(No Model.)

J. N. CLOUSE.

VELOCIPEDE.

No. 433,889. Patented Aug. 5, 1890.

Fig. 1.

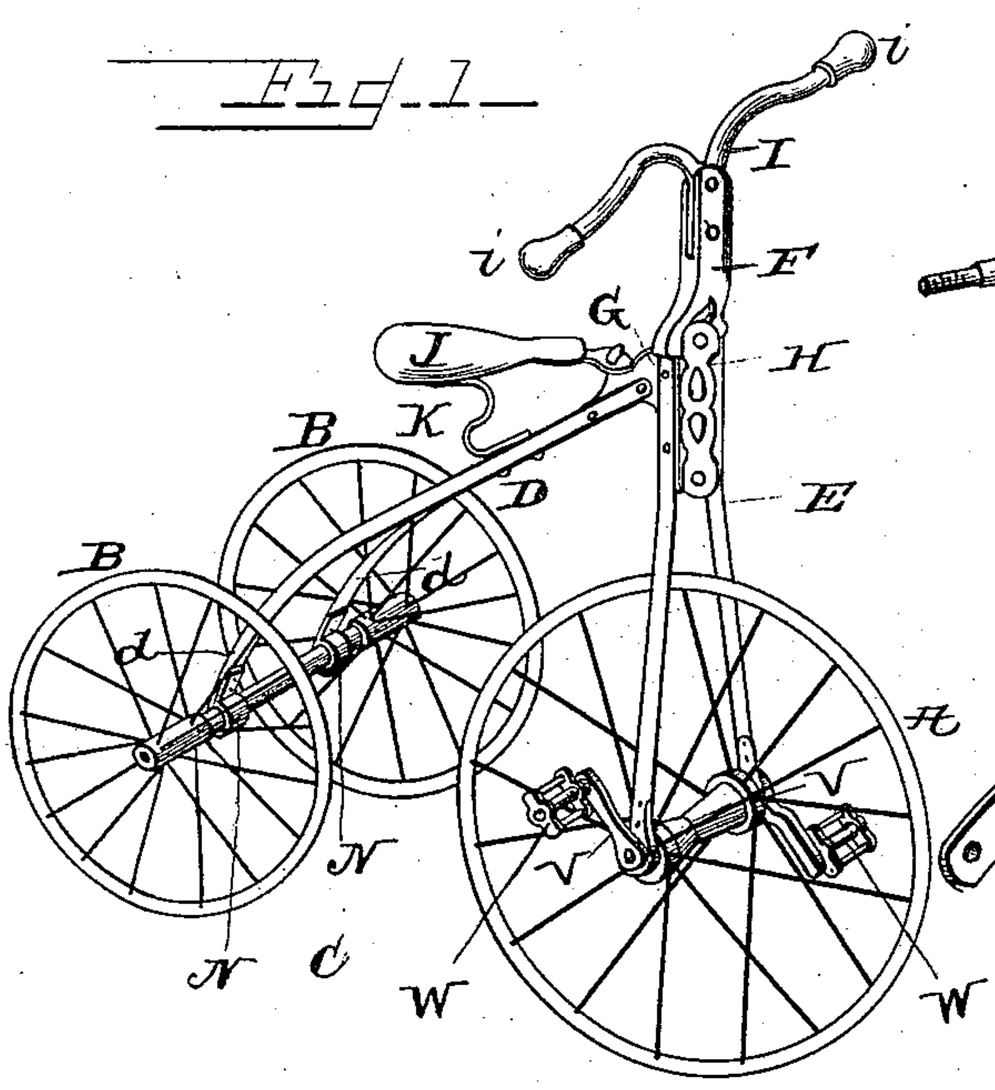


Fig. 2.

