Jan. 27, 1925. 1,524,552

J. HUDRY

FOLDING VELOCIPEDE

Filed July 16, 1923 3 Sheets-Sheet 1

Fig. 1.

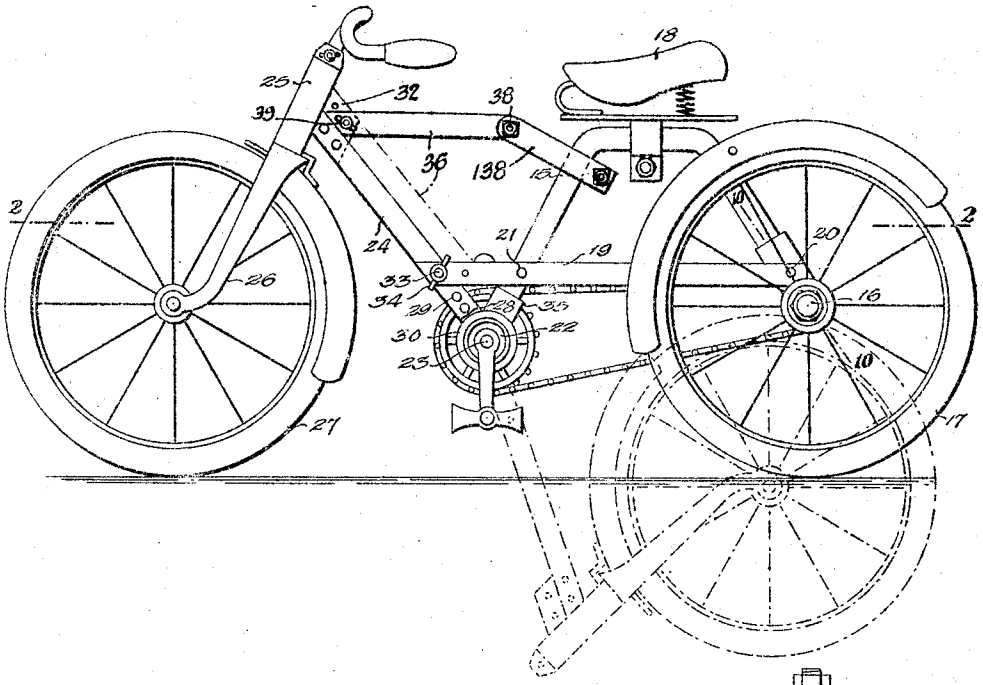


Fig. 2.

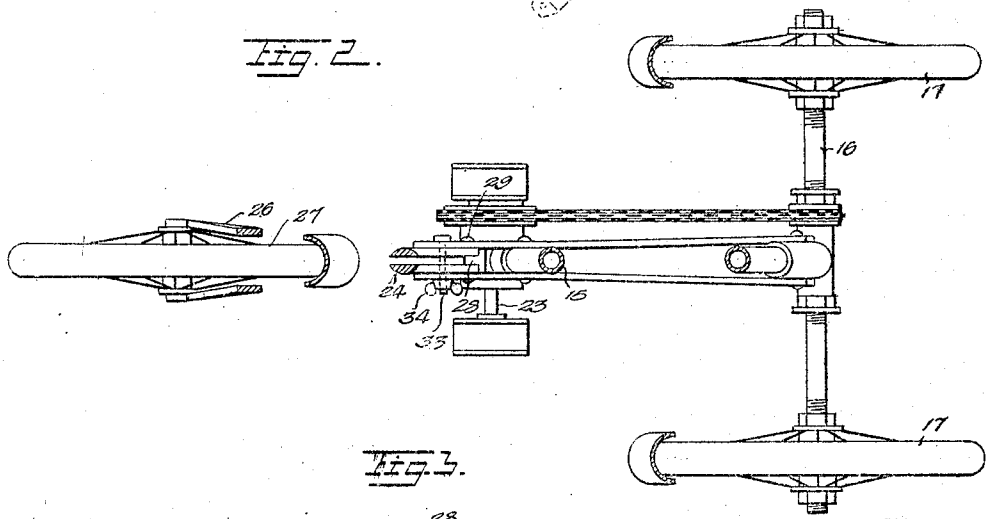
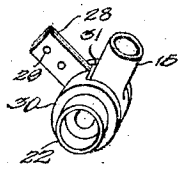


Fig. 3.



