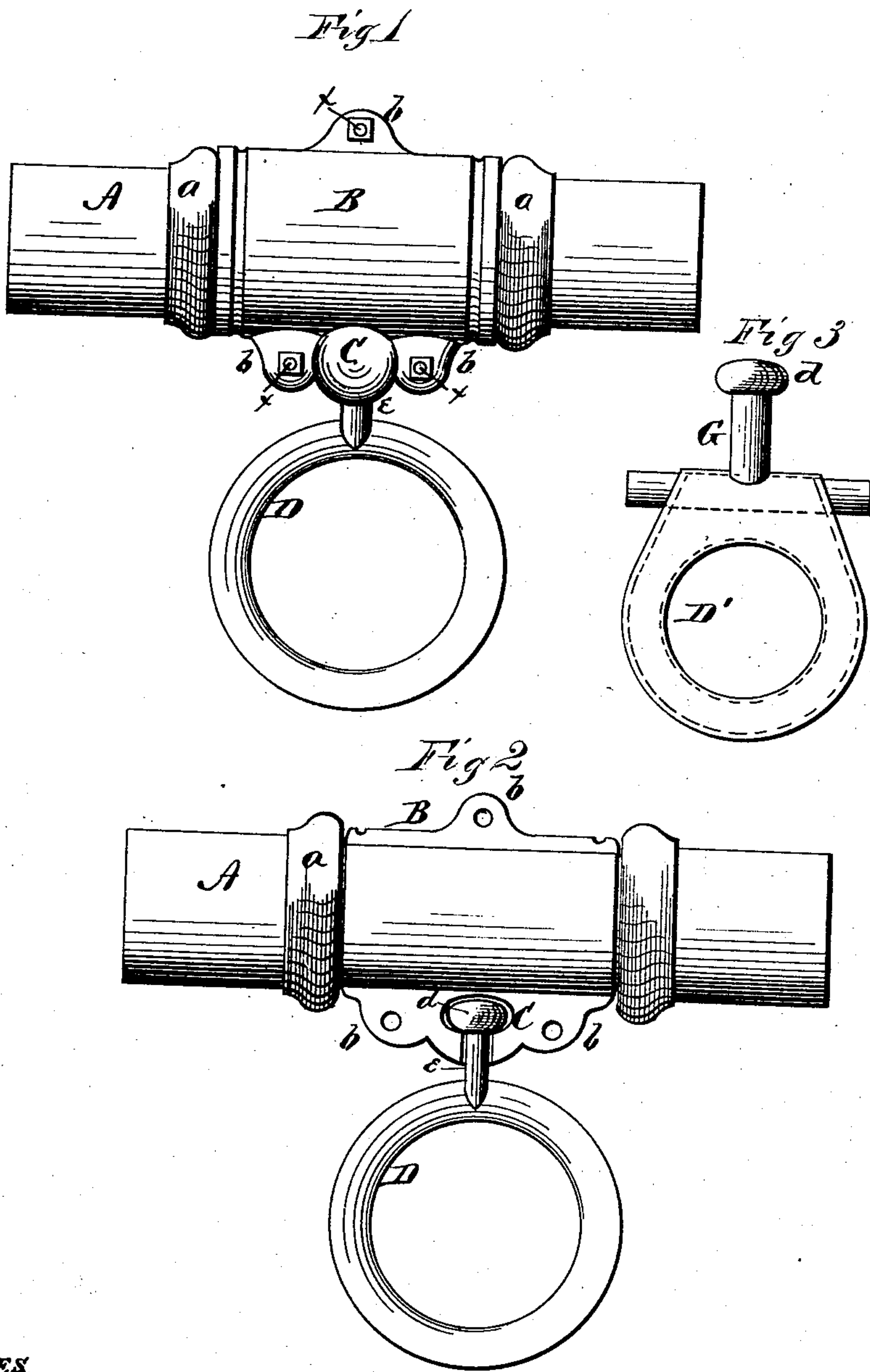


L. BIDDLE.  
Neck-Yokes for Vehicles.

No. 155,064.

Patented Sept. 15, 1874.



WITNESSES.  
Francis L. Quaint  
C. L. Everett.

By

INVENTOR  
Lepold Biddle  
Hanson & Mason  
Attorneys.

# UNITED STATES PATENT OFFICE.

LEOPOLD BIDDLE, OF KNOXVILLE, IOWA.

## IMPROVEMENT IN NECK-YOKES FOR VEHICLES.

Specification forming part of Letters Patent No. **155,064**, dated September 15, 1874; application filed February 4, 1874.

*To all whom it may concern:*

Be it known that I, LEOPOLD BIDDLE, of Knoxville, in the county of Marion and in the State of Iowa, have invented certain new and useful Improvements in Neck-Yokes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a neck-yoke, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view of my neck-yoke. Fig. 2 is a view of the same with one-half of an exterior metal tube removed. Fig. 3 shows a modification of my invention.

A represents the central part of a neck-yoke for a buggy or wagon, provided with circumferential flanges or offsets *a a*. Between the flanges *a a*, around the neck-yoke A, is placed a tubular socket, B B, of proper thickness and strength, which is made in two longitudinal halves, fastened together by means of rivets or bolts *x x*, passed through projecting ears *b b* on the same. In the center, on one side of the socket B B, is formed a housing, C, one-half of which projects from each half of the socket. This housing is large enough to admit and retain the head *d* formed on the end of a shank, *e*, which projects from a ring, D. The fitting is done loosely enough to permit fair and sufficient play of the ring D.

This ring is intended to hold the tongue or pole of the vehicle, and the unevenness of the ground or movement of the horses does not

cramp, twist, or otherwise strain the ring, the head *d* giving all necessary motion.

This device is made of malleable iron, making it cheaper and more durable than the leather or wrought-iron centers now in use. Being more durable, it is safer, avoiding accidents to teams or persons. The part which bears the most strain (the ring and ball-joint) when found deficient or worn, can be replaced at little or trifling cost by a new ring; or when any part is broken, that particular part can be replaced without casting away the whole device.

Persons who desire to use a leather ring instead of an iron one on the pole or tongue can use the leather ring D', (shown in Fig. 3,) in which is secured a T-shaped iron, G, having the ball or head *d* formed on its outer end.

In securing this neck-yoke center, the wooden yoke A is not weakened by boring holes through it.

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

1. The longitudinally-bisected tube B B, secured on the neck-yoke A, and provided with a housing, C, in combination with a ring having a projecting shank, with head *d* on its outer end, substantially as and for the purposes set forth.

2. The leather ring D', with T-shaped iron G, having head *d* on its outer end, in combination with the bisected tube B, with housing C, and the neck-yoke A, substantially as and for the purposes set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 15th day of January, 1874.

Witnesses: LEOPOLD BIDDLE.

W. H. GARRISON,

W. M. STONE.