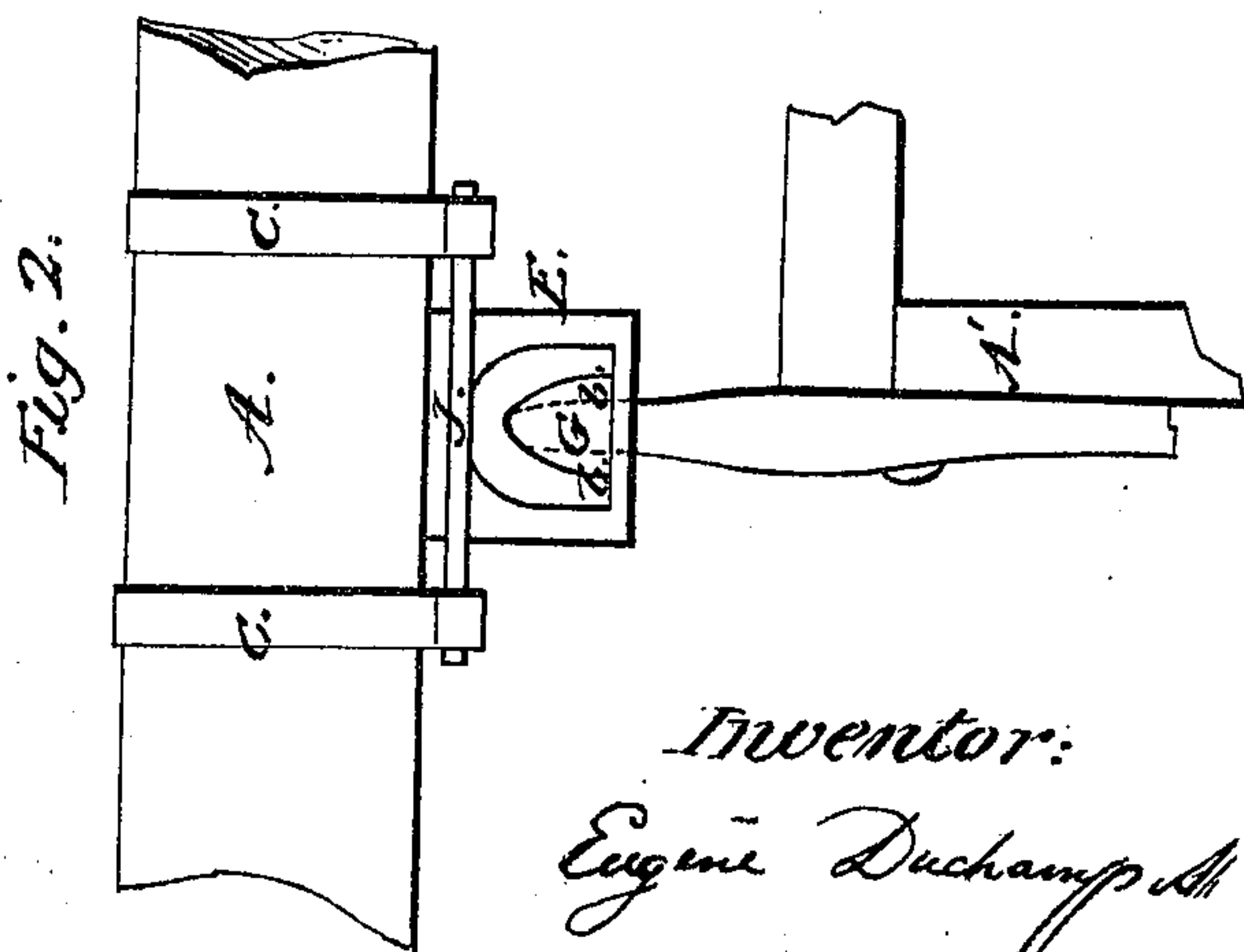
