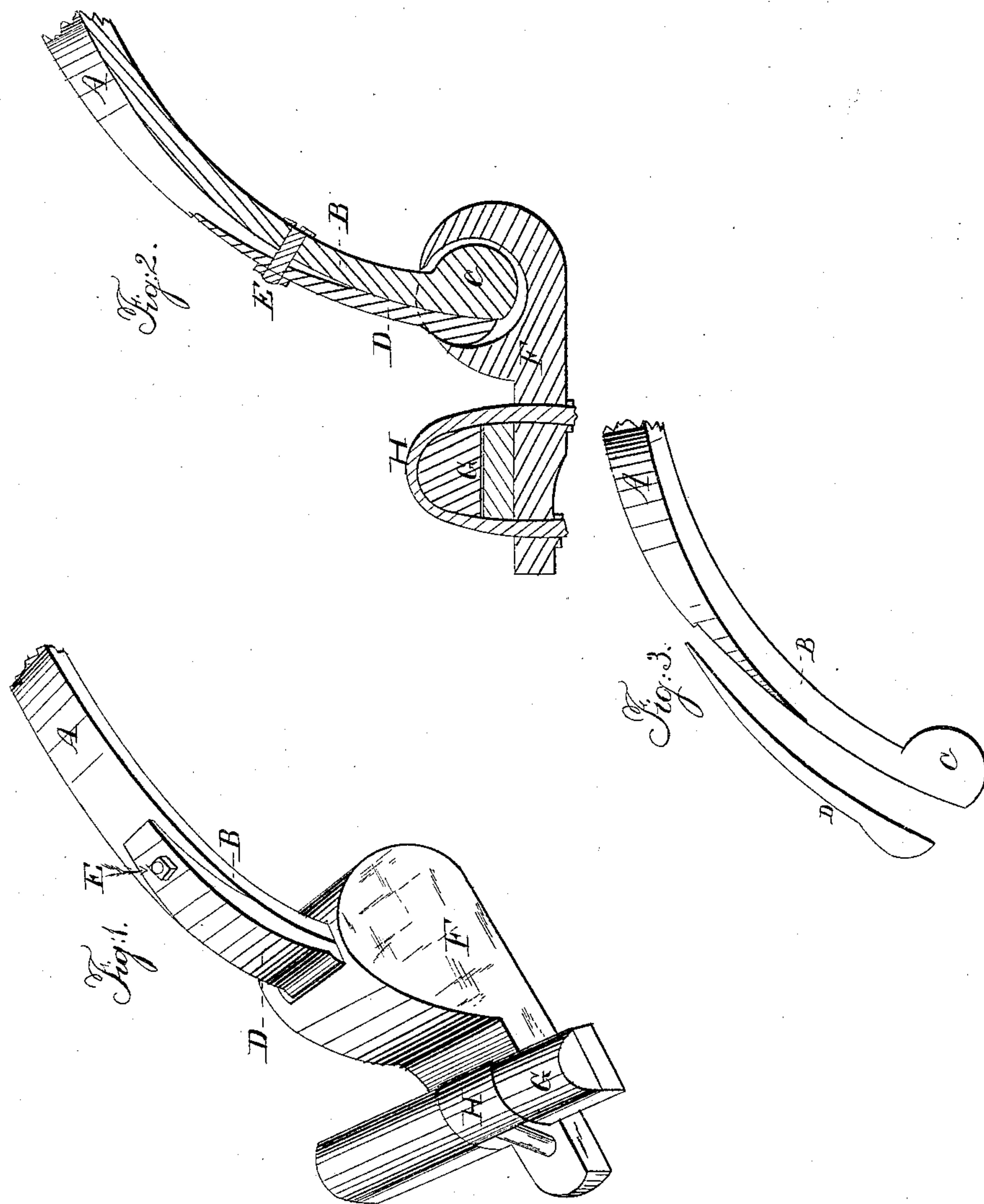


F. ODELL.
Thill-Coupling.

No. 27,562.

Patented Mar. 20, 1860.



Witnesses
C. L. Parrott
S. Keshole

Inventor
F. Odell

UNITED STATES PATENT OFFICE.

FRANCIS ODELL, OF NEW YORK, N. Y.

ATTACHING THILLS TO VEHICLES.

Specification of Letters Patent No. 27,562, dated March 20, 1860.

To all whom it may concern:

Be it known that I, FRANCIS ODELL, of the city, county, and State of New York, have invented certain new and useful Improvements in Couplings for Attaching Thills to Axles of Wagons and other Vehicles; and I do hereby declare the following to be a full description of the same.

The nature of my invention consists in the new and improved method of coupling or attaching thills to the axles of wagons or other vehicles, by means of a ball and socket joint, formed by making a ball or cylindrical head in two parts on the end of the thill irons and inserting them, when separated into the socket formed on the jack or clip holder, and then bolting them together, so as to form a solid head, incased within the cavity of the socket of a greater diameter than the opening through which they were in their detached condition admitted.

But to describe my invention more particularly I will refer to the accompanying drawings forming a part of this specification, the same letters of reference whenever they occur referring to like parts.

Figure 1, is a perspective view of the coupling as attached to the axle of the wagon. Fig. 2, is a longitudinal cut section of the coupling. Fig. 3, is a detached view of the parts forming the ball at the head or end of the thill iron.

Letter A, is the thill or shaft, and B, is the thill or shaft iron, on the end of which is formed a half cylindrical or ball like head C, so as to leave the upper face of the thill iron flat, upon which is fitted a key D, having a half cylindrical head, to match with the head formed on the end of the thill iron, to form a ball like head when the two parts are united together by means of a bolt E, or other suitable device, inserted transversely through the thill iron, key and end of the

thill, as represented in the cut section Fig. 2.

Letter F, is the jack, having on the end of it a socket head, with a small opening in its upper side, of about half the diameter of the interior of the socket, so that when the two parts of the thill iron are inserted with the socket, they can not be withdrawn again unless the bolt holding the key and thill iron together be taken out.

G, is the axle tree, combined with the jack by means of a clip H, clasp ing the axle tree, and having its ends pass through holes in the end of the jack, and secured by screw nuts in the usual way.

The operation of my invention is first to separate the key D, from the thill iron. This is then inserted into the socket through the opening in its upper side. The key is now inserted, and combined with the thill iron by means of the screw bolt E. By this means a solid cylindrical or ball like head is formed to fill the cavity of the socket which being of much greater diameter than the opening through which they were entered separately, forms a perfect coupling of the parts, and yet permits of all the requisite motion for their successful operation.

Having now described my invention, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States.

What I claim is—

The key D, or equivalent, in combination with the head C, on the end of the thill iron, and jack F, having a socket formation on its outer end as described, for the purpose of forming a coupling for attaching thills to axles substantially as hereinbefore set forth.

F. ODELL.

Witnesses:

C. L. KARRILL,
S. NICHOLS.