(No Model.)

J. DESMARAIS.

THILL COUPLING.

No. 339,390. Patented Apr. 6, 1886.

Fig. 1.

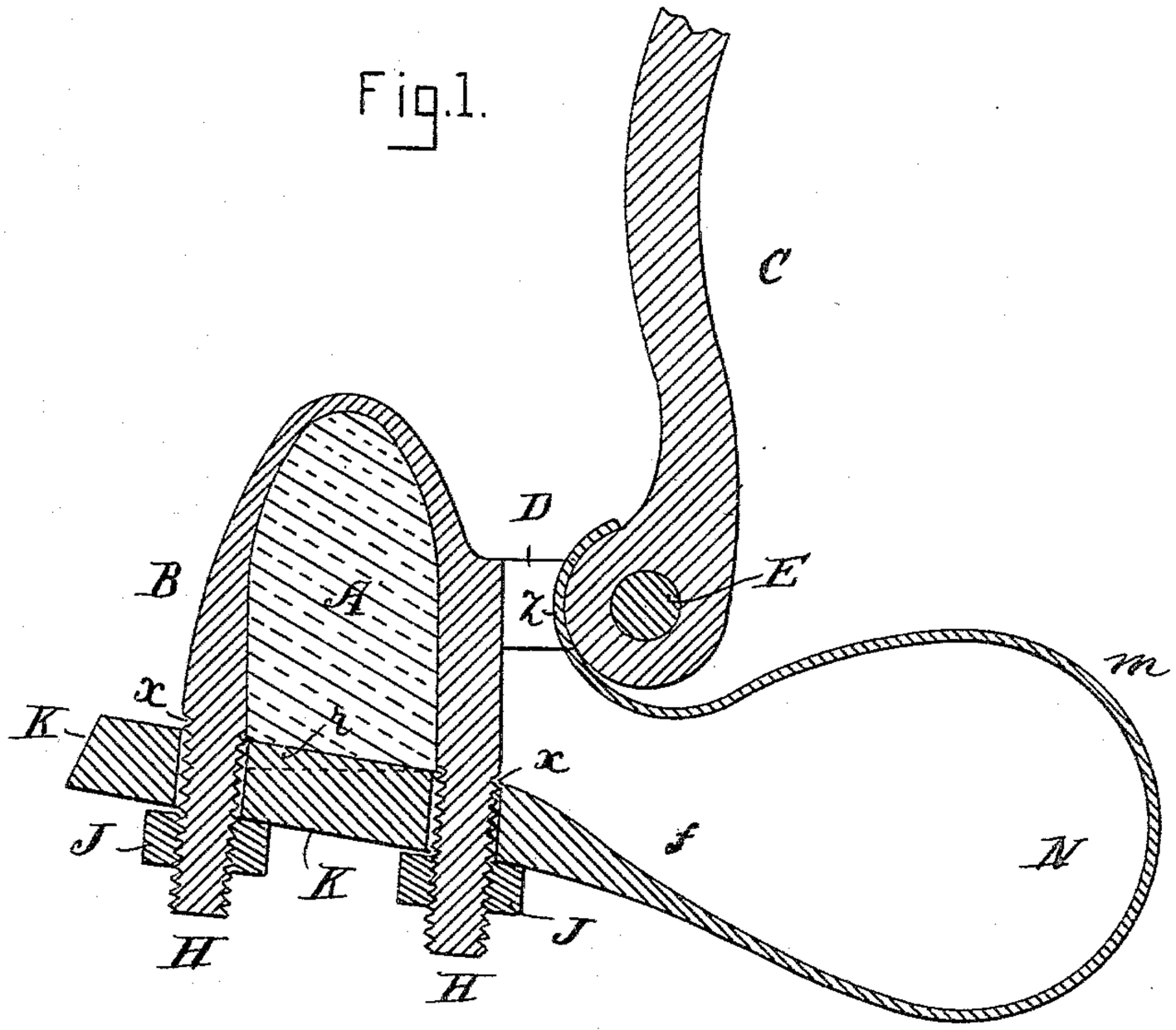
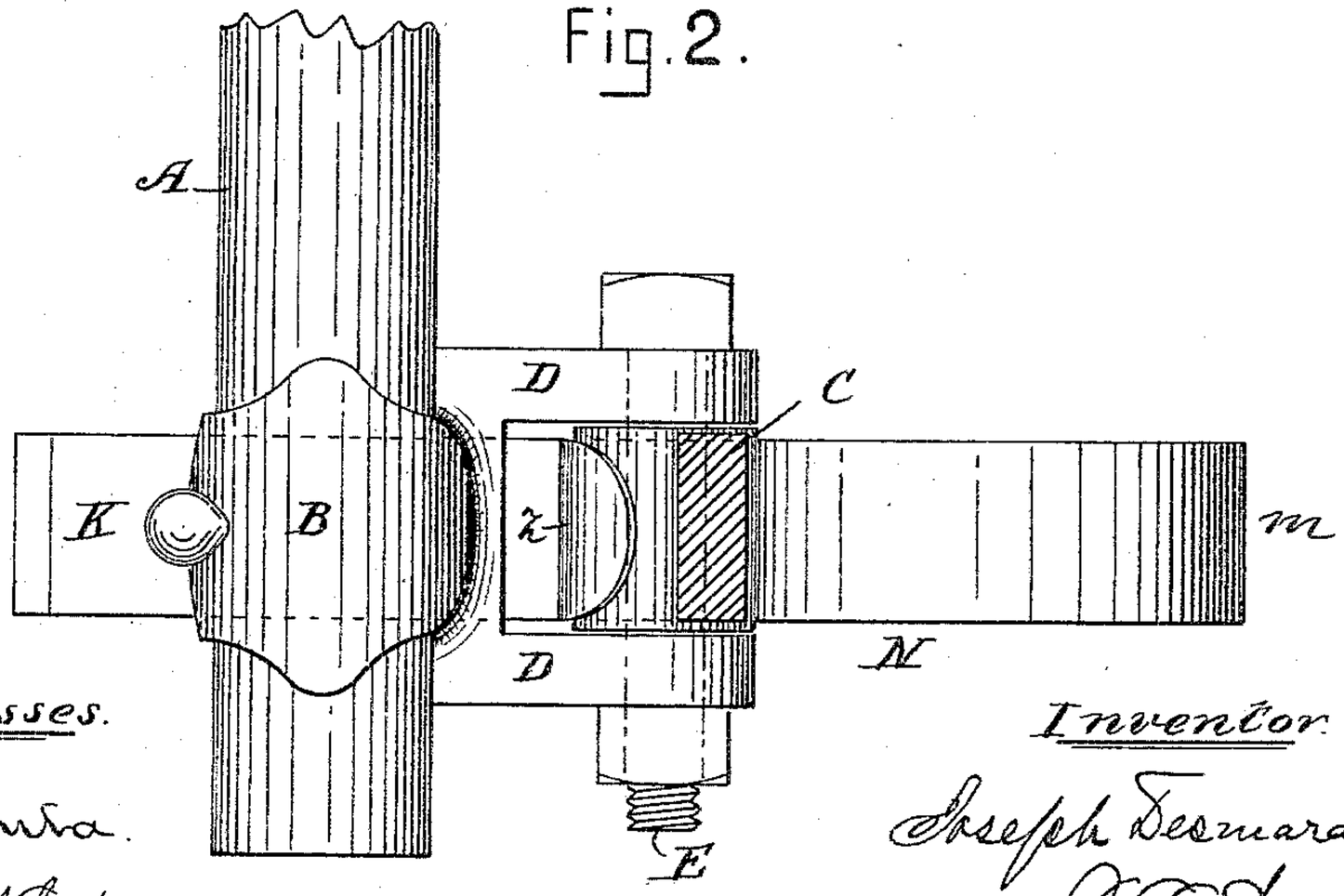