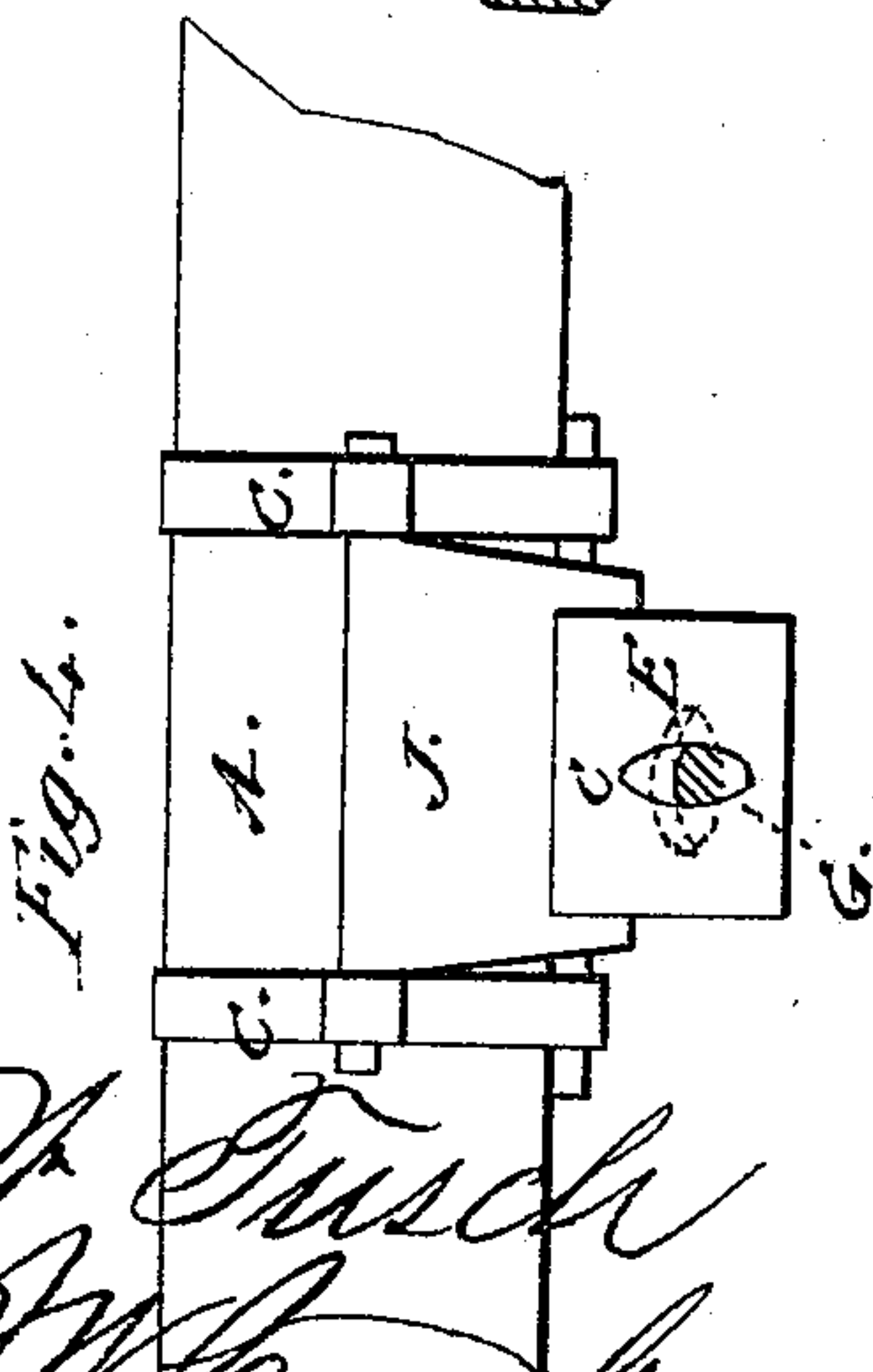
