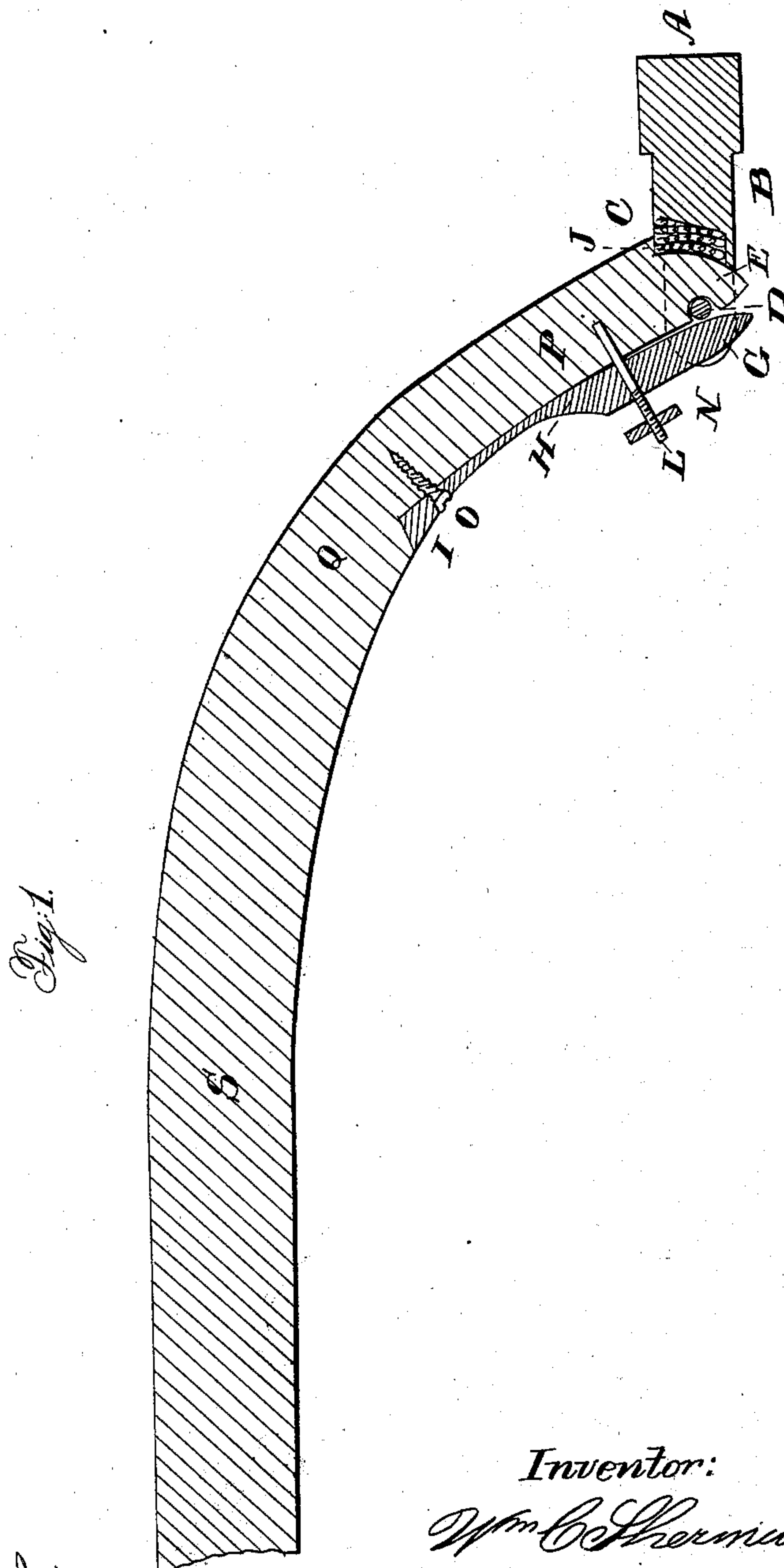
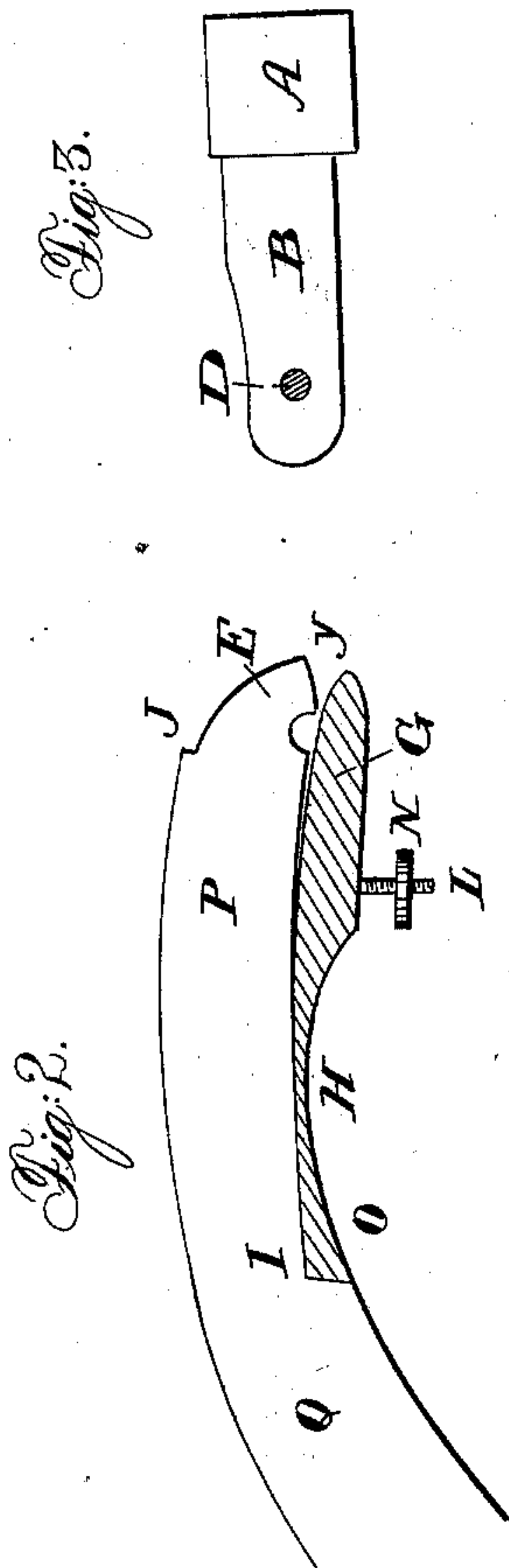


