No. 636,108. Patented Oct. 31, 1899.

F. E. BLACKMAN.

BICYCLE HARNESS.

(Application filed Jan. 28, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 2.

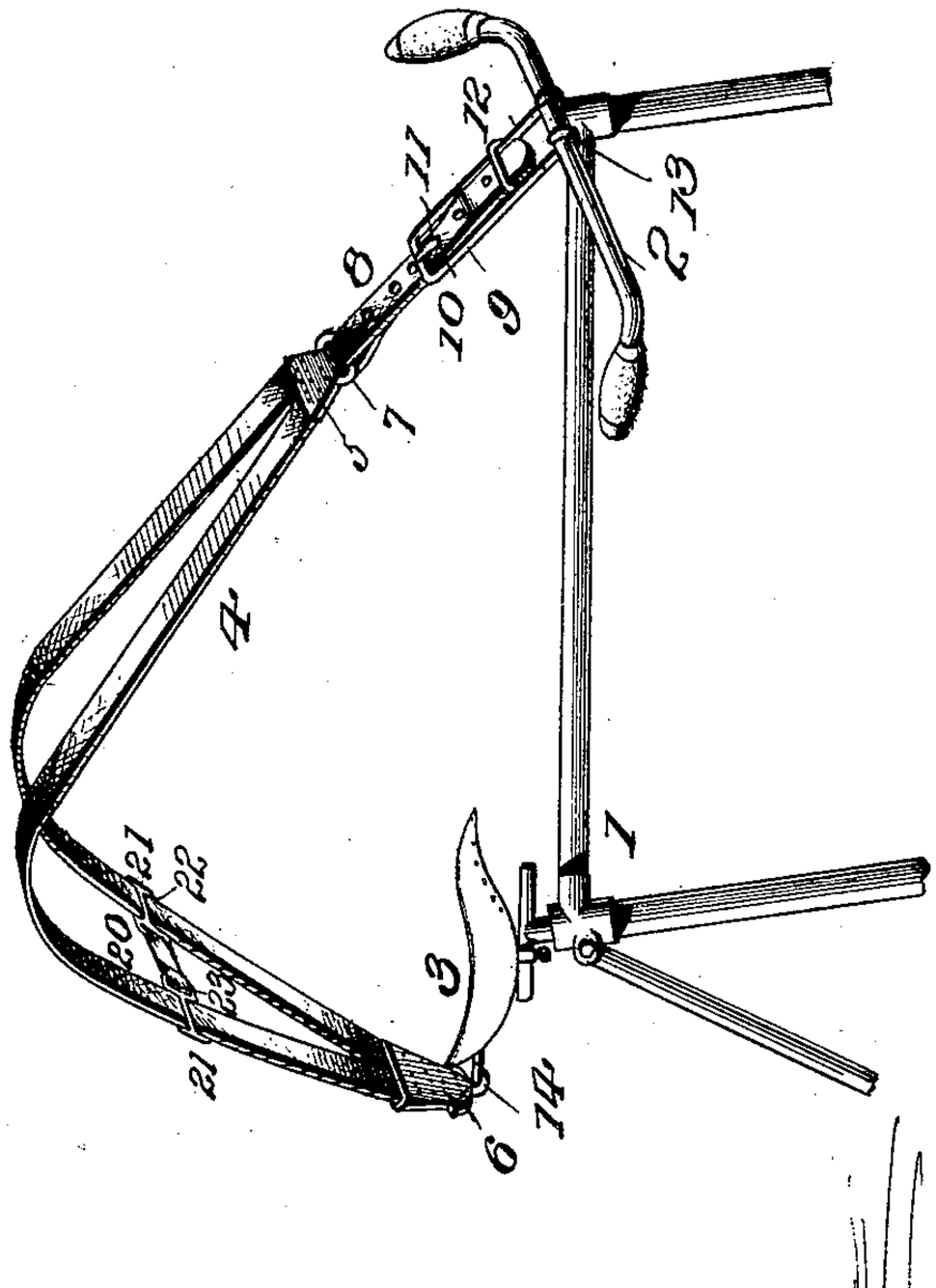
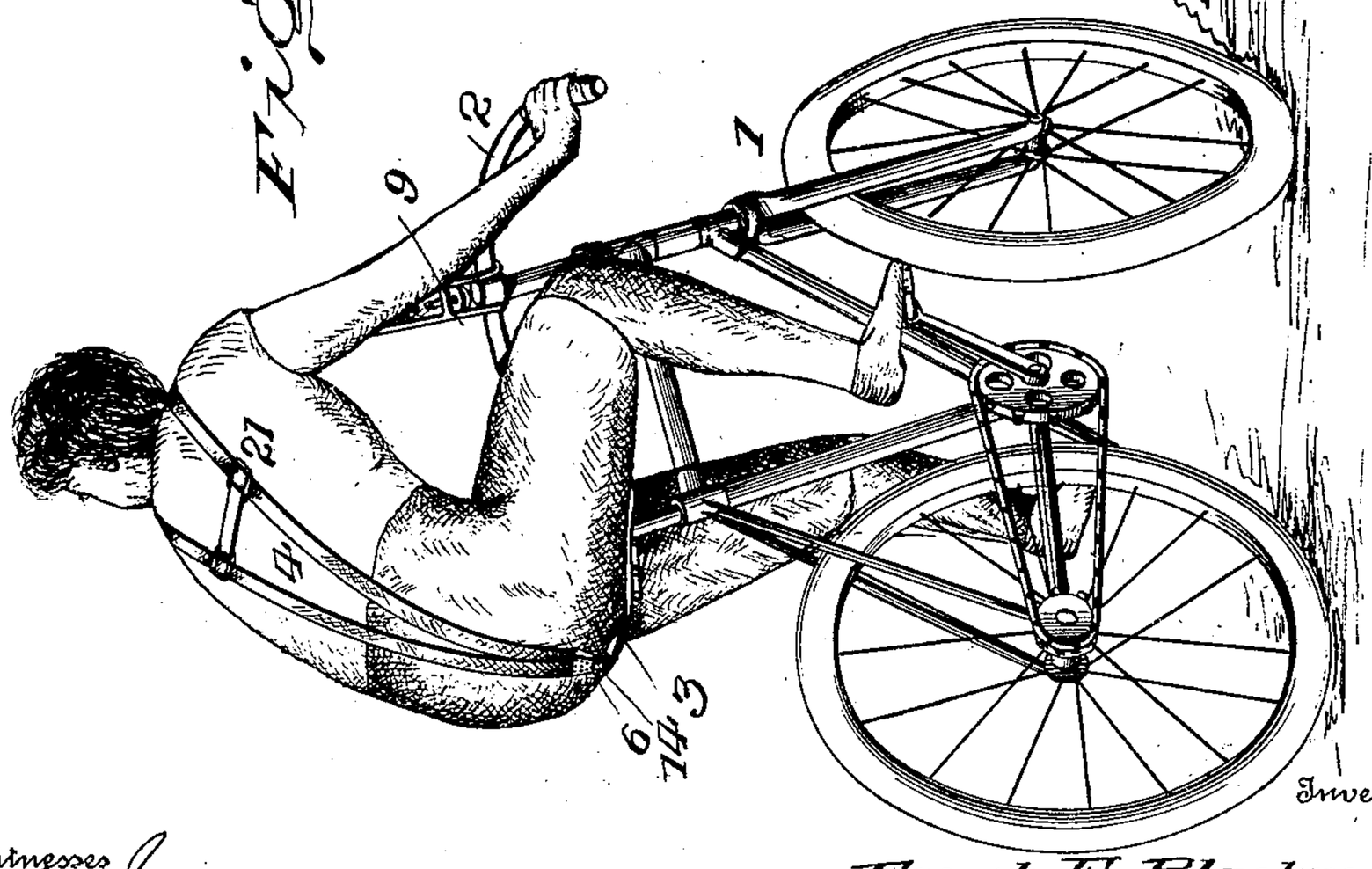