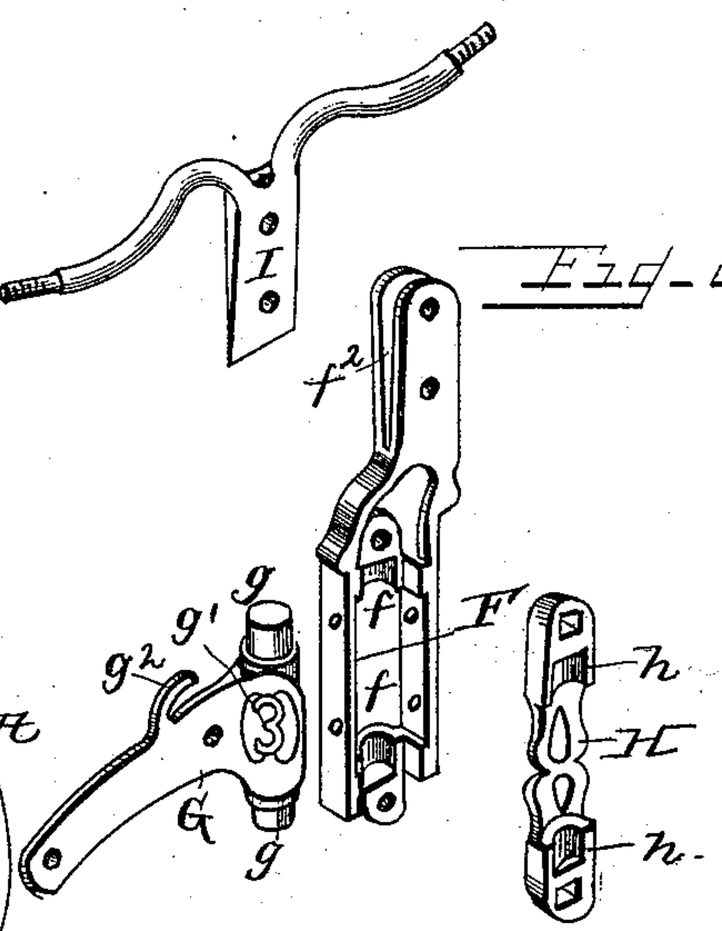


Fig. 4.

Fig. 3.

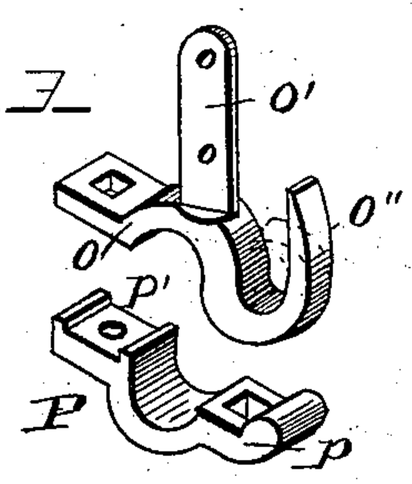


Fig. 5.

