(No Model.) 2 Sheets—Sheet 1.

M. B. PEUGNET.

CONNECTION FOR BICYCLES.

No. 590,687. Patented Sept. 28, 1897.

Fig. 1.

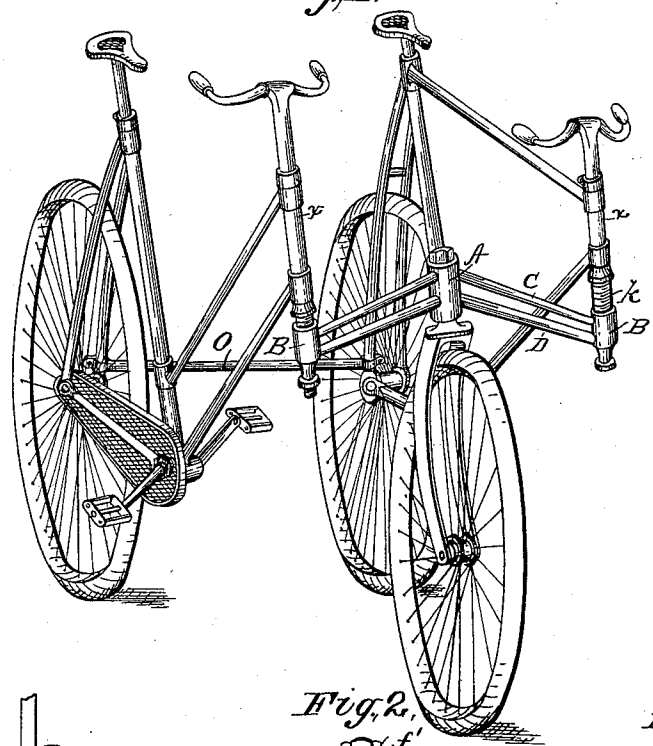


Fig. 2.

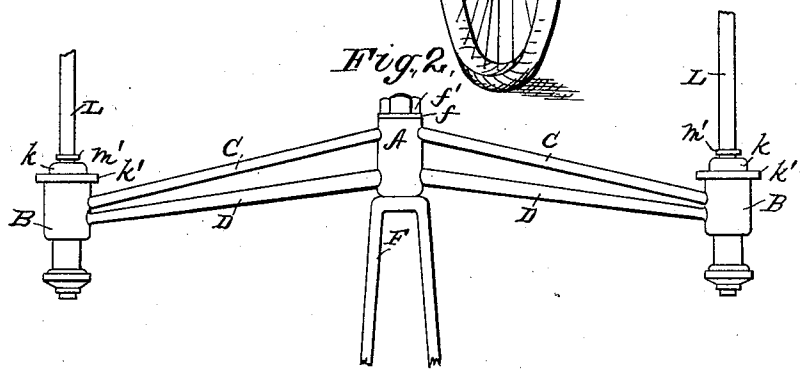
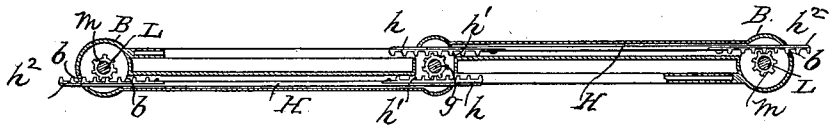


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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CONNECTION FOR BICYCLES.

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Fig. 3.