W. C. SHERMAN.

Thill-Coupling.

No. 60,071

Patented Nov. 27. 1866.



Witnesses.

John M. Buschelder
John Federken

Inventor:

Wm C Sherman

United States Patent Office.

IMPROVEMENT IN ATTACHING CARRIAGE THILLS.

WILLIAM C. SHERMAN, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 60,071, dated November 27, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM C. SHERMAN, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an "Improvement in Shaft Attachments," the same being a new and useful invention; and I do hereby declare that the following is a full and exact description of the construction and mode of use of the same, reference being had to the accompanying drawings, and to the letters and figures marked thereon.

Figure I is a vertical section of one shaft of a pair of shafts.

Figure II, vertical section of the shaft, the outer end being depressed.

Figure III represents the axle-tree, or the draw-bar to which the shafts are attached.

The object of my invention is to provide a ready and convenient mode of attaching and detaching the shafts of carriages, and at the same time insure perfect safety, the parts being so constructed that the shafts cannot be removed from the draw-bar while they are horizontal and in the position they occupy when supported at the sides of the horse. My invention is especially applicable to vehicles that are used with a pole for two horses, which requires to be taken out and two shafts put in when a single horse is to be used. Each of the two shafts is usually attached to a carriage by means of a bolt having a head at one end and a screw-nut at the other; this nut often works loose and falls off; the bolt then comes out and one of the shafts falls, thus causing serious accidents.

In my improvement the iron bolt, D, has a fixed head or projection at both ends, and is a fixture in the draw-bar, B A. The whole draught or strain comes upon this bolt, and the rear end of the shaft is in contact with it at the curved part, E, which is either a part of the shaft, S Q P, or it may be a separate piece of iron properly secured to the shaft. On its front edge there is a recess, nearly circular, to receive the bolt, D, and opposite to the recess is the free end, G, of the spring, I H G. The fixed end, I, of this spring is secured to the under side of the shaft by the screw O; and the free end is allowed to open or is held closed by the screw-bolt and nut, L N.

The draw-bar is usually made with two side pieces, which enclose the flattened end, E, of the shaft; the ends of draw-bolt D are supported in these side pieces, and the shaft can move freely on the bolt D as a centre. In the rear of the curved part, E, there is a small cavity or recess in the draw-bar to receive a small piece of India rubber, C; the small shoulder, J, formed on the shaft is just above it, and it bears against the part E and prevents jarring and noise.

When the shafts are to be put in or taken out they are depressed, as in Fig. II, the nut, N, is started back from the spring, the mouth, Y, is thrust against the bolt, D, which enters its seat in the part E; the nut, N, is then turned back against the spring and keeps the mouth, Y, closed. It will be noticed that when the shafts are horizontal the shoulder, J, compresses the India rubber, C, and makes a close fit of all the parts.

What I claim as my invention, and desire to secure by Letters Patent, is—

The hook E taking a solid bearing on the lower part of the draw-bar, in combination with spring G, shoulder J, and rubber pad C, all constructed, arranged, and operating substantially as described.

WILLIAM C. SHERMAN. [SEAL.]

Witnesses:

JOHN M. BATCHELDER,
JOHN FEDERHEN.