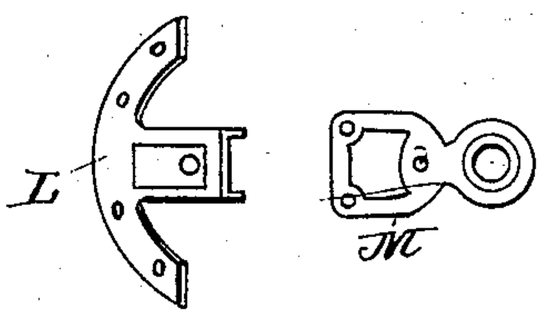
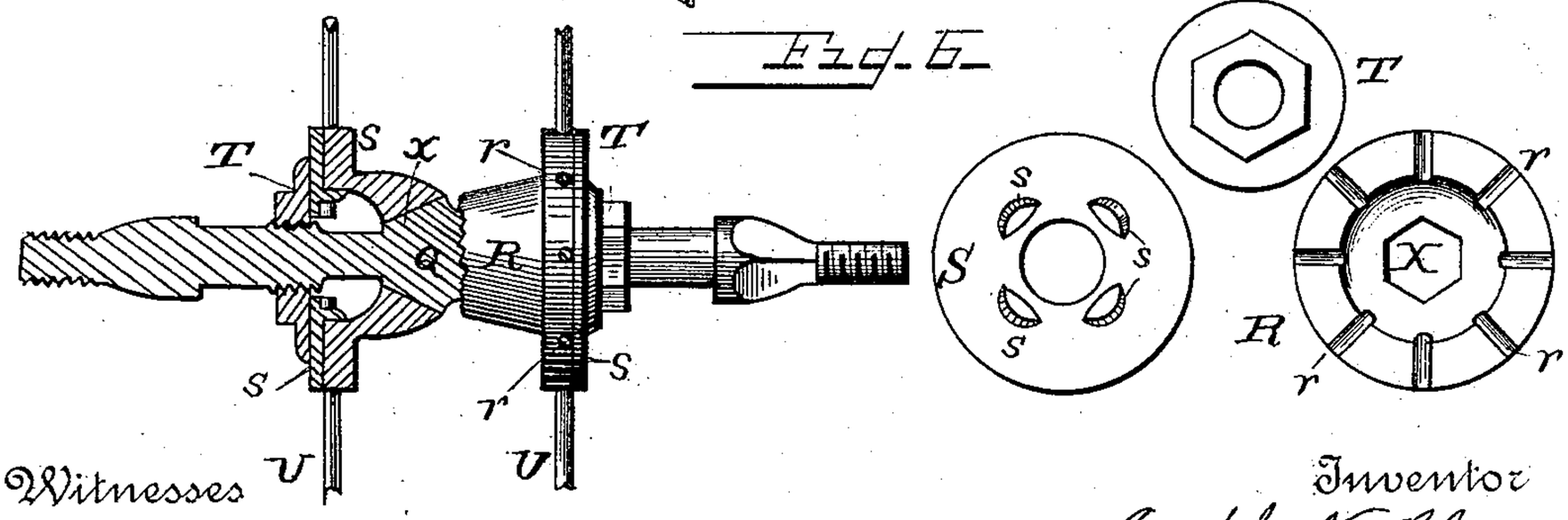


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH N. CLOUSE, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE ST. LOUIS TOY COMPANY, OF SAME PLACE.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 433,889, dated August 5, 1890.

Application filed July 27, 1888. Serial No. 281,257. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH N. CLOUSE, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented new and useful Improvements in Velocipedes, of which the following is a specification.

My invention relates to improvements in velocipedes, which relate to the special construction of various parts of them; and the objects of my improvements are, first, to simplify the construction of velocipedes; second, to increase the durability of them; third, to lessen the cost of construction, and, fourth, to give symmetry, beauty, neatness, and compactness to their design. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the velocipede complete. Fig. 2 is an enlarged detail view showing a group of parts connected together—the head F, swivel-plate G, box-cap plate H, and lever I. Fig. 3 is an enlarged detail view of the fork-box O and pivoted cap P. Fig. 4 is an enlarged detail view of the axle-clip N, showing the manner in which the backbone is secured to the axle C. Fig. 5 is an enlarged detail view of the front saddle-plate M and the curved spring and saddle plate L. Fig. 6 is an enlarged detail view of the front axle and hub, one end up to the center showing a cut section to show the internal construction and the other end complete so as to show the outside, with the other views of the parts grouped about it.

In the several views throughout like letters refer to like parts.

The general construction of the machine, as shown in Fig. 1, represents a frame-work with a front and back axle and three wheels arranged in the ordinary manner, which is common; but the special construction of the parts, as shown in the enlarged detail views, is new.

A is a front driving-wheel provided with an axle Q. B B are two rear wheels on an axle C. Upon these axles C and Q is mounted a frame-work consisting of a fork E, and a backbone D and *d d*. The backbone is pivoted to the head F by means of the swivel-plate G and cap H. This head F is mounted with a lever I, provided with handles *i i*.

Upon the backbone D is mounted a saddle supported on a spring K and stayed by a hook *g''*.

The backbone is divided into two parts *d d*, each one of which parts is attached to the rear axle C by means of a clip N. Two boxes and caps on the front fork E form boxes and attachments for the front axle Q. The front axle is provided with cranks V V and treadles W W. Thus is described the general construction of the velocipede in its various parts.

The novel and particular construction of the various parts shown in enlarged detail I will describe more minutely, showing their advantages.