WITNESSES

H. T. Walker

J. Meaulliffe

INVENTOR

JOHN HUDRY

BY Munn & Co

ATTORNEYS

Jan. 27, 1925. 1,524,552

J. HUDRY

FOLDING VELOCIPEDE

Filed July 16, 1923 3 Sheets-Sheet 2

Fig. 4.

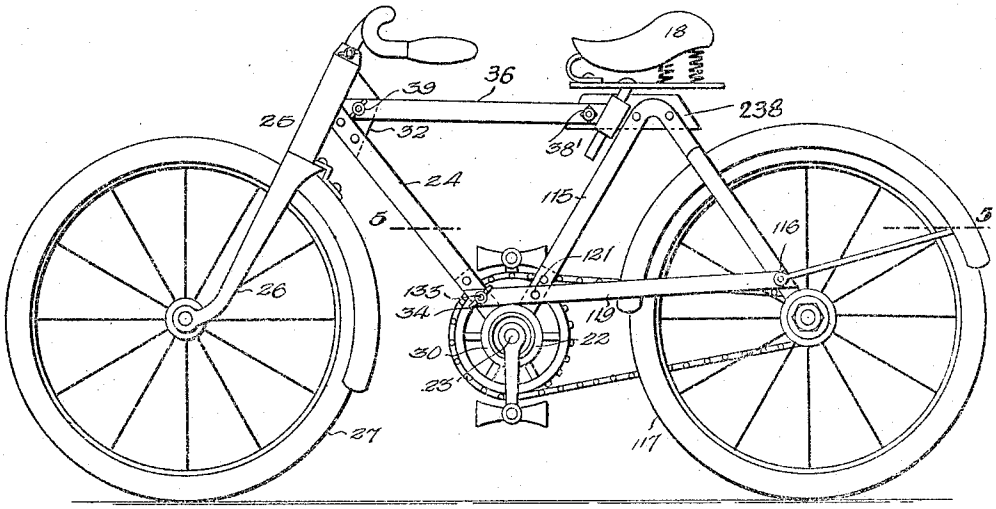


Fig. 10.

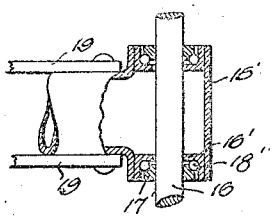


Fig. 5.

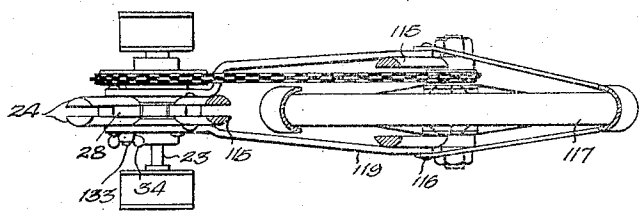
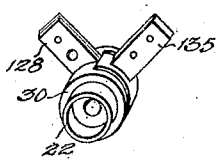


Fig. 6.



WITNESSES

H. T. Walker

L. L. McCauliff

INVENTOR

JOHN HUDRY

BY Munn & Co

ATTORNEYS

Jan. 27, 1925. 1,524,552

J. HUDRY

FOLDING VELOCIPEDE

Filed July 16, 1923 3 Sheets-Sheet 3

Fig. 7.

