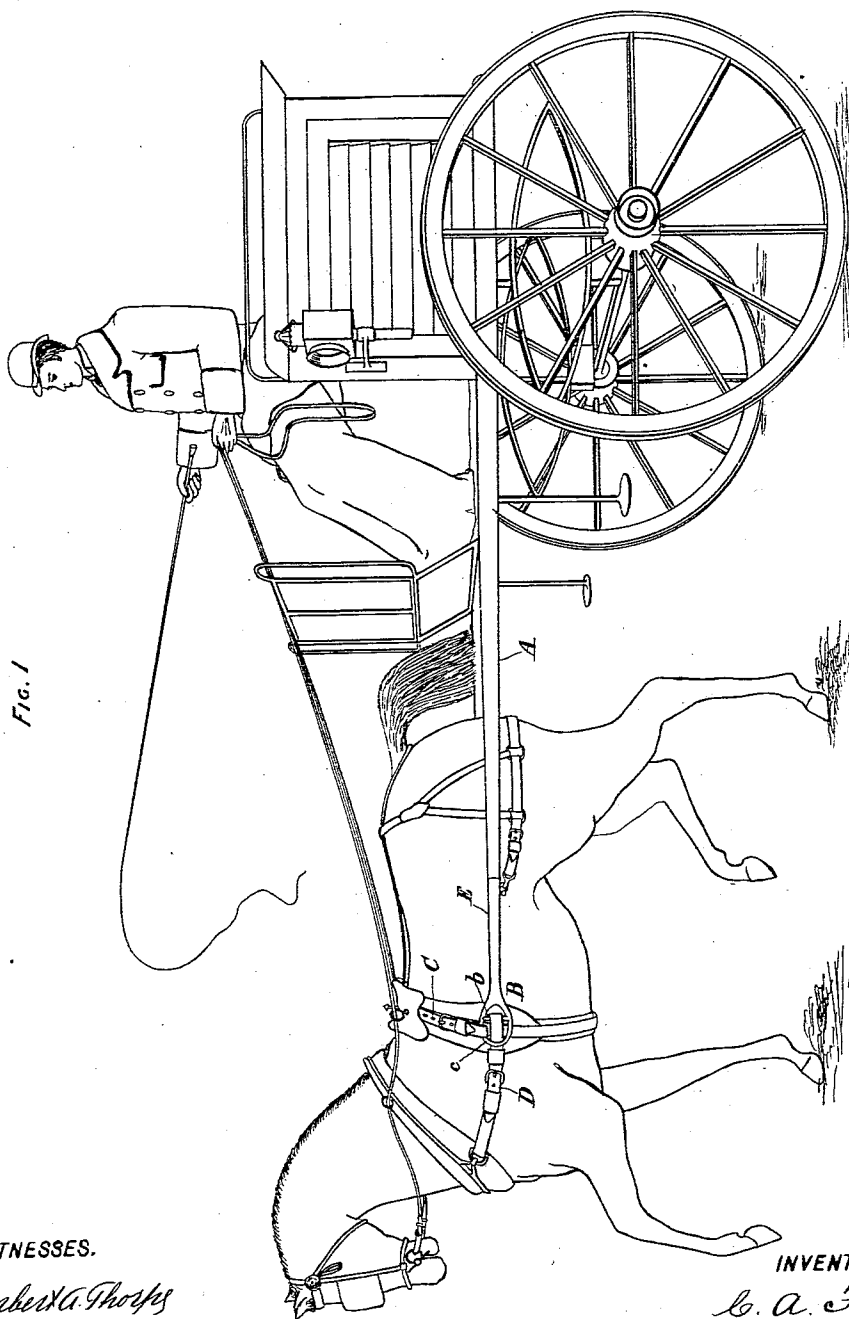
(No Model.)

2 Sheets—Sheet 1.

C. A. FLOYD.
VEHICLE SHAFTS.

No. 557,793.

