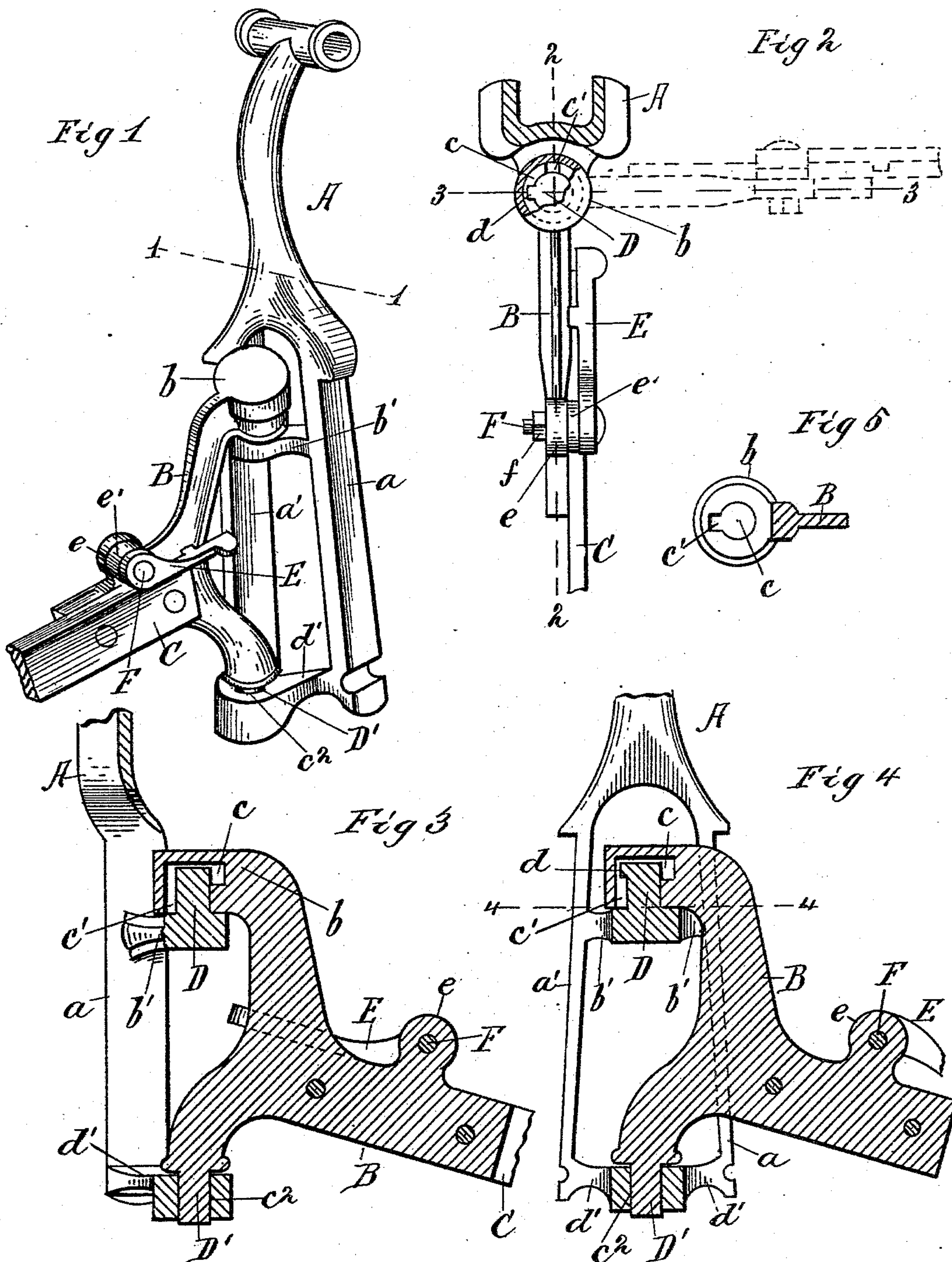


(No Model.)

A. FEATHERSTONE.  
VELOCIPEDÉ.

No. 414,505.

Patented Nov. 5, 1889.



Witnesses

W. C. Coolidge  
A. M. Best.

Inventor

Alfred Featherstone

By Coburn Thacher  
Attys.



# UNITED STATES PATENT OFFICE.

ALFRED FEATHERSTONE, OF CHICAGO, ILLINOIS.

## VELOCIPEDÉ.

SPECIFICATION forming part of Letters Patent No. 414,505, dated November 5, 1889.

Application filed September 10, 1889. Serial No. 323,496. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED FEATHERSTONE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Velocipedes, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the steering head and neck containing my improvements; Fig. 2, a plan section on line 1 1 of Fig. 1, showing neck turned in dotted lines; Fig. 3, a longitudinal section on lines 2 2 of Fig. 2; Fig. 4 is a cross-section on lines 3 3 of Fig. 2; Fig. 5, a detail plan section of the upper end of the neck, looking up.

Like letters refer to like parts in all the figures of the drawings.

