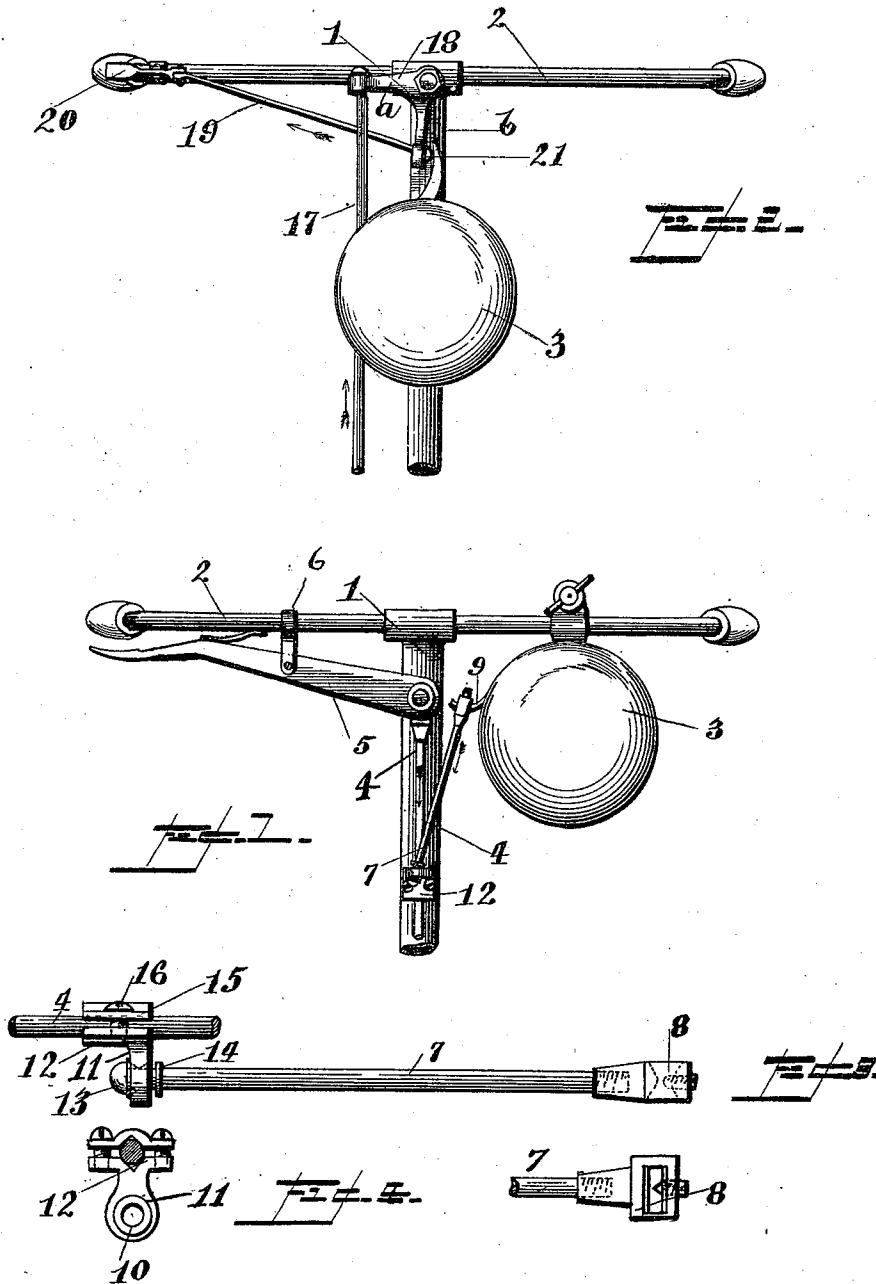


(No Model.)

R. H. CHARLES.
BICYCLE BELL.

No. 517,026.

Patented Mar. 27, 1894.



Witnesses
James G. Jester
Edward R. Wells.

Inventor
Roland H. Charles
A. M. Legg and
By J. R. Nottingham
Attorney

UNITED STATES PATENT OFFICE.

ROLAND H. CHARLES, OF CANISTEO, NEW YORK, ASSIGNOR OF ONE-HALF
TO ARETAS M. LEGG, OF WASHINGTON, DISTRICT OF COLUMBIA.

BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 517,026, dated March 27, 1894.

Application filed April 8, 1893. Serial No. 469,570. (No model.)

To all whom it may concern:

Be it known that I, ROLAND H. CHARLES, a citizen of the United States, residing at Canisteo, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Bicycle-Bells; 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 bells for bicycles, and other machines of a like character; and it consists of the peculiar arrangement of the bell on the frame of the machine and the new and novel means employed for actuating the operating-lever or handle of the bell.

Heretofore, bells on bicycles have been generally operated or sounded by pressure applied by the hand direct upon the operating-lever or handle of the bell; or through the medium of mechanism operated by one of the wheels of the machine, but both of these methods are objectionable in that the rider is compelled to disengage one of his hands from the handle-bar of the machine to manipulate the operating-lever, or the mechanism operating the said lever.