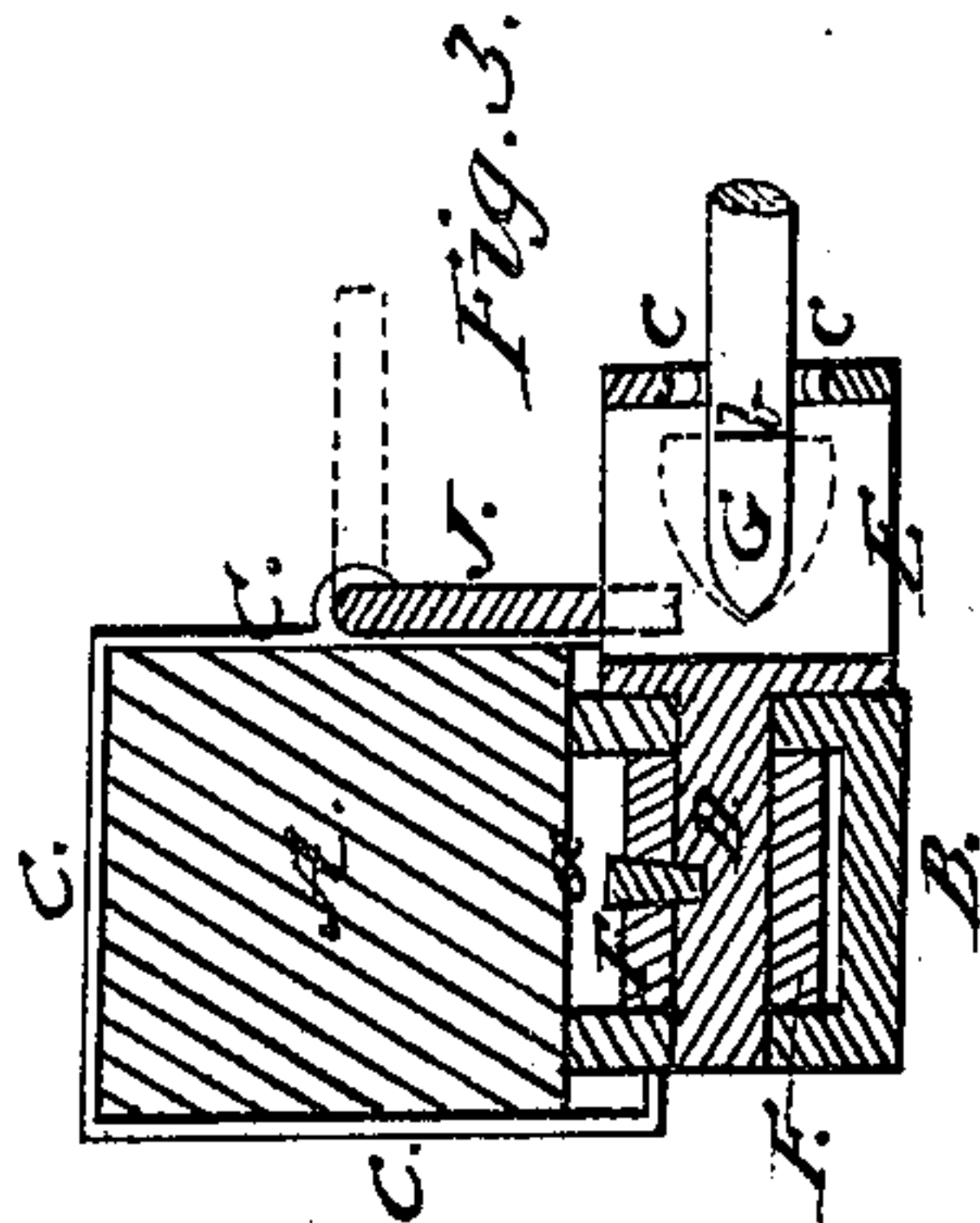