My invention relates especially to means for holding the neck in the steering-head; and it consists in devices whereby the neck can be readily secured to or disengaged from the steering-head and at the same time be held securely to it; and it also consists in the particular manner in which the neck is hinged to the steering-head, and in other improvements hereinafter mentioned.

Heretofore in velocipedes it has been customary to connect the neck and backbone of velocipedes to the steering-head by a spindle upon the neck, so constructed and secured on the neck as to partly revolve in the head and secured in its place by an adjusting screw-bolt passing through the head to the top of the spindle and having a bearing on said spindle. In such cases the neck and head are not readily or easily separated. By using my improvements these parts are disconnected without difficulty, and at the same time when in use these parts are firmly held together. All the parts are metal.

A is a steering-head with forks projecting from the lower part.

B is a neck attached to the head, and C is part of a perch or backbone of a velocipede.

b is the cap or head of the neck and forms part of it, being cast in one piece with it. The cap b has a socket or chamber c in its lower end, and is fitted to receive a pintle with a spline, as hereinafter stated. The socket c is enlarged at its upper end, so as to

permit the spline or key to turn easily in the socket.

D is a pintle with a spline or lug d at the top. The pintle D is supported on two arms b', projecting from the forks a a' on the steering-head, the whole being preferably cast in one piece with the head.

The pintle D, with the spline d, is fitted to enter the socket c and groove c', and after the spline has passed through the groove c' the pintle will turn in the socket and will be retained in the socket by the spline d. At the lower end of the forks a a' and supported by two arms d' is a socket c<sup>2</sup> in the same vertical plane with the socket C. The socket c<sup>2</sup> is fitted to receive the pintle D' at the lower end of the neck B and forming part of the same. The pintles D D' with the sockets c c<sup>2</sup> form a hinge or hinges uniting the neck and backbone to the steering-head and causing them to swing thereon. It is obvious that the two sockets might have been formed on the neck B and the two pintles on the head A, instead of in the manner shown in the drawings. The groove c' should be so placed in the socket c and the spline d should be so placed on the pintle D that the spline d can enter the groove c' only when the neck is turned to the extreme right or left (it is shown in the drawings at the right) and until the neck B on the backbone C will rest against the edges of the fork a, so that when the pintle D is put in the socket the spline d will, as soon as it passes through the groove c', operate to lock the neck to the head and secure it when in use.

There is no reasonable probability of the neck becoming disengaged from the head of the velocipede when in use; but to guard against any possibility of accident a stop E is provided to prevent the neck from turning on the pintle D after connection to the point where the spline or key d will enter the groove c. The stop is a piece of wood or metal (shown in the drawings as metal) hinged at one end to a bolt F, passing through the stop E at one end of it and through a lug e on the neck B. The bolt F is headed at one end and screw-threaded at the other. A washer e' is interposed between the stop E and lug e, and a nut f at the end of the bolt secures the bolt.

When it is desired to attach the neck to



the head, the free end of the stop E swings out from the neck and rests on the backbone or perch until the neck is attached at the head, when the stop E is turned on its hinge 5 or bolt, so that its free end is interposed between the neck and one of the forks of the steering-head A, thus preventing the neck from turning on its hinge to the point where the splined *d* can enter the groove *c'*, and thus 10 allow the neck to become disengaged from the head.

It is obvious that devices other than the one part described may be used, or the stop may be otherwise secured. It may be, for instance, secured to an arm of the steering-head instead of to the neck, as shown in the drawings, the stop being a device attached to the neck or head and adapted to prevent the splined *d* from entering the groove *c'* after the 20 neck has been attached to the steering-head and while the velocipede is being used.

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

25 1. In a velocipede, the steering-head provided with a splined pintle and a socket arranged in line one above the other, in combination with a forked steering-neck, one arm having a grooved socket and the other a 30 pintle attached to the pintle and socket on the steering-head, respectively, substantially as and for the purposes specified.

2. In a velocipede, a forked steering-neck

having a cap with a grooved socket at one end and a pintle at the other, in combination 35 with a steering-head having a splined pintle and socket arranged in line one above the other, attached to the forks, and adapted to enter the socket and receive the pintle of the neck, and a stop hinged to the neck or 40 fork in such a manner that its free end may be interposed between the forks of the head and the neck for the purpose of preventing the spline from entering the groove of the socket, substantially as and for the purposes 45 specified.

3. In velocipedes, the forked steering-head A, having pintle D, supported by arms *b'*, with the spline *d* and socket *c'*, supported by arms *d'*, in combination with the neck B, having a cap *b* and socket *c*, with groove *c'* and 50 pintle D, all combined and arranged substantially as set forth.

4. In a velocipede, the steering-head A, having forks *a a'*, pintle D, with spline *d*, and 55 socket *c'*, arranged in line with the pintle D, in combination with the neck B, having cap *b* and socket *c*, groove *c'*, pintle D, and the stop E, bolt F, lug *e*, and washer *e'* and nut *f*, all arranged and combined substantially 60 as specified.

ALFRED FEATHERSTONE.

Witnesses:

WM. M. LUFF,  
H. H. TALCOTT.