

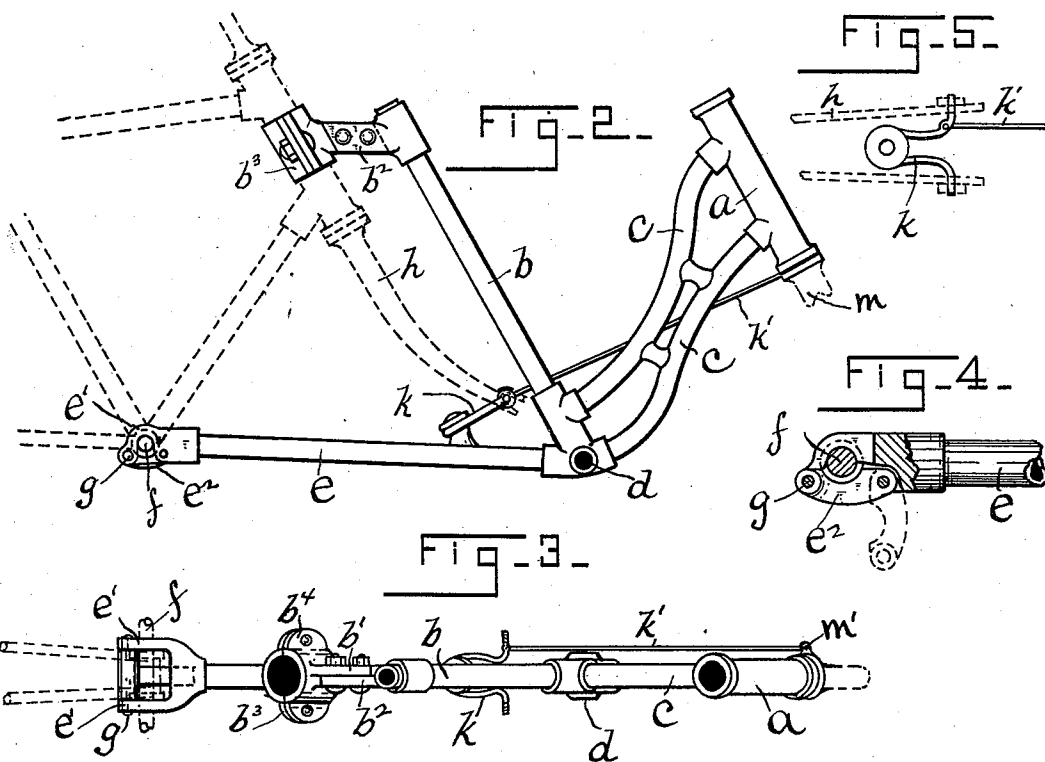
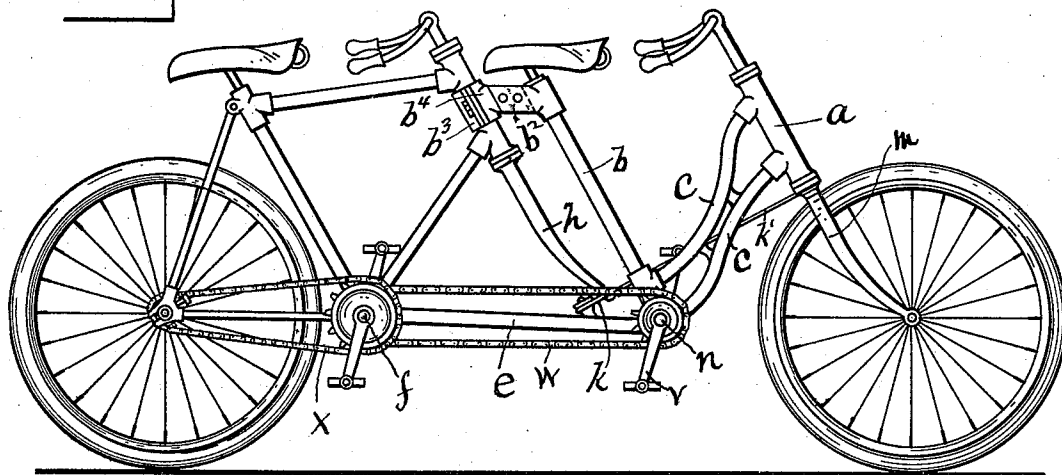
(No Model.)

C. S. BUELL.
BICYCLE.

No. 575,692.

Patented Jan. 26, 1897.

Fig-1-



Witnesses
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UNITED STATES PATENT OFFICE.

COLIN S. BUELL, OF NEW LONDON, CONNECTICUT.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 575,692, dated January 26, 1897.

Application filed May 14, 1895. Serial No. 549,223. (No model.)

To all whom it may concern:

Be it known that I, COLIN S. BUELL, a citizen of the United States, residing in the city and county of New London and State of Connecticut, have invented certain new and useful Improvements in Bicycles, which improvements are fully set forth and described in the following specification, reference being had to the accompanying sheet of drawings.

The object of this invention is to provide an attachment for bicycles by means of which the well-known single "safety-bicycle" can be readily converted into a "tandem" wheel similar in appearance to those commonly in use, the construction of said improvement being such that it may be readily and quickly applied to such "single" cycles to produce a tandem or removed from the latter to again convert it into a single.