Fig. 1.



Witnesses
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Fig. 3.

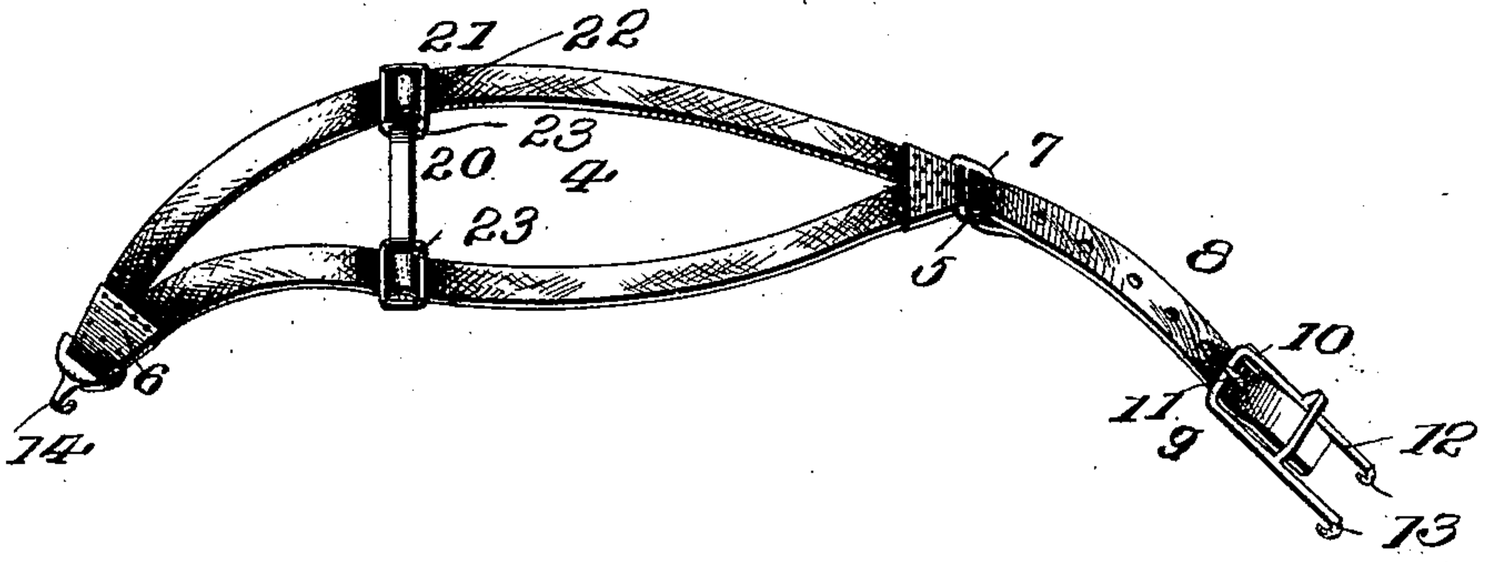


Fig. 4.

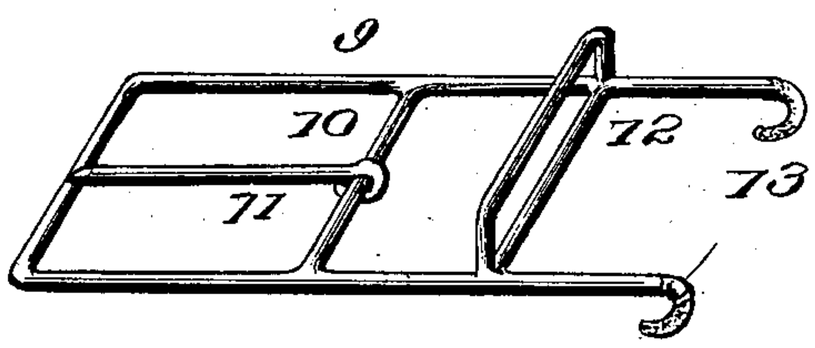


Fig. 6.

