(No Model.)

C. F. PEASE.

VELOCIPEDE.

No. 492,988. Patented Mar. 7, 1893.

Fig. 3.

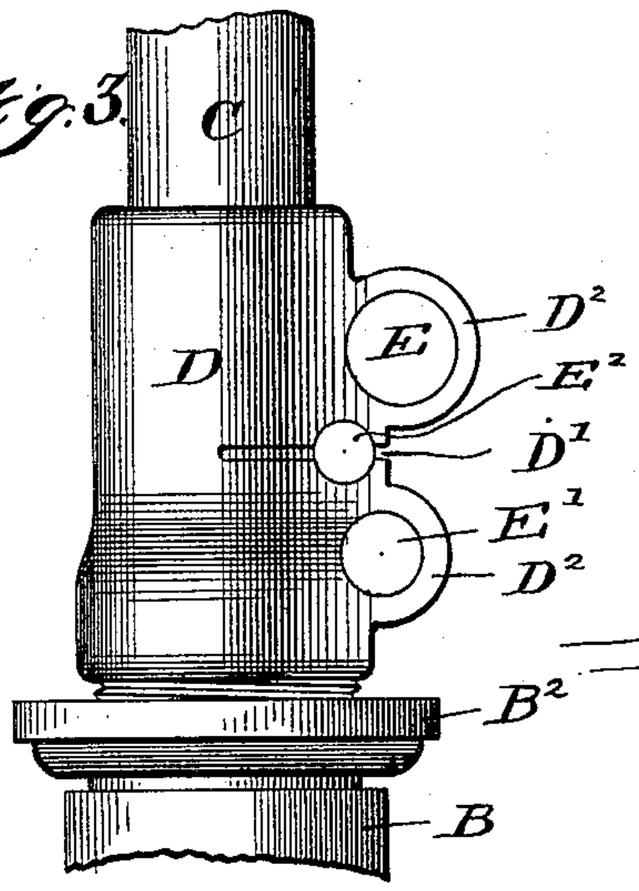


Fig. 1

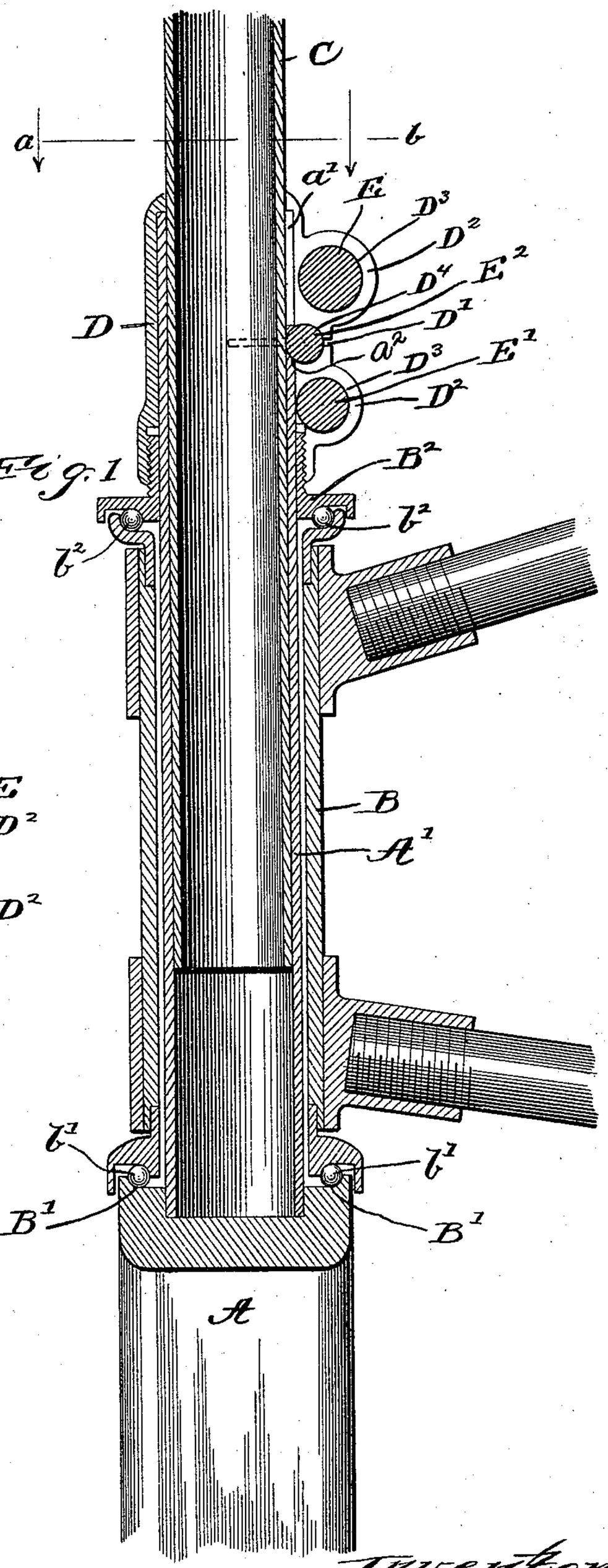
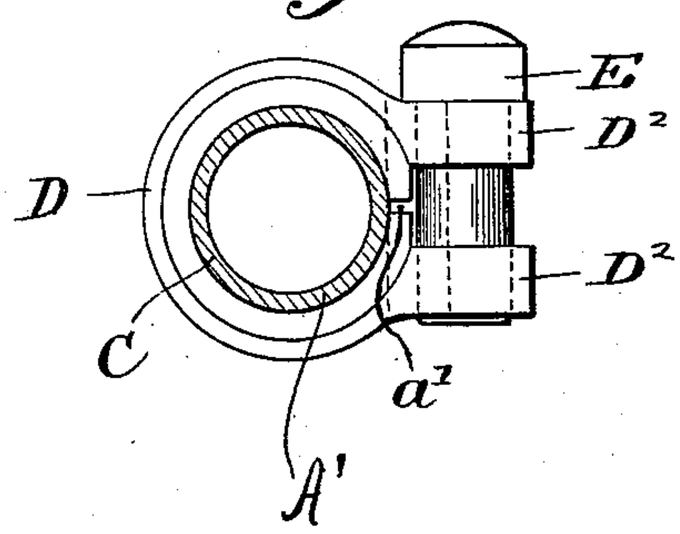