My invention is designed principally to overcome this objection, and in sounding an alarm the hand is not disengaged or taken from the handle-bar, as the bell is rung by the manipulation of the brake-lever or handle of the brake.

In the accompanying drawings:—Figure 1 represents a front elevation of the handle-bar and a portion of the steering-head of a bicycle, showing one location of the bell operated by one style of brake-operating mechanism; Fig. 2, a similar view, showing the bell located in another position and operated by another style of brake-mechanism; Fig. 3, a detached view of the swiveled connecting-link which connects the operating lever, of the bell with the brake-rod; and Fig. 4, detail views of a portion of the connecting-link and the device by which it is attached to the brake-bar.

Referring to the drawings:—The numeral 1 indicates the steering head and 2 the handle-bar of an ordinary bicycle frame.

The numeral 3 denotes the bell, which may be of the kind usually employed on bicycles and the like machines. As shown in Fig. 2, the bell is placed onto the front of the steering-head, and in Fig. 1, it is shown clamped to the handle-bar at one side thereof.

The brake shown in Fig. 1, is of the ordinary plunger variety, which, in this instance, consists of the brake-rod 4, having its upper end pivoted to one end of the brake-handle or operating-lever 5, which, in turn, is pivoted at 6 to the handle bar. The rod 4 is provided with the usual brake-shoe. (Not shown.)

The numeral 7 indicates a connecting-link which is provided at one end with a slotted head, 8, to receive the end of the operating-handle or lever 9 of the bell, said handle or lever being confined by a set-screw. The other end of said link is screw-threaded and plays loosely in an aperture 10 made in an arm 11 of a clamping-plate 12. The aperture is countersunk on both sides of the plate to permit the end of the connecting-link to play loosely therein, and a nut 13 screwed on the end of said link and a collar 14 secured thereon serve to limit the vertical motion of the link. The clamping-plate 12 is secured to the brake-rod by means of a back-plate 15 and screws 16. To sound an alarm, it is only necessary to press the free end of the brake-handle with the fingers. A very slight pressure, not sufficient to apply the brake to the wheel, will give to the brake-rod a downward movement, exerting a pull on the connecting-link sufficient to operate the bell-lever to set the striking-mechanism of the bell into operation.

In Fig. 2, the form of brake shown is that technically known as the "Columbia brake," and consists of the brake-rod 17 having its upper end attached to the arm *a* of a bell-crank lever 18, the other end of said rod (not shown) has connected to it the usual mechanism to which is attached the brake-shoe. Secured to the arm *b* of the bell-crank lever is one end of a connecting-rod, 19, the other end of said rod being pivotally connected to one end of the brake-handle 20, which, in turn, is pivoted on the handle-bar in the usual manner. The end of the bell operating-lever

rests against the end of the arm *b* of the bell-crank lever. An alarm is sounded by pressing the brake-handle as hereinbefore described. As pressure is applied to the brake-handle, the rod 19 is pulled in the direction indicated by the arrow, withdrawing the arm *b* from the operating-lever of the bell, and the said lever being released its spring tension sets the ringing mechanism into operation. It will be understood that the bell-operating lever is set over to its farthest limit and there held by the end of the arm *b* until released by the manipulation of the brake-handle. As the arm *b* and connecting-rod move in the direction indicated by the arrow the arm *a* and the brake-rod move upward.

It will be understood that the character of bells ordinarily used on bicycles is of the variety known as "wound up," wherein pressure applied to the operating-lever of the bell will set the striking-mechanism into operation, and that described in Letters Patent granted to E. D. Rockwell, March 29, 1892, No. 471,982, wherein pressure upon the bell-lever in either direction will impart motion to a striking bar, through the medium of a train of gearing, and produce the ringing of an electric bell. Either form of bell may be used in carrying out my invention.

One of the principal advantages of my invention, is that, in cases of danger, an alarm is continually sounded as the brake is being applied, and without the rider being com-

pelled to remove his hand from the handle-bar of the machine.

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

1. In combination with the frame of a bicycle and a bell mounted thereon and carrying an operating-lever, of a connecting-rod having one end connected to said operating lever and the other end to the brake-rod of a brake, whereby when pressure is applied to the brake-handle an alarm will be sounded, substantially as specified.

2. The combination with the brake-mechanism of a bicycle, of a bell secured to the frame thereof and provided with an operating-lever arranged in contact with said brake-mechanism, whereby when pressure is applied to the brake-handle an alarm will be sounded, substantially as specified.

3. The combination with the brake-mechanism of a bicycle and a bell having an operating-lever, of a connecting-rod having one end connected to said operating-lever and the other end swiveled to the brake-rod of the said brake-mechanism, substantially as specified.

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

ROLAND H. CHARLES.

Witnesses:

J. R. NOTTINGHAM,
S. BRASHEARS.