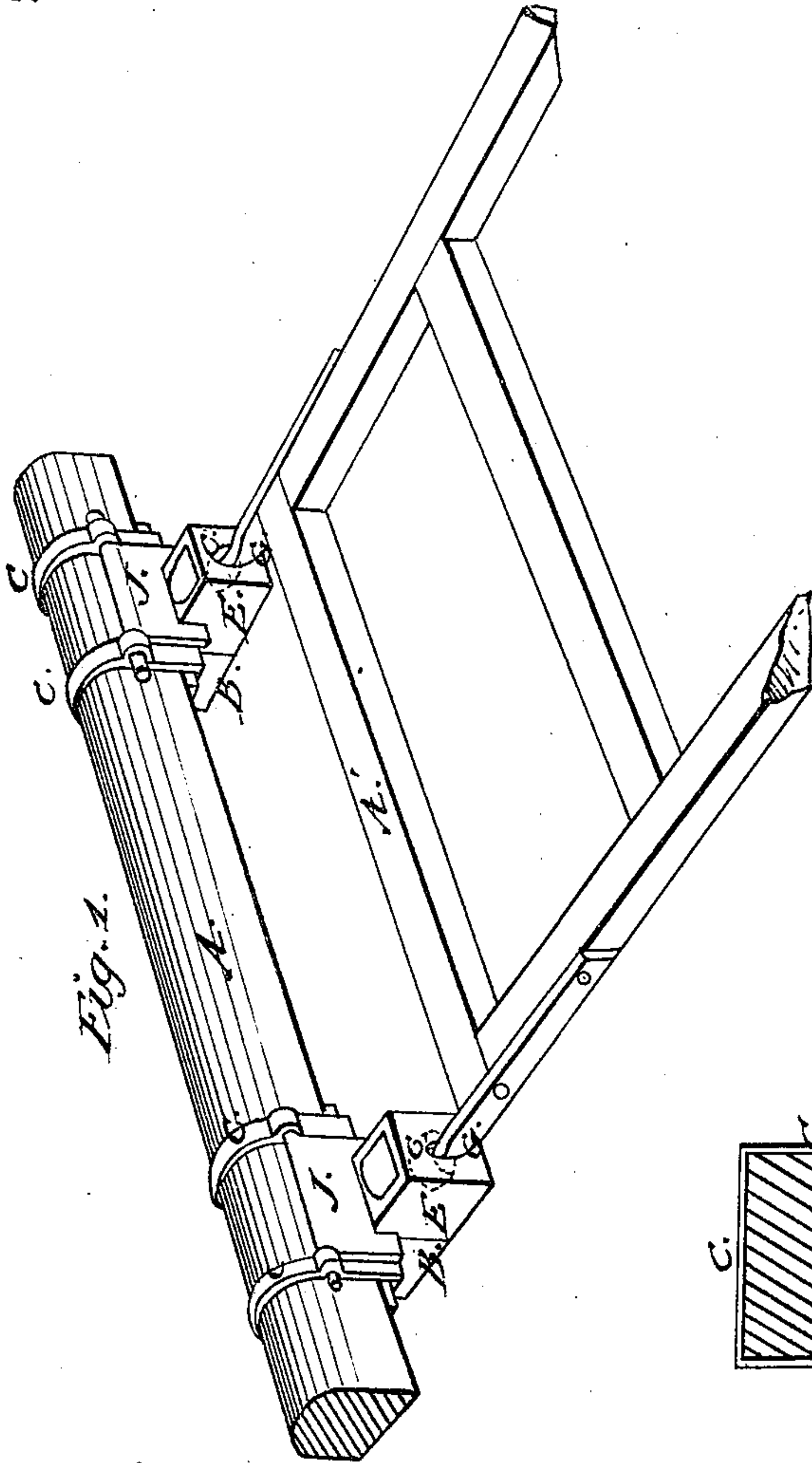