Patented Apr. 7, 1896.



WITNESSES.

Herbert A. Phelps

J. M. Hanaford

INVENTOR:

C. A. Floyd.

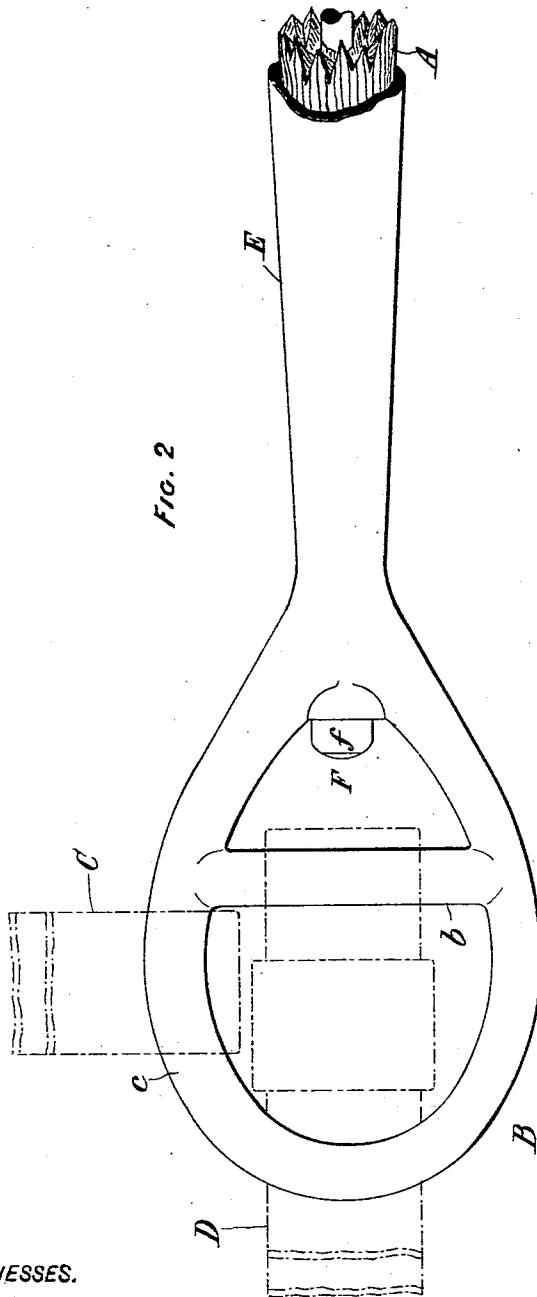
BY

Mumby
ATTORNEYS

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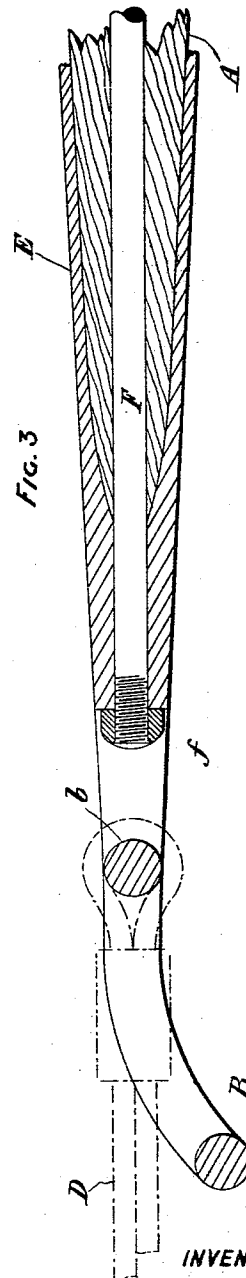
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WITNESSES.

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UNITED STATES PATENT OFFICE.

CHARLES ASHBURNHAM FLOYD, OF LONDON, ENGLAND, ASSIGNOR TO
WILLIAM ALFRED BROMWICH, OF SAME PLACE.

