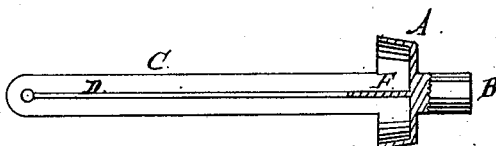
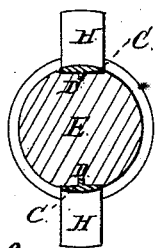
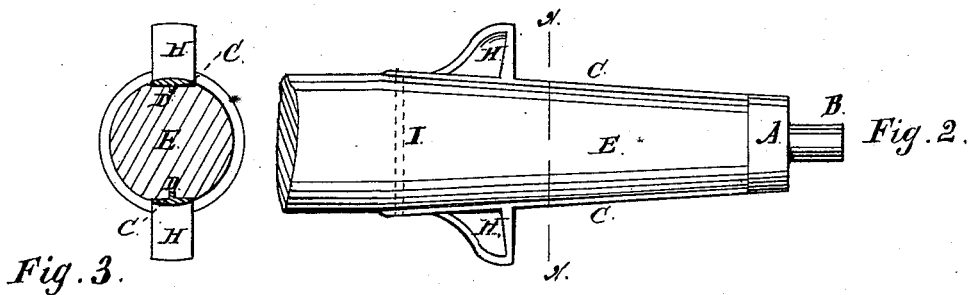
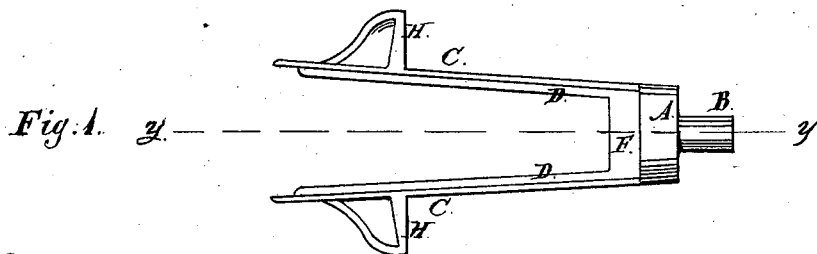


J. A. ELLIS.
Axle-Skein.

No. 161,603.

Patented April 6, 1875.



Witnesses:

Heinrich F. Bennis
Lewis L. Coburn

Inventor:

J. Alder Ellis

UNITED STATES PATENT OFFICE.

J. ALDER ELLIS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN AXLE-SKEINS.

Specification forming part of Letters Patent No. **161,603**, dated April 6, 1875; application filed January 5, 1875.

To all whom it may concern:

Be it known that I, J. ALDER ELLIS, of Chicago, in the county of Cook, State of Illinois, have invented an Axle-Skein, of which the following is a specification:

My invention is more especially adapted to be used on axles for agricultural implements and light vehicles.

My invention consists in the special construction of the axle-skein, as hereinafter fully described.

In the annexed drawing, Figure 1 represents a side elevation of the axle-skein detached from the axle. Fig. 2 represents the same attached to the end of an axle. Fig. 3 represents a transverse sectional view taken at the line *x x* in Fig. 2, and Fig. 4 represents a longitudinal section at the line *y y* in Fig. 1.

I ordinarily make my axle-skein of malleable iron; and it consists of an end band, A, to which is attached a spindle, B, which holds the nut or washer to secure the wheel upon the axle. C C are two ribbed straps extending back from the band A, as shown, the ribs or flanges D fitting into grooves in the top and

bottom of the axle-spindle E. F is a center web cast in the middle of the band A, and is secured in a slot in the end of the axle-spindle. This center web serves the purpose of keeping the band from turning on the end of the spindle. H H are two lugs or shoulders, one on each of the straps C. I is a bolt passing through the ends of the straps C, holding them in place. The spindle E is made flattened at the top and bottom, so that the straps C constitute a metal bearing on the top and bottom of the spindle, and, at the same time, make the spindle of the same shape of the ordinary spindles used for similar purposes.

Having thus described the construction and operation of my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the band A, straps C C, having the ribs or flanges D D, and the shoulders H H, as and for the purposes specified.

J. ALDER ELLIS.

Witnesses:

HEINRICH F. BRUNS,
LEWIS L. COBURN.