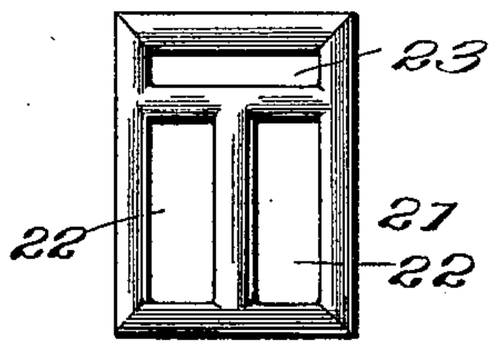
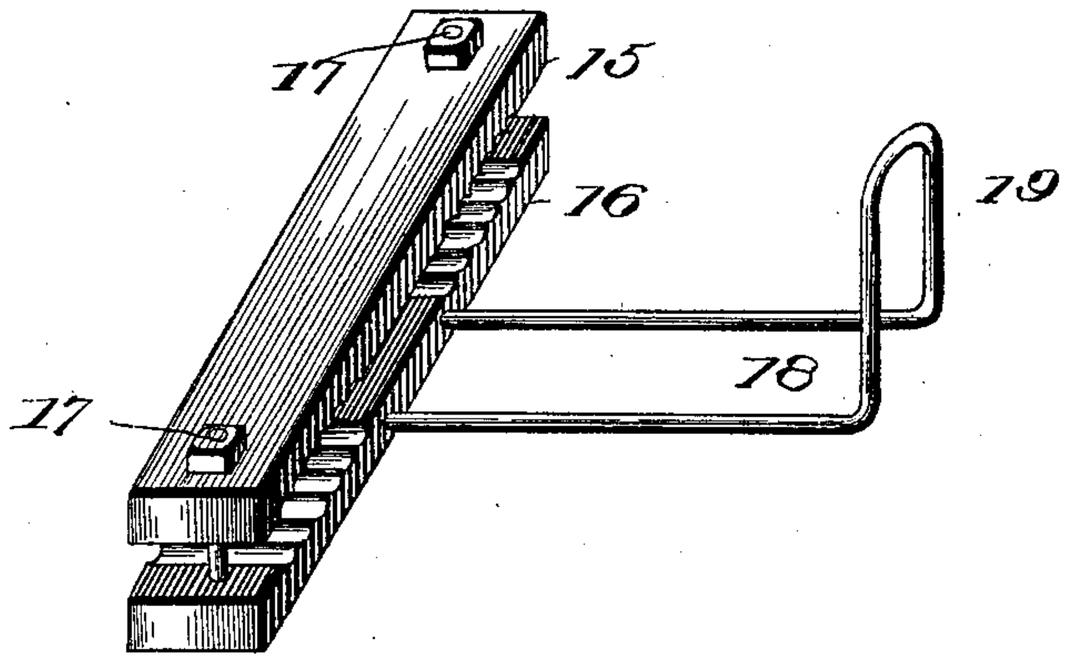


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANK E. BLACKMAN, OF ALBION, INDIANA.

BICYCLE-HARNESS.

SPECIFICATION forming part of Letters Patent No. 636,108, dated October 31, 1899.

Application filed January 28, 1899. Serial No. 703,716. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. BLACKMAN, a citizen of the United States, residing at Albion, in the county of Noble and State of Indiana, have invented certain new and useful Improvements in Bicycle-Harness; 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.

This invention relates to a bicycle-harness for a cyclist, and the purpose of the same is to utilize a considerable amount of force heretofore unexpended to enable a cyclist to attain an increased rate of speed by a concentration of propelling power and materially assist in hill-climbing. Further, by reversing the action of the feet on the pedals when going down steep grades the cyclist can keep his machine under perfect control, and, if necessary, stop it almost instantly, thereby preventing accidents to himself and others. Also the use of a high-geared machine is possible with reduced friction and wear of parts.

The principle of the invention contemplates bringing into practical effect the force or power afforded by a point of support. Without this point of support the only force a rider has is his weight. On the contrary, if the back or shoulders be well supported he has in each leg a force more than treble his own weight.

With this end in view the invention consists of the construction and arrangement of parts hereinafter described and claimed, and whereby a cyclist is held firmly in the saddle and allowed to make complete use of the toggle-joint that is afforded by the foot and the bones that constitute the knee-joint.