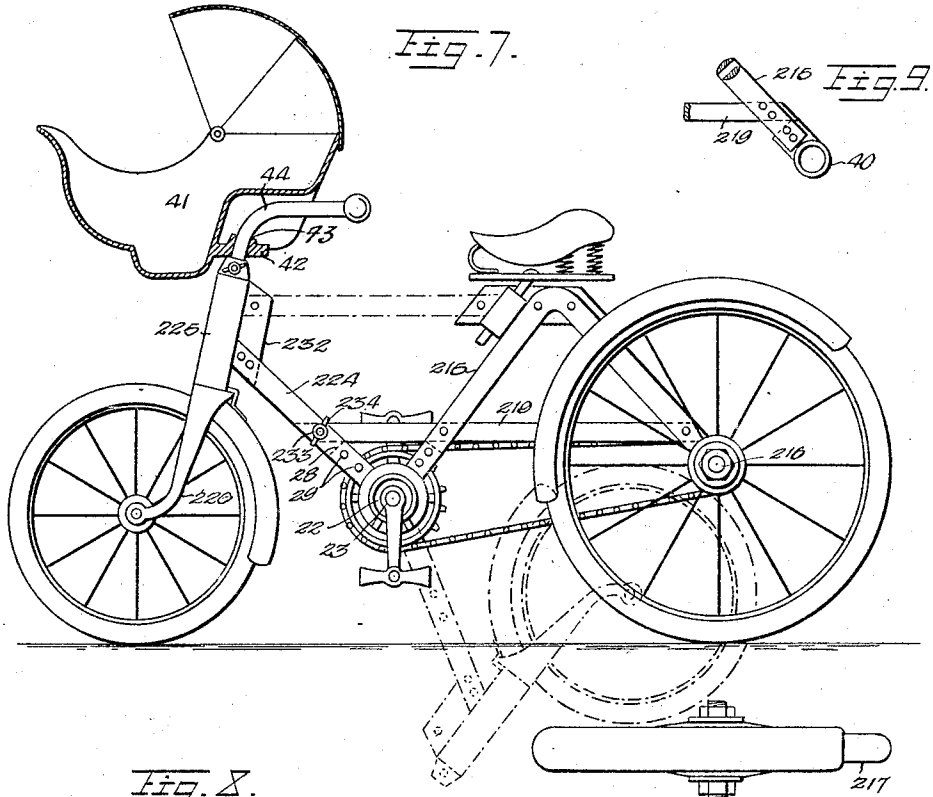


Fig. 9.

Fig. 8.

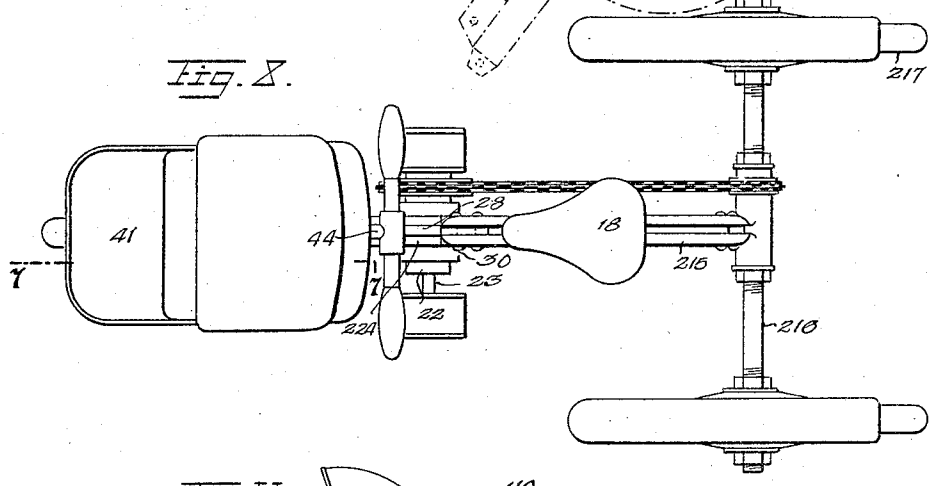
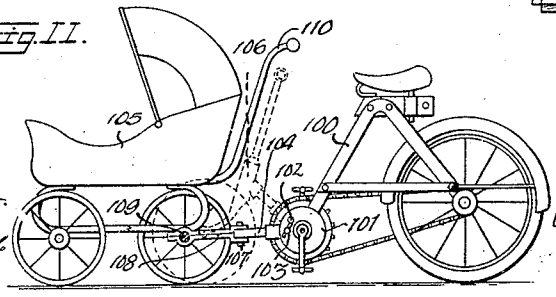


Fig. 11.