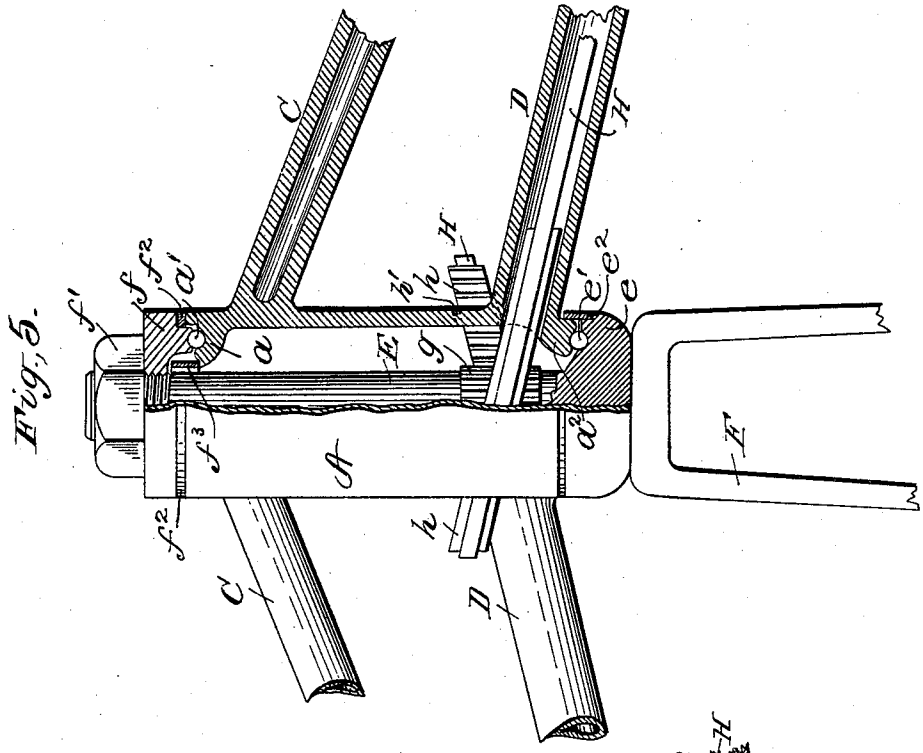
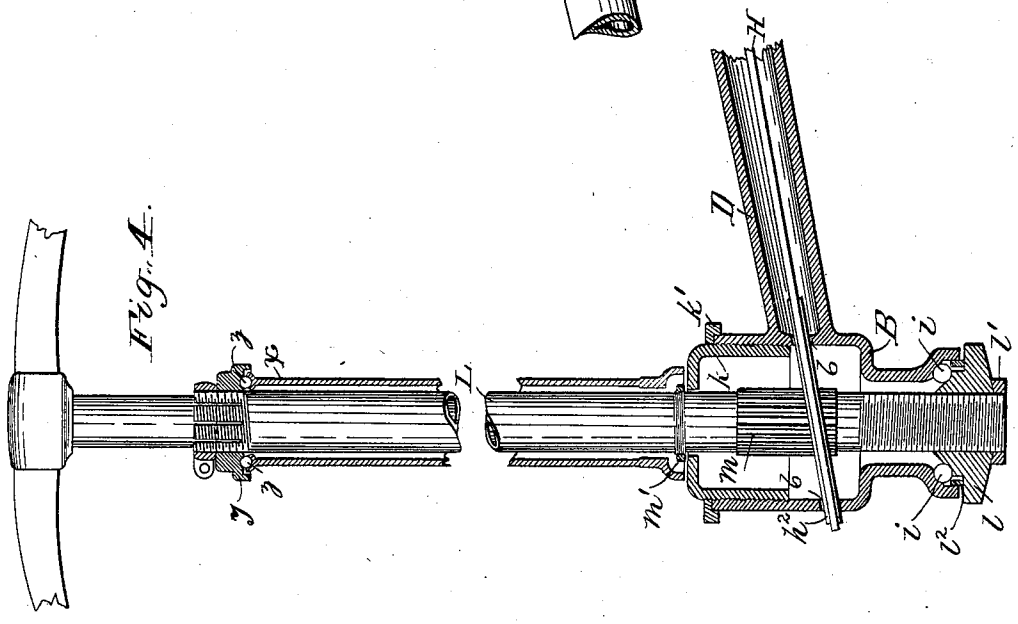


Fig. 4.



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UNITED STATES PATENT OFFICE.

MAURICE B. PEUGNET, OF CAMBRIDGE, MASSACHUSETTS.