Fig. 2.



Witnesses.

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JOSEPH DESMARAIS, OF LAWRENCE, MASSACHUSETTS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 339,390, dated April 6, 1886.

Application filed November 23, 1885. Serial No. 183,671. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH DESMARAIS, of Lawrence, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Carriage-Thills, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section, and Fig. 2 a top plan view.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates more especially to means for preventing the coupling from rattling; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simpler, cheaper, and more effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the axle, B the clip, and C the thill-iron. The clip is provided in the usual manner with horizontally-projecting arms or brackets D, in which the iron C is journaled or pivoted on the bolt E in the usual manner. The clip is also constructed with a downwardly-projecting screw-threaded stud, H, at either side of the axle in the usual manner, the studs being provided with nuts J.

In attaching the clip to the axle a clamping-bar, K, provided with holes *x* is employed also in the usual manner, the studs H being inserted in said holes, and the nuts J turned in onto the bar, thereby forcing it against the lower side of the axle and firmly securing the clip thereto.

In my improved thill-coupling I construct the bar K of steel, and elongate it to form a C-shaped spring, N, the spring and bar being integral or composed of one piece of metal. This spring is curved upwardly and backwardly, its free end *z* being passed between the arms D and bent around the inner end of the iron C, as best seen in Fig. 1, the spring acting expansively and exerting a constant pressure on the thill-iron, thereby forcing it against the inner side of the bolt E and preventing it from rattling in a manner which will be readily obvious without a more explicit description.

In order that the bow *m* of the spring may drop low enough to be out of the way of the iron C when said iron is depressed, I cut out the axle A on its under side, as shown by the dotted lines *r*, thereby elevating the rear end of the bar K above the plane of its body and depressing the bow *m* accordingly. By this construction the clip B is prevented from slipping lengthwise of the axle when the clip-bar is drawn up into the recess or cut-away portion thereof, and the bar K and spring N may be formed with or without an elbow or shoulder, as desired.

I am aware that it is not new to clamp the clip-bar horizontally against the bottom of the axle and extend it into a spring, whether such spring be given a bend at its point of connection with said clip-bar or not; but in the present invention the clip-bar inclines downwardly toward the front and rests in a recess in the under side of the axle.

Having thus explained my invention, what I claim is—

In a thill-coupling, the axle A, provided with a recess in its under side inclined downwardly toward the front, the clip B, having brackets D, and the thill-iron C, pivoted in said brackets, in combination with the clip-plate K, adapted to rest in said recess, the C-spring N, integral with said clip-plate, adapted to bear against the eye of said thill-iron, and nuts J, for securing said clip-plate in place.

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