WITNESSES

H. J. Walker

INVENTOR

JOHN HUDRY

BY Munn & Co

ATTORNEYS

Patented Jan. 27, 1925. 1,524,552

UNITED STATES PATENT OFFICE.

JOHN HUDRY, OF HAZLETON, PENNSYLVANIA.

FOLDING VELOCIPEDE.

Application filed July 16, 1923. Serial No. 651,897.

To all whom it may concern:

Be it known that I, JOHN HUDRY, a citizen of the United States of America, and a resident of Hazleton, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Folding Velocipede, of which the following is a description.

My invention relates to velocipedes and has for its general object to provide a velocipede having means for folding it in a novel manner into small compass for storage or convenient transportation.

More specifically the invention has for an object to provide a construction affording the velocipede proper strength when set up in erect form for use.

The invention is adapted to be embodied in bicycles or tricycles as will appear from the following description which affords a disclosure of the distinctive features and advantages.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of practical examples of the invention.

Figure 1 is a side elevation of a tricycle embodying my invention and indicating in dotted lines the folded form of the tricycle;

Figure 2 is a horizontal section as indicated by the line 2—2, Figure 1;

Figure 3 is a detail in perspective of the hub assemblage;

Figure 4 is a side elevation of the invention as embodied in a bicycle;

Figure 5 is a horizontal section on the line 5—5, Figure 4;

Figure 6 is a detail in perspective of the hub assemblage in the construction shown in Figures 4 and 5;

Figure 7 is a side elevation of a tricycle embodying my invention with a baby carriage body suitably mounted on the front fork head, said carriage body being shown in vertical section, the section being indicated by the line 7—7, Figure 8;

Figure 8 is a plan view of the assemblage shown in Figure 7;

Figure 9 is a fragmentary detail at the hub in the construction shown in Figures 7 and 8;

Figure 10 is a section on line 10—10 of Figure 1.

Referring more particularly to the form of the invention shown in Figures 1 to 3, the frame of the vehicle includes an arched backbone 15 having at its rear end a bearing member 15′ in the form of a T-tubing, in the transverse portion of which the rear axle 16 turns, the numeral 17 indicating the rear wheels of a tricycle. In each end of the transverse portion of the bearing member 15 the same has mounted therein the cooperating members 16′ and 17′ combining to form a race for the ball bearings 18′, the member 17′ being fixed on the axle 16 in any preferred manner and rotating therewith.

The backbone 15 supports a saddle 18. The strengthening frame 19 is disposed approximately horizontally and secured at its rear end, as at 20, to the rear portion of the backbone and bearing 15′ and suitably secured, as at 21, to the front portion of the backbone adjacent the pedal shaft.

The lower end of the front portion of the backbone 15 below the bar 19 is formed with a hub 22 for the pedal shaft 23. A bearing construction similar to that shown and described in Figure 10 may be disposed in each end of the hub 22 so as to provide a ball bearing mounting for the pedal shaft 23.

A frame member 24 is disposed obliquely at the front of the backbone 15 and is suitably secured thereto by a bracket 32 to the head 25 of the front fork 26, the numeral 27 indicating the front wheel. The frame member 24 is divided, being formed of side bars half rounded in cross section. The rear or lower end of frame bar 24 receives a lug 28 which is riveted thereto as at 29. Said lug 28 is rigid with a shell or sleeve 30 turnably fitted to the hub 22 and slotted as at 31 to afford clearance for the backbone 15.

