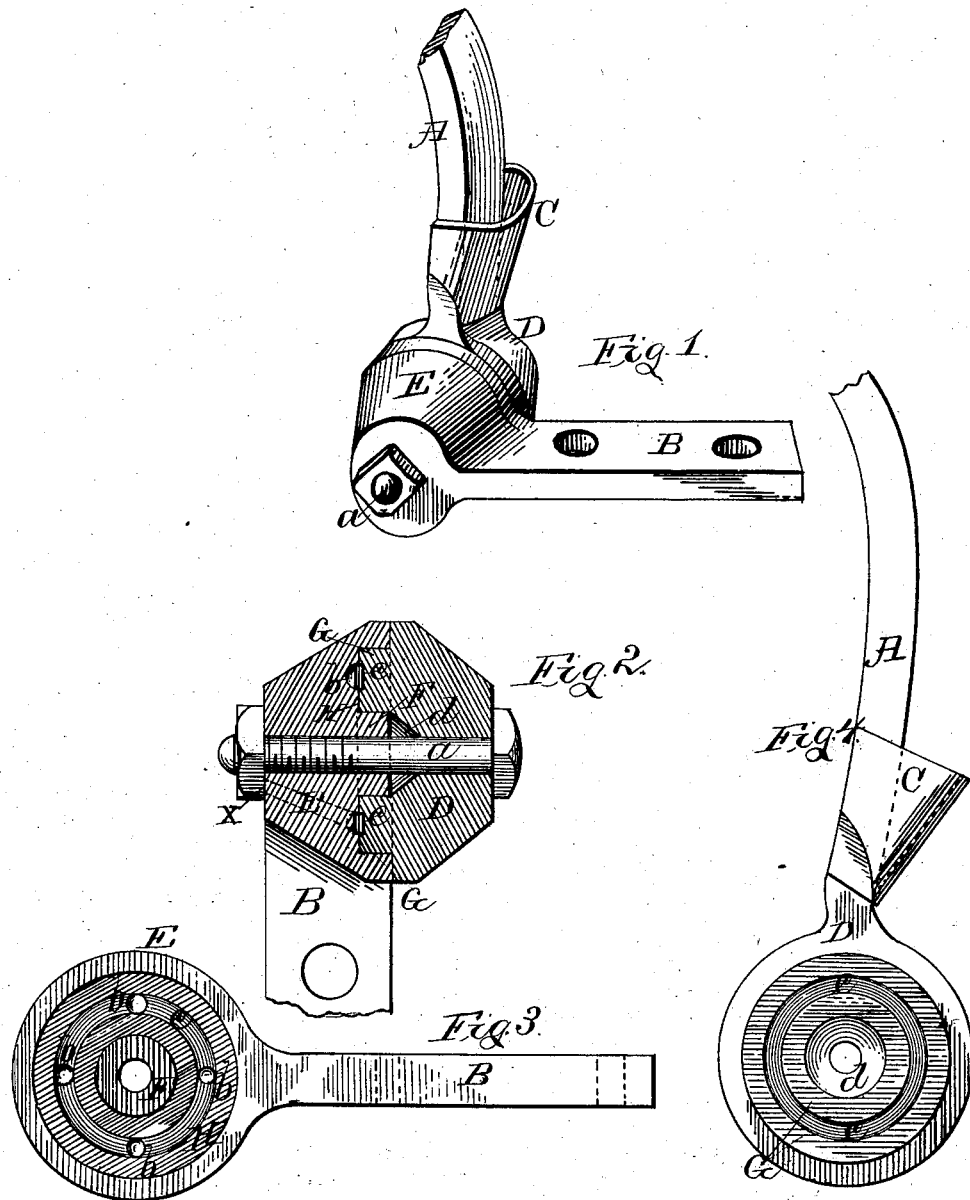


(No Model.)

A. C. KASSON.  
THILL COUPLING.

No. 260,876.

Patented July 11, 1882.



Witnesses:  
Ed. Ames  
F. H. Bottom

Inventor  
Amasa C. Kasson  
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# UNITED STATES PATENT OFFICE.

AMASA C. KASSON, OF MILWAUKEE, WISCONSIN.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 260,876, dated July 11, 1882.

Application filed October 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, AMASA C. KASSON, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to the couplings used to connect the thills to the forward axle of wagons and buggies.

It consists of a new method of forming and attaching the flexible joint used therein so as to make a strong, durable connection, and at the same time afford large bearing-surfaces and means for tightening up the joint and preventing the rattling that forms a disagreeable attendant upon the wear of the joint.

My improved device does entirely away with the necessity of using any rubber or spring.

In the accompanying drawings, Figure 1 is a view in perspective of my improved device. Fig. 2 is a vertical section, and Figs. 3 and 4 respectively are views in detail of each of the two halves of the joint.

Like letters denote like parts throughout the drawings.

A represents the curved strap attached to the under side of the thill. B is the strap attached to the under side of the wagon-axle. These terminate in the two heads D and E, which are fitted together so as to form a hinge-joint, and are connected by the bolt *a*. The head D is provided upon its inner face with an annular projection, G, and has a circular recess, *d*, at its center. The head E is provided with a circular projection, F, at its center, which fits accurately into the recess *d* in D, and with an annular recess, H, into which the annular projection G fits accurately. The parts

are held in position by means of the bolt *a*, which passes through the heads D and E at their centers. The bolt *a* is threaded and screws into one of the heads, and I usually provide a safety-nut outside to prevent the loosening of the bolt. In the face of the annular projection G, I provide an annular groove, *c*, to act as an oil well or reservoir, and in the face of head E, opposite to it, I provide small oil-wells *b b b b* by drilling shallow holes into the metal. Near the head D a thimble or pocket, C, is formed upon the strap A in such manner as to receive the end of the thill, curved to fit it, thereby holding the end of the shaft firmly, preventing it from splitting or fraying, and forming an appropriate finish. An oiling-orifice, *x*, is located so as to lead to the oil-chamber C and have its exterior opening covered by nut *a*.

In case from long use the parts wear loose the bolt can be turned up and tightened. In this manner no rubber or steel spring becomes necessary to hold the parts together and prevent shaking. It is immaterial whether the shaft-strap head D is provided with the larger projection and the head E with the larger recess, or vice versa. All that is required is to have the projecting and recessed portions large and properly fitted, so that there is in the draft of the vehicle no strain caused upon the bolt.

I claim—

The thill-coupling herein described, consisting of head D, having annular projection G, provided with annular groove *c* and central recess, *d*, and head E, having central circular projection, F, annular recess H, and oil-wells *b*, and bolt *a*, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

AMASA C. KASSON.

Witnesses:

E. H. BOTTUM,  
F. H. BOTTUM.