

N<sup>o</sup> 20,535



A.D. 1913

Date of Application, 11th Sept., 1913—Accepted, 13th Aug., 1914

COMPLETE SPECIFICATION.

**Improvements in Couplings or the like Devices for Shafts, Rods, Axles or the like.**

I, FRANK HORNBY, of 274, West Derby Road, Liverpool, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 This invention relates to an improved device for use in the construction of toys or small engineering models adapted to be built up from standard separate parts, such parts being capable of being taken to pieces, and re-made up into other toys as required. In such classes of toys it is frequently desirable to be able to extend a length of shafting, rod, or the like, by means of a coupling adapted to join the abutting ends of two pieces of shafting.

According to the present invention a tubular coupling is provided, the bore of which is adapted to fit the exterior diameter of the shafting, axles, rods or the like, which it may be required to connect, the coupling being provided at each end with pinching screws. Means are also provided for enabling the coupling to be used for connecting together shafts or the like at right angles.

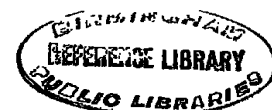
The invention is illustrated in the accompanying drawings, in which, Fig. 1. is a perspective view of a coupling constructed in accordance with this invention, and is shown connecting together two lengths of shafting disposed at right angles. Fig. 2. shows a coupling utilised for connecting shafts in line. Fig. 3. is a vertical section through the coupling and Fig. 4. a horizontal section.

In carrying out the invention, the coupling 1 is composed of a tubular element, the bore 2 of which is made to engage closely round the shafts or axles 3 which it is desired to connect together. Pinching screws 4, 5, are fitted into radially disposed threaded holes formed at each end of the coupling, by tightening which the rods 3 are gripped firmly in the coupling. In the same plane with one of the pinching screws is formed a transverse hole 6, of the same bore as the main axial hole 2, so that the coupling 1 may be utilised for connecting rods 3 at right angles as in Fig. 1., by threading the cross rod through the transverse hole 6, or for connecting together in line two lengths of shafting or the like as shown in Fig. 2. If desired a second transverse hole may be formed in the same plane as the pinching screw 5. Or the transverse holes may be arranged obliquely to the main bore hole 2.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A coupling for connecting together axles, rods, shafting, or the like, for use in building toys or models, comprising a tubular element fitted with pinching screws at each end and having one or more holes intersecting the axial hole of the element, the pinching screw or screws being disposed so as to command the point or points of intersection of the holes, whereby a rod or the like may be gripped by the same screw in either the axial or a transverse hole.

[Price 8d.]



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*Improvements in Couplings or the like Devices for Shafts, Rods, Axles or the like.*

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2. A coupling for rods, axles, shafting or the like, for use in building toys or models, substantially as described and shown in the accompanying drawings.

Dated this 10th day of September, 1913.

For the Applicant,

A. J. DAVIES,  
Patent Agent by Examination,  
37, Moorfields, Liverpool.

[This Drawing is a full-size reproduction of the Original.]

Fig. 1.

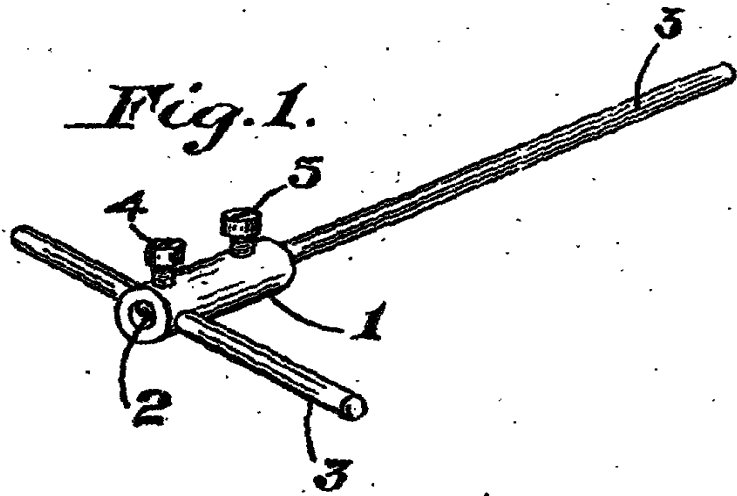


Fig. 2.

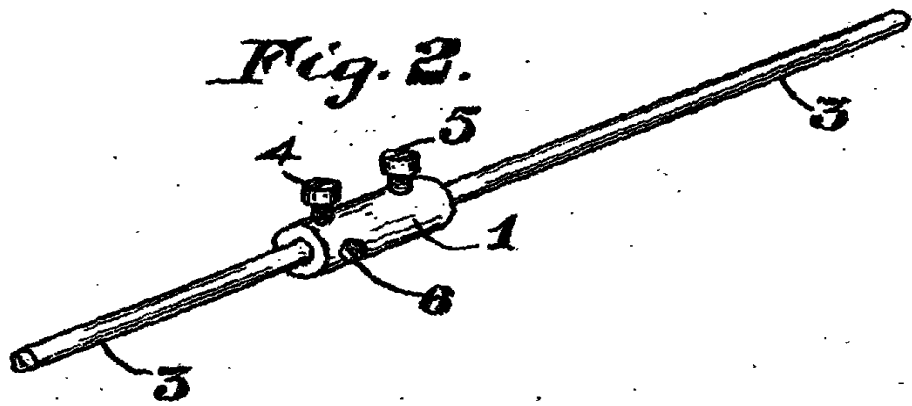


Fig. 3.

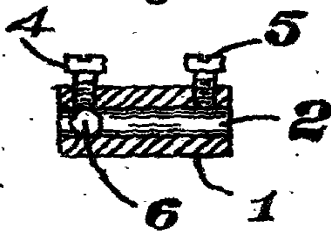


Fig. 4.