CONNECTION FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 590,687, dated September 28, 1897.

Application filed April 5, 1897. Serial No. 630,808. (No model.)

To all whom it may concern:

Be it known that I, MAURICE B. PEUGNET, of Cambridge, Massachusetts, have invented a new and useful Improvement in Connections for Bicycles, which improvement is fully set forth in the following specification.

This invention has general reference to so-called "social" attachments for bicycles, but more specifically relates to means for transforming two ordinary bicycles into a two-seated or what may be termed a "sociable" tricycle.

To this end my invention consists principally in a connecting-head which may be applied between the heads of two ordinary bicycles, said head having at its middle a depending fork carrying a front wheel (which may be the front wheel removed from one of the bicycles) and being provided with connections whereby said wheel may be turned from the handle-bars to steer the machine. Adjusting means are provided whereby in effecting the connection between the heads of the two machines each machine may be brought to the proper level independently of the other. Such means constitute an important feature of my invention and have been found to be of special advantage, for example, in associating a lady's wheel with a gentleman's.

My invention embraces many other important structural features, all of which will be more clearly understood by reference to the accompanying drawings, illustrating one embodiment thereof, wherein—

Figure 1 is a perspective view showing a lady's and a gentleman's wheel connected in accordance with my invention. Fig. 2 is an elevation of the connecting-head. Fig. 3 is a horizontal sectional view through the connecting-head. Fig. 4 is a vertical sectional view through the head of one of the bicycles, showing the connections between the same and the connecting-head; and Fig. 5 is a similar view through the bearing for the front fork at the middle of the connecting-head.

Referring particularly to Figs. 2, 3, and 4, I will first describe the connecting-head in its entirety.

A represents the sleeve or casing for the bearings of the front fork, and B B are casings for the bearings and connections to the head of each machine, said sleeve A being rigidly joined to casings B B by hollow arms C D C D, respectively. At its upper end sleeve A is formed with an interior cup-shaped flange a, in which balls a' run. A similar flange a^2, opening downwardly, is provided in the lower end of the sleeve A.

E is the axle or stem of the front fork F, having an annular flange e recessed on its upper side, in which recess rest balls e', bearing against the under side of flange a^2 on sleeve A.

e^2 is a ring around flange e for excluding dust and dirt from the balls and for preventing the latter from dropping out when the fork is removed. At its upper end stem E is screw-threaded and carries a bearing-nut f, which is turned down against balls a' and locked by lock-nut f'. A ring f^2, of rubber or other suitable material, is interposed between nut f and the upper edge of sleeve E to exclude dust, dirt, &c., and a second ring f^3 rests on the inner edge of flange a and acts to prevent balls a' from dropping out upon removal of the stem.

g is a pinion on stem E, engaged at opposite sides by racks $h\,h$ on the ends of bars H H, sliding in hollow arms D D, said racks projecting through openings h' in opposite sides of sleeve A. At their other extremities rods H H carry racks $h^2\,h^2$, which project through casings B B and slide in openings $b\,b$ at opposite sides thereof.

I will next describe the mechanism of the connecting-head whereby the latter is adjusted to and connected with the heads of the several partly-dismembered bicycles, and as this mechanism is the same for both bicycles a description with reference to one will suffice for both.

Casing B is formed at its lower end with a suitable bearing for balls i and is interiorly screw-threaded at its upper end for engagement with an annular cap k, the latter being exteriorly threaded for engagement thereabout of a lock-nut k'.

L is the handle-bar shaft, which is hollow to receive the stem of the handle-bar, adapted to be adjustably secured therein by the usual means. Shaft L passes downwardly through

the head tubing of the bicycle and into the casing B through the cap k, and is screw-threaded at its lower extremity for engagement therewith of bearing-nut l (for balls i) and lock-nut l'. Ring l^2 is interposed between bearing-nut l and the lower extremity of casing B for excluding dust, dirt, &c., and for holding the balls when the parts are separated. Elongated teeth m are formed integral with or are secured to shaft L in the form of a pinion (and may extend partly or entirely about the shaft) within casing B, and are engaged by rack h^2 on the end of rod H, the length of the teeth serving to compensate for vertical adjustment of the shaft. Above teeth m shaft L is screw-threaded for a portion of its length for engagement therewith of an annulus m' overhanging cap k, and thereby preventing the shaft from dropping out of the casing when the connecting-head is not in use.