Fig. 2.



Witnesses:
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By Cyrus Keller Atty.

UNITED STATES PATENT OFFICE.

CHARLES F. PEASE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE AMES & FROST COMPANY, OF SAME PLACE.

VELOCIPEDE.

SPECIFICATION forming part of Letters Patent No. 492,988, dated March 7, 1893.

Application filed October 22, 1892. Serial No. 449,601. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. PEASE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Velocipedes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates particularly to means for securing and adjusting the stem of the handle-bar of a bicycle and to means for adjusting the bearing at the head of the bicycle.

The object of the invention is to produce a more simple and economical and a stronger construction than has heretofore been produced.

In the accompanying drawings: Figure 1 is a vertical, sectional view of a portion of a bicycle to which my invention is applied. Fig. 2 is a section on the line *a*—*b* of Fig. 1, looking downward. Fig. 3 is a side elevation of a portion of the clamping-strap.

In the accompanying drawings, A is the front fork, and A′ is the tubular neck rising from the front fork and to which the stem of the handle-bar and the head of the frame are applied. Heretofore said tubular neck has had near its upper end a threaded portion extending outward a little farther than the rest of the cylindric surface of said neck. Said neck was usually formed by taking a solid shaft and turning down all of the exterior excepting that portion upon which threads were to be formed. Then said threads were turned, and thereafter said shaft was bored out almost to the lower end to make a partial tube. This work is expensive and tedious and cannot always be done so correctly as to make a strong neck. Occasionally in the process of boring, the tool is deflected sufficiently to produce a thin and consequently weak wall at one side. In my construction said threaded portion is omitted and the entire neck is uniform in surface and diameter throughout its entire length. A piece of stock tubing of good quality may be used: and it requires no further work than the longitudinal slotting of the transverse channeling to be hereinafter described. The lower end of said neck is let into the upper end of the fork and secured thereto by brazing, or said neck and fork may be made continuous in any other suitable manner. At its upper end, its rearward side is vertically slotted a short distance, as at a', and at the lower portion of said slot, said neck has formed into it a transverse groove, a^2, to a depth of approximately the thickness of the wall of said neck.