In Fig. 2 the lever I, provided with threaded ends to receive handles, is firmly seated in a beveled opening f^2 in the head F. The head F is provided with bearings *f f* to receive the pivots *g g* on the swivel-plate G, which is held in place by the cap-plate H, securely bolted to it. The swivel-plate G is arranged with a hook *g''* to receive the saddle-plate M, and has a number *g'*, suspended in an opening in it, which designates the size of the velocipede.

Fig. 3 is a front bearing box and cap which are attached to the front fork E, the box of which is provided with an upward-projecting lug O', by means of which it is attached to the fork-arm E, and a tang O'', which is clinched down, as indicated by dotted lines, to pivot the cap P to it by means of its end *p*. This cap P is also provided with two projecting ribs *p'*, which may be filed down to take up the wear occasioned by the use of the machine.

Fig. 4 shows the clip-plate N made in rights and lefts, which is constructed with a pocket *n* to receive the end of the backbone *d*, a valley to receive the axle C, provided with a rib *n'*, which sets into the axle, and a fulcrum-rib *n''*, which causes the clip to draw firmly around the axle when bolted up tight.

Fig. 5 shows a plate M, which is riveted fast to the leather saddle J and hooks onto the swivel-plate G; also, a curved rear saddle-

plate L, that is riveted onto the saddle and provided with a seat to receive the spring K, and to which it is bolted.

In the group, Fig. 6, showing the front axle and hub in its parts, Q is the axle, one-half the length of which is shown in a longitudinal central cut section. The construction of each end up to the center is the same. The end is provided with a threaded portion to receive a nut, next a square to receive a crank, then a bearing for a fork-box, next a threaded portion to receive the nut T of the hub, then a clearance-space for the wire of the spokes in the hub, and lastly a hexagon beveled portion X, thus bringing the two tapered hexagon portions next to each other at the center of the axle. To this tapered hexagon portion X is fitted a flanged head-piece R, the flange of which is provided with a series of radial grooves *r r*, to receive the wire spokes U U. S is a disk or circular plate provided with a series of short arms or wedges *s s*, which fit inside of the flanged head-piece R, and around these arms or wedges *s s* the wire return-spokes U U are looped. T is a nut which holds the parts of the hub together and holds them onto the tapered hexagon portion X. The spokes U U are drawn up firmly and riveted into the rim in the ordinary manner.

I am aware that prior to my invention wheels and velocipedes have been made having the same general construction and arrangement of parts. I therefore do not claim such a combination broadly; but

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

1. In a driving-wheel hub for velocipedes, the axle Q, with its tapered hexagon portions X X and threaded portions and bearings, in combination with the flanged head-pieces R R, with their series of small radial grooves *r r r*, and the plates S S, with their arms *s s s*, and the nuts T T, all substantially as described and specified.

2. In a driving-wheel hub for velocipedes, the flanged head-pieces R R, with their series of radial grooves *r r r*, in combination with the circular plates S S, provided with a series of arms or wedges *s s s*, the return-spokes U U, and nuts T T, all substantially as set forth.

3. In a velocipede, the fork bearing-box O, with its upward-projecting lug *o'* and tang *o''*, bent as indicated, in combination with the cap P, having ribs *p'*, and pivoted at *p* to the cap O, as described and specified.

4. In a velocipede, a clip-plate N, with its pocket *n*, valley, with rib *n'*, and fulcrum-rib *n''*, in combination with the axle C and branch of backbone *d*, as described and set forth.

5. In a velocipede, the head F, with its bearings *f f* and beveled opening f^2, in combination with the swivel-plate G, with its pivots *g g*, designating-number *g'*, and hook *g''*, together with the cap-plate H, with its bearings *h h*, substantially as described.

6. The head F, with its beveled opening f^2, in combination with the lever I, substantially as described and specified.

7. In a velocipede, the rear saddle-plate L, in combination with the spring K and the saddle J, and the front saddle-plate M, in combination with the saddle J and the hook *g''* of the swivel-plate G, substantially as described and set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH N. CLOUSE.

Witnesses:
S. H. MAGUIRE,
VALLE REYBURN.