L. PENTZ.

Thill Coupling.

No. 84,212. Patented Nov. 17, 1868.

Fig. 1

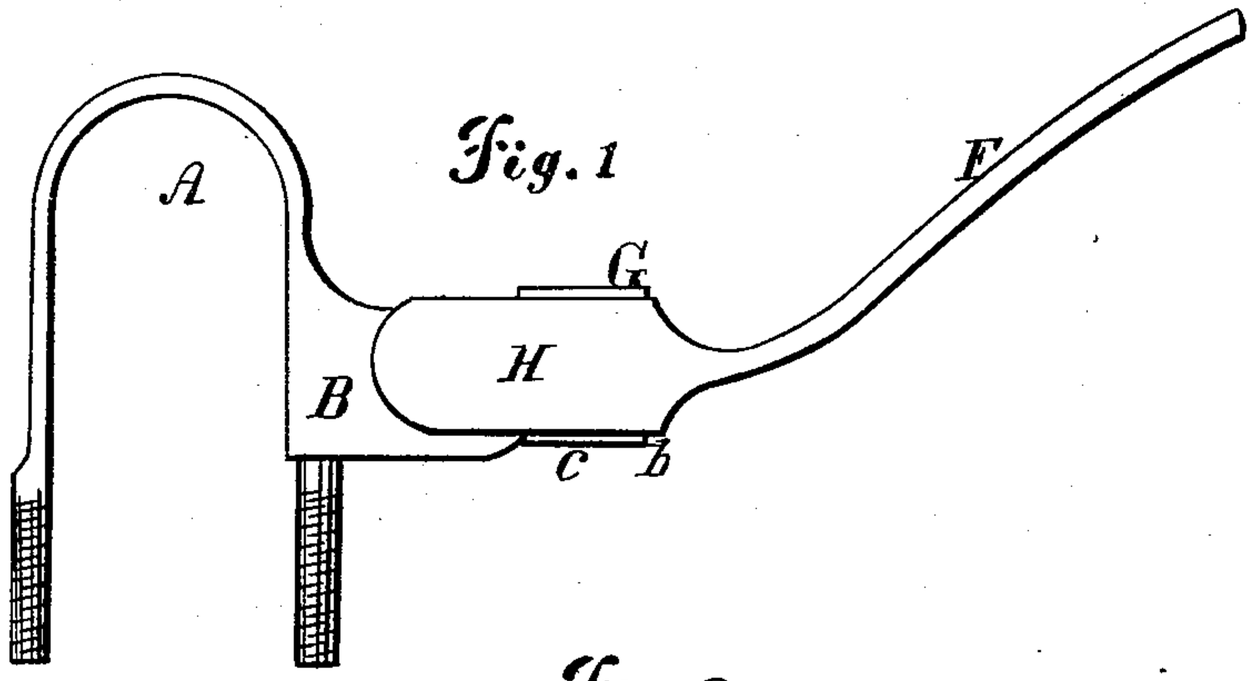


Fig. 2

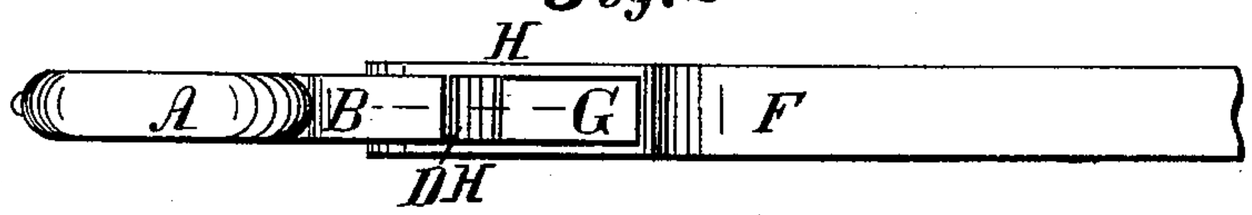


Fig. 3

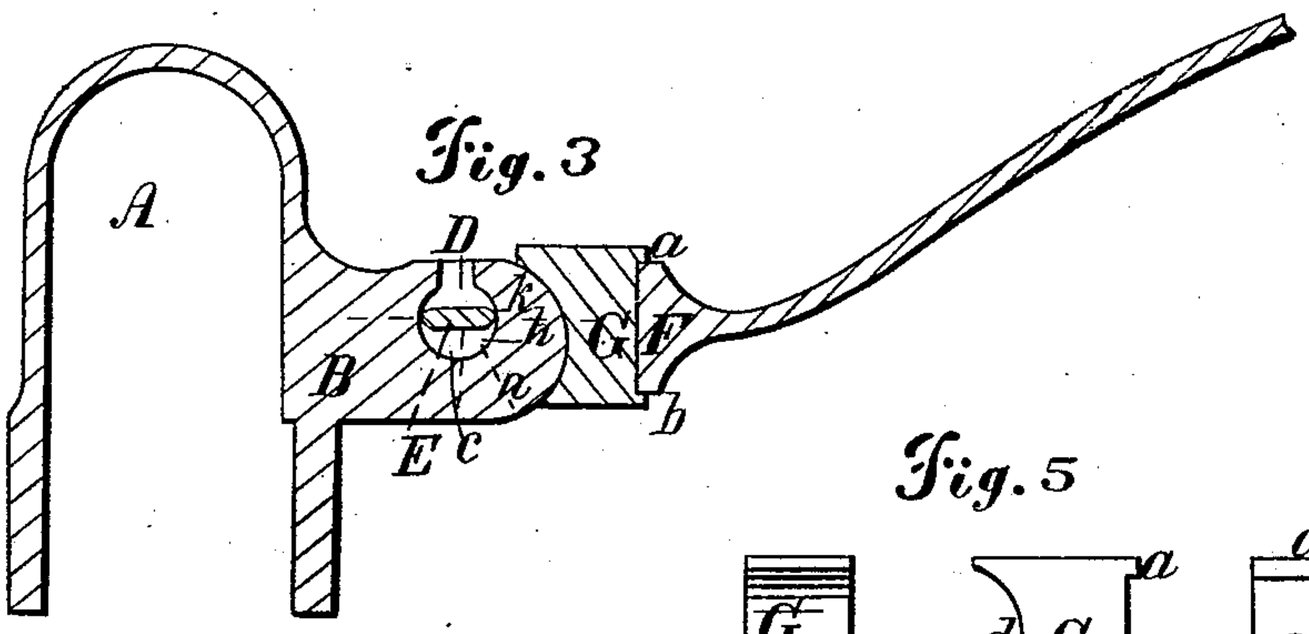