B is the tubular head of the frame. This surrounds the neck, A′, and has at its lower end a bearing on an annular seat, B′, on the upper end of the fork, B. Balls, b' may intervene between said head and said seat in the well known manner. At the upper portion of said head, B, an adjusting collar, B^2, surrounds said neck and bears upon the upper end of said head in the well known manner. Balls, b^2, may intervene between said collar and said head, as indicated in the drawings. But said collar is not threaded upon said neck as has been heretofore done. On the contrary, the interior of said collar is smooth and fits neatly but loosely around said neck, which latter, as already stated, is smooth throughout its entire length.

C is the stem of the handle-bar. This is preferably made tubular as has been done heretofore. It is cylindric and of uniform diameter and has a smooth exterior. Said stem telescopes into the neck, B, fitting to the latter closely but loosely.

D is the clamping-strap extending around the upper end of the neck, A′, and the upper portion of the collar, B^2. The portion of the interior of said strap extending around said collar is threaded to the latter. The remainder of the interior of said strap is smooth. At the extreme upper end said strap is preferably contracted so as to extend over the upper end of the neck, A′, into contact with the stem, C. At its middle and at the rear said strap has preferably cut into it a horizontal slot, D′, so that the portion of the strap above and below said slot may be separately contracted and relaxed. Above and below said slot each side of the strap is provided with an

ear, D^2, through which extends a horizontal opening, D^3. A bolt, E, extends horizontally through the holes, D^3, above said slot, and a bolt, E′, extends through the holes, D^3, below said slot. The opening, D^4, is formed horizontally through the clamping-strap between the bolts, E, and E′, in such position and of such form as that it will together with the channel, a^2, form a cylindric passage for a bolt, E^2. Said bolt, E^2, when resting in said opening serves as a key to prevent said clamping-strap from rotating or moving up and down upon the neck, A′. Tightening the bolt, E′, will clamp the lower portion of the strap, D, to the neck, A′, and to the collar, B^2. If the bearings or head, B, are to be adjusted, said bolt, E′, must be loosened and the collar, B^2, screwed up or down as may be required. Then the bolt, E′, is to be tightened. With the bolt, E′, thus tightened, the neck, C, of the handle-bar is still free within the neck, A′, of the fork. If the bolt, E, is now tightened the upper portion of the clamping-strap, D, is bound tightly around the upper end of the neck, A′, and the latter is compressed (as permitted by the slot, a') and pressed tightly against said neck, C. Either the bolt, E, or the bolt, E′, may be loosened while the other remains tight, so that an adjustment of either the handle-bar or of the bearings of the head, B, may be made separately.

I claim as my invention—

1. In a velocipede, the combination with the tubular head, B, of a fork having a tubular neck of uniform diameter and smooth exterior, a collar, B^2, having a smooth interior and surrounding said neck above said head, B, and exteriorly threaded, a clamping-strap surrounding said neck and said collar and threaded to the latter and keyed to the former, and a bolt for tightening said strap, substantially as described.

2. In a velocipede, the combination with the tubular head, B, of a fork having a tubular neck of uniform diameter and smooth exterior and slotted at its upper end, a collar, B^2, having a smooth interior and surrounding said neck above said head, B, and exteriorly threaded, a handle-bar stem extending into said neck, a clamping-strap surrounding said neck and said collar and threaded to the latter and keyed to the former and a bolt for tightening the lower portion of said clamping-strap and a bolt for tightening the upper portion of said strap, substantially as described.

3. In a velocipede, the combination with the tubular head, B, of a fork having a tubular neck of uniform diameter and smooth exterior and slotted at its upper end, a collar, B^2, having a smooth interior and surrounding said neck above said head, B, and exteriorly threaded, a handle-bar stem extending into said neck, a clamping-strap surrounding said neck and said collar and contracted at the top to extend over the upper end of said neck into contact with the handle-bar stem and threaded to the latter and keyed to the former, and a bolt for tightening the lower portion of said clamping-strap and a bolt for tightening the upper portion of said strap, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses, this 11th day of October, in the year 1892.

CHARLES F. PEASE.

Witnesses:
W. E. KING,
CYRUS KEHR.