VEHICLE-SHAFTS.

SPECIFICATION forming part of Letters Patent No. 557,793, dated April 7, 1896.

Application filed January 3, 1896. Serial No. 574,279. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ASHBURNHAM FLOYD, gentleman, of 12 St. James Square, London, S. W., England, have invented a new and useful Improvement in the Shafts of Vehicles, of which the following is a full, clear, and exact description.

This invention relates to improvements in the shafts of vehicles and to the harnessing of draft-animals thereto; and it has for its principal object, besides the improvement of the appearance of the vehicle and the simplification of the harness, to avoid the danger, in the case of a collision, of the projecting ends of the shafts causing injury to any other animal that may be run into.

The end portions of vehicle-shafts, which extend forward beyond the loops carried by the back-band, are not only a source of the danger just referred to, but are quite useless either for the purpose of harnessing the animal or for guiding the vehicle, and my invention has for its object to dispense with the projecting ends of the shafts, and also to obtain other advantages, which will be apparent from the description.

The invention will be described with reference to the accompanying drawings, forming part of this specification, wherein—

Figure 1 illustrates, by a perspective side view of a gig, the construction of my improved shaft end and the mode of harnessing the horse thereto. Figs. 2 and 3 are respectively a side view and horizontal section of my improved shaft end on a larger scale.

Similar letters of reference denote like parts in all the figures.

The invention consists mainly in making each shaft A terminate in a looped end or eye B, the shafts being only of such length that the looped end or eye B will come opposite the side panel of the back pad in position for attachment of the back-band C. The attachment of the back-band C to the loop may be effected by passing the end of the back-band through the loop, lapping it around the upper member c thereof and buckling it, as shown, or in any other convenient way, the

usual closed loops or tugs being, of course, unsuitable.

The looped end B of the shaft is made by forging and is strengthened by a cross-stay b, which serves as a stop for the back-band and also forms the point of attachment for the trace D. The traces are consequently very much shortened, the draft strain being applied directly to the front end of the shafts, instead of at a point farther back, although it is to be observed that the adoption of my improved shaft end does not preclude the use of the ordinary long traces, if these be preferred. In the event of long traces being used, the cross-stay b is not required, unless for strengthening the loop B.

Fig. 1 shows the short trace D attached to an ordinary collar, but it will be obvious that the latter might be replaced by a breast-collar and short traces.

Figs. 2 and 3 show the preferred form for the looped end B of the shaft, the front or bowed part of the loop being preferably curved outward, as shown in Fig. 3, so as to give clearance-room for the trace D, which passes behind it, as shown, and also forming a convenient point of attachment for the trace from the leading horse when driving tandem. The looped end B is conveniently attached to the shaft by a socket E, wherein the point of the shaft is received, and which may be secured to the shaft by cross-rivets or by means of a longitudinal bolt F, fixed in the shaft by cross-pins or otherwise and securing the socket and loop by a nut f.

In addition to the advantages already mentioned, the following are obtained by my improved shaft end, viz: The end of the shaft cannot catch in the collar, reins, or traces, or injure the collar by rubbing against it, and in case of a horse falling there are no shaft ends to be broken off and the animal can be more easily unharnessed.

The invention is applicable to the shafts both of two-wheeled and four-wheeled vehicles.

I claim—

1. The herein-described improvement in

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the shafts of vehicles, which consists in providing the front end of each shaft with a terminal loop or eye in position for the attachment thereto of the back-band, substantially
5 as and for the purpose specified.

2. The herein-described improvement in the shafts of vehicles, which consists in providing the front end of each shaft with a terminal loop or eye in position for the attach-

ment thereto of the back-band, the loop being 10 provided with a cross-stay for the attachment thereto of the trace, substantially as specified.

Signed by the said CHARLES ASHBURNHAM FLOYD.

CHARLES ASHBURNHAM FLOYD.

In presence of—

WM. CLARK,

WALTER J. SKERTEN.