E. DUCHAMP.

Thill-Coupling.

No. 25,103.

Patented Aug 16, 1859.



Attest; *Wm. Tusch*
J. M. Coombs

Inventor:
Eugène Duchamp

UNITED STATES PATENT OFFICE.

EUGÈNE DUCHAMP, OF ST. MARTINSVILLE, LOUISIANA.

ATTACHING THILLS TO VEHICLES.

Specification of Letters Patent No. 25,103, dated August 16, 1859.

To all whom it may concern:

Be it known that I, EUGÈNE DUCHAMP, of St. Martinsville, in the parish of St. Martins and State of Louisiana, have invented
5 a new and Improved Mode of Attaching Shafts to the Axles of Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying
10 drawings and to the letters of reference marked thereon, in which—

Figure 1 represents a perspective view of the axle of a carriage with the shafts attached thereto. Fig. 2 is a top view showing the thill iron attached to the axle. Fig.
15 3 is a vertical cross section taken through the shaft and connecting box. Fig. 4 is a front view of Fig. 2 showing a portion of the thill iron in two positions in the coupling box.
20

The object of my invention is to form a ready attachment for the shafts or thills of carriages with the axle, and, at the same time, to effect a coupling, which will not be
25 liable to accidental detachment, without employing either bolts or screws.

My invention consists in attaching to the axle swivel coupling boxes, having elliptical eyes in their ends; and in forming on the
30 ends of the thill-irons fluke-shaped enlargements, which will pass freely through the eyes in the coupling boxes when the boxes are turned so that the eyes stand perpendicular to the axle; and then by turning the
35 boxes one quarter around and fixing them in this position by hinged gates, as herein-after described, the shafts will be securely attached to the axle.

A represents the front axle of a carriage;
40 A', the thills or shafts, and B, a hollow journal box, which is rigidly secured underneath the axle, A, by metal bands, C C. This box, B, serves as a bearing for the stem or gudgeon, D, of the coupling box, E, which is prevented from coming out of the
45 box, B, by a collar, F, and pin, a, yet it is free to rotate in its bearings in this box.

The coupling box, E, has an elliptical slot, c, through its end, and is made hollow
50 for the purpose of preventing the end of the

thill-iron to pass freely into the box when the slot is in the position shown by red lines in Fig. 4, but when the box is turned one quarter around, as in Figs. 1 and 2, the fluked end, G, of the thill iron is prevented
55 from coming out of this slot by the shoulders, b b, of the fluked portion.

J is a gate hinged to the metal bands on the front of the axle which when brought down over the coupling box, as shown in
60 each of the figures of the drawing, prevents this box rotating in its bearings, and consequently prevents the thill-irons from being drawn out of the coupling boxes. Then by raising the gate, J, as indicated by the
65 red lines of Fig. 3, the box, E, can be rotated, and the longer portion of the slot, c, brought parallel with the shaft when the thill-irons can be readily withdrawn from the boxes.
70

This arrangement forms a very secure and efficient coupling for the shafts of carriages, or for the pole of a wagon. The attachment being effected simply by raising
75 the gates and slightly turning the coupling boxes, and then shutting down the gate over the boxes—the detachment is by reversing the operation. The shafts have a vertical play sufficient for all purposes.

The rattling and noise occasioned by the
80 jarring of the parts may be easily obviated, in my arrangement by placing a collar of vulcanized rubber around the thill-irons close against the shoulders of the fluked ends, G, so that the traction will be upon
85 this rubber, and against the inside surfaces of the coupling boxes.

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

The combination of the swivel coupling
90 boxes, E, having an elliptical slot through their ends, thill-irons having fluked portions, G, and hinged gates, J, or their equivalents, substantially as herein shown, and for the purpose specified.

EUGÈNE DUCHAMP.

Witnesses:

R. S. SPENCER,
J. W. COOMBS.