In the accompanying drawings, Figure 1 is a perspective view of a bicycle looking toward the rear and showing the invention applied thereto in operative position. Fig. 2 is a perspective view of a part of a bicycle-frame looking toward the front and having the improved device thereon. Fig. 3 is an enlarged detail perspective view of the novel attachment. Fig. 4 is a detail perspective view of a buckle used on the attachment. Fig. 5 is a detail perspective view of a preferred form of device for connecting the attachment to the saddle. Fig. 6 is a detail plan view of a slide used on the attachment.

Referring to the drawings, wherein similar numerals of reference are employed to indicate corresponding parts in the several views, the numeral 1 designates a bicycle of any preferred or well-known form or design, having the usual handle-bar 2 and saddle 3.

The invention comprises two straps 4 or equivalent devices, connected at opposite ends by clamps 5 and 6. To the clasp 5, at the front end of the straps, a link 7 is secured, and thereto is attached a strap 8, having openings therein at regular intervals. On the strap 8 a buckle 9 is mounted and has a rear holding-loop 10, with a movable tongue 11 to adjustably engage said strap, a forward strap-end-retaining loop 12, and front terminating hooks 13, having a rubber or other buffing covering thereon and adapted to engage the handle-bar 2 at opposite points or an adjacent part of the bicycle. To the rear of clasp 6 a hook 14 is secured, which may also have a buffing covering and is intended to be applied to the rear part of the saddle 3. There are many ways of attaching the said hook to the saddle or even to a near by part of the frame, but the preferred device for this purpose is illustrated in Fig. 5. This device consists of two clamping-jaws 15 and 16, adjustably connected by end clamping-bolts 17, and parts of the inner opposing faces have transverse corrugations. From the rear edge of the jaw 16 a loop-hook or similar device 18 is projected and has a vertical portion 19. The jaws 15 and 16 are clamped on the springs of the saddle, the series of corrugations accommodating a differentiation in position of springs in various saddles, and the vertical portion 19 of the hook-loop stands out for ready attachment or detachment of the hook 14 on the rear ends of the straps 4.

To assist in holding the straps on the shoulders of the rider or to accommodate various riders, a cross or brace strap or web 20 is adjustably connected to the straps 4 by slides 21. Each of the slides is in the form of a flat plate having longitudinal parallel slots 22, through which the strap 4 on each side is passed, and a transverse slot 23 at the inner end, to which the end of the strap or web 20 is

attached in each instance. This cross or brace strap or web can be readily moved lengthwise of the straps 4 and either limit the transverse separation of the same or permit them to have greater lateral movement or play.

After a mount is made the rider throws the straps 4 over his shoulders, the hook 14 having been first attached to the saddle, and the hooks 13 are then connected to the handle-bars or front part of the frame. If a standing start is made, the device can be first adjusted in position, or while the machine is stationary. In either case the rider is held firmly down to the saddle, and a brace is provided which concentrates all the muscular power, in addition to the weight of the cyclist, on the driving mechanism in the effective manner heretofore referred to. From a hygienic standpoint the device is also highly beneficial in that a support for the back is provided, and this function is particularly desirable for beginners, long-distance riders, in hill-climbing, and in bringing the machine to a sudden stop without straining the rider in the least. Furthermore, said support is conducive to the staying qualifications of a rider and will materially assist in making a weak back stronger.

Having thus described the invention, what is claimed as new is—

1. A bicycle-harness adapted to be attached at its ends to the machine-frame in advance and in the rear of the rider and comprising spaced shoulder-straps, a transverse brace and means for adjustably connecting the shoulder-straps and brace, substantially as and for the purpose described.

2. A bicycle-harness adapted to be attached at its ends to the machine-frame in advance and in the rear of the rider comprising spaced shoulder-straps, which are brought together at their ends and diverge from their terminals to an intermediate point, a transverse brace and means for adjustably connecting the shoulder-straps and brace, substantially as and for the purpose described.

3. A bicycle-harness adapted to be attached at its ends to the machine-frame in advance and in the rear of the rider and comprising spaced shoulder-straps, slides adjustable on the shoulder-straps and comprising plates having parallel longitudinal slots to receive the shoulder-straps, and a transverse slot, and a transverse web connecting the slides by engagement with the transverse slots thereof, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK E. BLACKMAN. [L. S.]

Witnesses:
RICHARD L. STONE,
DH. BURGHMAN.