To assist in the explanation of my invention the accompanying drawings have been provided, the various figures of which serve to illustrate the same, as follows:

Figure 1 is an elevation of a tandem bicycle, the same being similar in appearance to other bicycles of this class, but being made up of a safety in conjunction with my newly-invented attachment. Fig. 2 shows, detached, an enlarged elevation of the framework of my improvement and illustrates the manner in which it is secured to the safety, a portion of the framework of the latter being indicated in dotted lines. Fig. 3 is a plan view of the framework illustrated in Fig. 2. Figs. 4 and 5 show, enlarged, certain details in the construction of my device.

I have already stated above that my newly-invented device is used in connection with an ordinary safety to produce a tandem, the framework of said improvement and attached parts being secured to the framework of the safety in advance of the latter, as shown in Fig. 1, but as the general construction of this class of safeties is well known it is thought unnecessary to explain the same in detail.

The following description is therefore confined principally to my newly-invented attachment and to the manner of its application to such safety-bicycles.

The principal feature of my device consists of an auxiliary framework similar in general appearance to the forward portion of the

framework of the usual safety or tandem bicycles, said framework being provided with a steering-head *a* and a saddle-post *b*, connected by means of rods *c*. Near the lower extremity of saddle-post *b* is a crank-shaft bearing *d*.

Extending rearwardly from bearing *d* is a rod *e*, which when my device is in use reaches to the crank-shaft *f* of the safety, to which latter said rod is securely clamped. To accomplish this clamping of rod *e* to shaft *f*, I have provided the means illustrated in Figs. 2, 3, and 4. The free end of said rod is provided with two rearwardly-extending arms *e'*, which straddle the bearing of the shaft and partially encircle it. Hinged to the end of rod *e* is a similar arm *e''*, which when rocked upward bears against the under side of the bearing of shaft *f*, and when the end thereof is in alinement with the ends of arms *e'* the several arms are secured together by means of a pin *g*, thus securely fastening the rear end of rod *e* to the safety.

Provision is also made for securing the framework of my device to the safety near the upper end of the saddle-post *b*, such clamping being accomplished by securing to the saddle-post an arm *b'* and to the steering-head of the safety a similar arm *b''*. Arms *b'* and *b''* when bolted together serve to securely clamp said framework and safety together. Arm *b''* is secured to the steering-head by means of a bearing, preferably formed in halves *b''b''*, thus making it an easy matter to attach the same to said steering-head.

To make it possible to steer my newly-constructed tandem by means of the rear handle-bars, (the handle-bars of the safety,) I have provided for the reception of the fork thereof (denoted by letter *h*) a U-shaped device *k*. This device is pivotally secured at its bow portion to the rod *e*, said pivotal point being in line with the axial center of the neck of said fork *h*, said U-shaped device *k* being adapted to revolve in a plane at right angles to said axial line.

The free ends of device *k* are bent outward, Fig. 5, for the reception of the ends of fork *h*, and to the latter said fork ends are secured when the device is in use. When thus fitted up, rotary motion of the safety-fork within its steering-head will impart similar motion to the device *k*, from which latter motion is

imparted, by means of a rod k' , to a steering-fork m , supported in the steering-head a , said last-named fork being provided with a radial arm m' , to the end of which the rod k' is attached. It will now be seen that through the connections described rotary movement of either fork h or m will be transmitted to the companion fork.

In addition to the steering-fork m the steering-head a is provided with suitable handle-bars and the saddle-post b with a saddle, as shown in Fig. 1; also a crank-shaft n is provided for bearing d , fitted up with pedals v , sprocket-wheel v' , and chain w , by means of which power is communicated from the shaft n to the shaft f , already referred to, and thence by chain x to the driving-wheel of the machine.

When it is desired to convert a safety into a tandem by use of the means described, the front or steering wheel of the safety is first removed, after which the auxiliary frame is secured to the safety-frame at its crank-shaft f and steering-head, respectively, and fork h is secured to the device k , as already explained, it being assumed that said auxiliary frame is fitted up with saddle, handle-bars, steering-fork, crank-shaft, and connected parts. The free end of rod k' is then connected to the arm m' , the front or steering

wheel is placed in position in the fork m , and the complete machine is geared up by means of the sprocket-chains, as already explained.

My device as a whole is not expensive to produce, is not complicated in construction, and may be readily attached to safeties with which it is designed to operate, thereby greatly increasing the utility of this class of bicycles.

Having thus described my invention, I claim—

1. In a device of the character described, an ordinary bicycle-frame, a supplemental frame adapted to be secured thereto, a fork journaled in the supplemental frame and means for connecting the fork of the supplemental frame to the fork of the ordinary frame, so that both forks will work in unison, as and for the purpose described.

2. In a device of the character described, an ordinary bicycle-frame, a supplemental frame adapted to be clamped thereto, a yoke pivoted to the supplemental frame and adapted to have its arms connected to the fork of the ordinary frame and a rod connecting said yoke to the fork of the supplemental frame, as and for the purpose described.

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Witnesses:

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