The frame member 19 projects forwardly beyond the backbone 15 and a detachable connection is made between the front end of said frame member and the oblique frame member 24. Any suitable means for effecting the detachable connection of the frame members 19 and 24 may be employed, there being illustrated a transverse bolt 33 and wing nut 34.

With the above described construction when connection is made between the frame members 19 and 24 the frame is made rigid. On the other hand when the members 19 and 24 are disconnected by the removal of bolt 33 in the present case the member 24 and with it the head 25, fork 26 and wheel 27 may turn about the hub 22 as indicated

in dotted lines in Figure 1 to give the velocipede a knocked down form.

The frame includes a top bar 36 detachably secured to a bracket 138 on backbone 15 as at 38 and to the bracket 32 as at 39. The bar 36 is removed in adapting the bicycle for use by girls.

In the construction shown in Figures 4 and 5 a single rear wheel 117 is employed, constituting the velocipede a bicycle. The parts are essentially the same as in the first described construction and those identical are similarly numbered. While in Figure 1 the backbone 15 is secured to the hub 22 by a nipple-like joint member 35, the construction in Figure 4 includes a lug 135 riveted to the backbone 115. The forward lug 128 corresponds essentially with the lug 28 and receives a bolt 133 having a wing nut 34. The approximately horizontal bottom frame bars 119 are disposed at the sides of the wheel 117 and corresponding generally with the frame bar 19, being secured to the rear fork of the backbone 115 as at 116 and being secured to the front portion of the backbone as at 121. The frame shown in Figure 4 includes the top bar 36 which in this instance is secured at its rear end by a transverse bolt 38′ to any suitable bracket 238 rigid with the backbone 115.

In the form shown in Figures 7 to 9 the backbone 215 supports the axle 216 of the pair of rear wheels 217 and mounts the saddle 18 as in the first previously described constructions. A shorter and lower oblique front bar 224 is provided secured by a bolt 233 and a wing nut 234. Said bar 224 is secured by a bracket 232 to the head 225 provided for the front fork 226. The parts in Figures 7 and 9 correspond with Figure 1 and are similarly numbered. The rear axle 216 turns in a hub 40 on the backbone 215 and a bottom frame bar 219 substantially the same as the bottom 19 is employed.

In Figures 7 and 8 I have shown a body 41 corresponding with a child's carriage body which may be of any desired construction and which has a rearwardly extending supporting member 42 having a hole 43 for the steering post 44.

Having thus described my invention, I claim:

1. A velocipede including a backbone, a wheel axle thereon at the rear, an approximately horizontal frame bar secured to the backbone and projecting forwardly beyond the same, and a frame member formed with a head to receive the front fork, a hub for a pedal shaft provided on said backbone at the front portion, said frame member carrying the front fork head being turnable on the said hub, and means to rigidly connect the last-mentioned frame member with the projecting end of the approximately horizontal frame bar.

2. A velocipede including a fixed frame, a hub thereon for a pedal shaft, a sleeve loose on the hub to turn thereon, a frame member rigid with said sleeve and provided with a head for a front fork, and means to hold said frame member and sleeve against turning.

3. A tricycle including a backbone having at the front lower portion thereof a hub for a pedal shaft, an approximately horizontal frame bar rigid with the backbone above said hub and projecting forwardly beyond the backbone, a sleeve on the hub, a frame bar rigid with said sleeve and adapted to mount a front fork, and means to detachably fasten the projecting end of the first-mentioned frame bar to the second-mentioned frame bar to prevent the latter from turning.

4. A tricycle including a backbone having at the front lower portion thereof a hub for a pedal shaft, an approximately horizontal frame member rigid with the backbone above said hub and projecting forwardly beyond the backbone, a sleeve loose on the hub and having an arcuate slot through which the backbone extends to a connection with the hub, a frame member rigid with said sleeve and adapted to mount a front fork, and means to detachably fasten the projecting end of the first-mentioned frame member to the second-mentioned member to prevent the latter from turning.

JOHN HUDRY.