Fig. 5

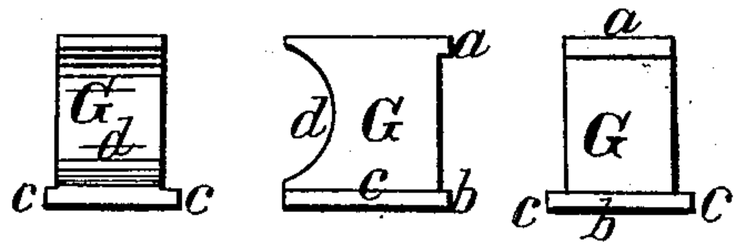
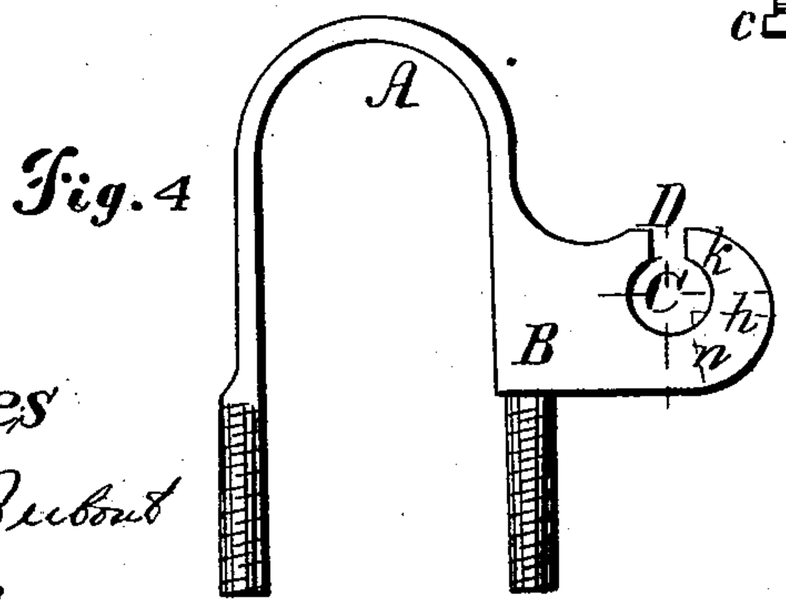


Fig. 4



Witnesses

Ed. A. Burdett

Daniel Meiller

Inventor;

Levi Pentz

by Jo Abbott

United States Patent Office.