O is a bar of suitable length for connecting the two bicycles in the rear, as shown in Fig. 1.

To join two bicycles by the connecting-head in the manner indicated in Fig. 1, the handle-bars, front forks, and with the latter the front wheels and lower bearings of the heads, are removed from the several machines. This having been accomplished the shafts L L of the connecting-head are inserted, respectively, into the head-tubings x x of the bicycles until the lower end of tubing x rests against cap k, which latter is adjusted to bring the several bicycles to their proper levels, the amount of which adjustment depends principally upon the length of tubing x. For example, the tubing x of the man's wheel shown in Fig. 1 being shorter than the corresponding part of the lady's wheel, the cap k on the right-hand end of the connecting-head must be considerably raised. The upper bearings, comprising nut y and balls z, having also been removed in dismembering the parts of the heads of the several bicycles, are now again brought into use about the upper ends of shafts L. The handle-bars are next secured in place in the upper ends of the hollow shafts and the sociable tricycle is ready for use. Of course some pains must be exercised to properly adjust the parts, the operation of which will be clearly understood without further description.

Modifications may be made without departing from the nature and principle of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Means for connecting the heads of two partially-dismembered bicycles, consisting of a connecting-head, means at the opposite end of said connecting-head for securing the same to the heads of the two bicycles, respectively, a front fork having bearings in the connecting-head and carrying a front wheel, and connections for transmitting motion from the handle-bars to the front wheel for steering the machine, substantially as described.

2. Means for connecting the heads of two partly-dismembered bicycles, consisting of a connecting-head, adjustable means at opposite ends of said connecting-head for securing the same to the heads of the bicycles respectively, at the proper level, a front fork having bearings in the connecting-head and carrying a front wheel, and connections for transmitting motion from the handle-bars to the front wheel for steering the machine, substantially as described.

3. The combination with two partly-dismembered bicycles, of a bar for connecting the same at the rear, a connecting-head for joining said bicycles at their forward ends, a front wheel mounted on said connecting-head and means for turning said wheel from the handle-bars to guide the machine, substantially as described.

4. A connecting-head for joining the heads of two partly-dismembered bicycles to form a tricycle, said head comprising a central sleeve or casing, a fork for the front wheel having its stem projecting into and bearing in said sleeve or casing, a pinion on said stem within the sleeve, two end casings connected to opposite sides of the sleeve by hollow arms and upon which the head-tubings respectively of the two machines are supported, handle-bar shafts projecting upwardly from said casings respectively into the head-tubings of the machines, teeth on said shafts within the end casings, and rack-bars sliding in the hollow arms engaging at one end the teeth on the handle-bar shafts and at the other the pinion on the stem of the front fork, substantially as described.

5. The combination with two partly-dismembered bicycles, of a connecting-head for joining the heads thereof, consisting of a central bearing-sleeve, a fork for the front wheel having a stem-bearing in said sleeve, a pinion on said stem within the sleeve, two end casings connected to opposite sides of the central sleeve by hollow arms, annular caps adjustably secured in the upper ends of the end casings, and against which the head-tubing of the bicycles rest, handle-bar shafts projecting upwardly from the end casings into the head-tubing of the bicycles respectively, and having bearings in said tubing and end casings, teeth on said shafts within the end casings, and bars sliding within the arms, sleeve and casings and carrying racks engaging with the teeth on the handle-bar shafts and pinion of the front-fork stem, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MAURICE B. PEUGNET.

Witnesses:

GEO. W. RYAN. [L. S.]

A. L. DRAPER. [L. S.]