LEVI PENTZ, OF CANTON, OHIO.

Letters Patent No. 84,212, *dated November* 17, 1868.

IMPROVEMENT IN THILL-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, LEVI PENTZ, of Canton, in the county of Stark, and State of Ohio, have invented new and useful Improvements in Thill and Axle-Coupling; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon, of which drawings—

Figure 1 is a side elevation of my improved coupling.

Figure 2 is a plan of the same.

Figure 3 is a longitudinal section of the same.

Figure 4 is a side elevation of the clip, with thill-iron removed.

Figures 5 are front, side, and rear elevations of thill-iron rubber.

The nature of my invention consists in the peculiar construction of a rubber or other elastic block, which is used in combination with an axle-clip and thill-iron, of the forms herein shown, in such a manner as to form a coupling of simple construction, moderate cost, and ample strength, which shall be free from any rattling, and specially adapted to any carriage where thills or a pole are to be frequently interchanged.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The clip A is of the common form, and is secured to the axle of the carriage in an ordinary manner.

On one side of this clip is forged the arm B, which is of the form shown, and is provided with the round hole C, and slot D, arranged, with reference to each other and the clip-arm B, as seen in fig. 4.

The thill-iron is constructed of the strap F, which is secured to the thill or pole in any suitable manner, and the lips H H, which are forged to the sides and end of the strap F, which is upset at this end, so as to form, with the lips H H, an iron of the form shown in figs. 1, 2, and 3.

The axle-pin E is forged or otherwise secured between the lips H H, and is of an oval or elliptical cross-section, the larger axis of its cross-section being of the same length as the diameter of the hole C in the clip-arm B, while the shorter axis of its cross-section is of the same or a very little less length than the width of the slot D in the said clip-arm.

The rubber block G is of the form shown in figs. 5, having a concave face, *d*, upper and lower end flanges, *a* and *b*, and lower side flanges, *c c*, the lower flanges *c b c* forming a continuous flange around three lower edges of said block.

This block fits in between the lips H H of the thill-iron, its rear face setting up against the end of the strap F, its upper flange *a* resting over the upper edge of said strap, while the lower flanges *c b c* set under the lips H H and the under edge of the end of the strap F, as seen in fig. 3.

The thill-iron is secured to the clip-arm B by first bringing it into an erect position, when the pin E will pass through the slot D into the hole C, then the thill-iron is turned down, which brings the pin E into the position shown in fig. 3, and thus secures the thill-iron and clip to each other.

The block G is made of such size as to allow the pin E to enter the hole C without any compression of said block, and the centre of the hole C, as shown at *k*, is placed a little above and back of the centre of the end of the arm B, shown at *h*, thus giving a curved wedge-shape to the front part *n* of said arm, from which it is readily seen that as the thill-iron F is turned down, the rubber block G will be firmly compressed between the end of the clip-arm B and thill-strap F, and thus all rattling of the clip prevented.

The flanges *c b c* prevent the block G from being forced up between the lips H H while the thill-iron is being turned down, and the flange *a* prevents said block from working down between the lips H H by reason of the up-and-down movement of the thills.

No flanges are put on the upper edges of the block G, above the lower flanges *c c*, so that said block can readily be introduced into its proper position between the lips H H.

Having thus fully described my improved coupling, I do not claim the clip A, arm B, hole C, or slot D; nor do I here claim the thill-iron F, H H, with oval pin E, nor the use of a rubber block G between the thill-iron and clip-arm, to prevent rattling, as all these features have been before shown; but

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

1. The rubber block G, when constructed with concave front face *d*, upper rear flange *a*, and lower side and rear flanges *c b c*, and used in combination with the thill-iron H F H and clip-arm B, constructed as specified, substantially as and for the purpose specified.

2. The combination of the rubber block G, constructed as specified in first claim, the thill-iron H F H, with elliptical pin E, and the clip A, with arm B, provided with the slot D, hole C, and curved-wedge part *n*, the several parts being arranged in the manner and for the purpose herein specified.

As evidence that I claim the foregoing, I hereunto set my hand, in presence of two witnesses, this 17th day of September, A. D. 1868.

LEVI PENTZ.

Witnesses:

ED. N. BEEBOUT,

JOB ABBOTT.