

(No Model.)

A. F. ROCKWELL.
BICYCLE BELL.

No. 557,287.

Patented Mar. 31, 1896.

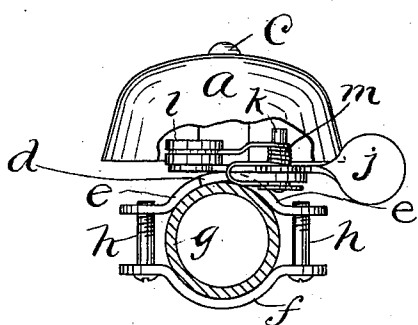


Fig. 1.

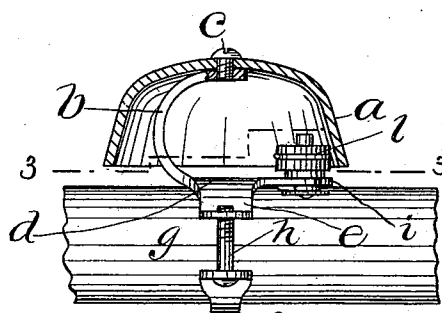


Fig. 2.

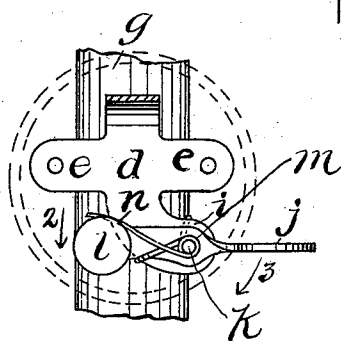


Fig. 3.

WITNESSES.

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BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 557,287, dated March 31, 1896.

Application filed August 6, 1895. Serial No. 558,438. (No model.)

To all whom it may concern:

Be it known that I, ALBERT F. ROCKWELL, of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Bells, of which the following is a specification.

This invention relates to alarm-bells generally, but for the sake of clearness and brevity of description and explanation will be herein set forth as having special reference to single-stroke bicycle-bells—that is, that class or type of bicycle-bells in which a separate act or action is required for each stroke or sound effected by the striker.

In the construction of bells of the kind mentioned it is prerequisite that three acts should be provided for—first, the drawing or moving of the striker away from the bell or gong; second, the impelling or moving of the striker toward and against the bell to sound the same, and, third, a slight return or rebounding of the striker from the bell and its retention away from the latter, so as not to check the vibrations thereof.

It is the object of my invention to meet the before-mentioned necessities in the most perfect manner and to, at the same time, provide a most simple, efficient, and economical structure, all as will be clearly understood by those skilled in the art from the following description and claims.

Reference is to be had to the annexed drawings, and to the letters and figures marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a side view, part being shown as broken out, of my improved bell as applied to the handle-bar of a bicycle. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a sectional plan view taken on the line 3 3 of Fig. 2.

In the drawings, *a* designates the gong or bell proper, which is herein shown as of hemispherical form, and is supported at its center upon the upper end of a standard or arm *b*, a screw *c* serving to attach the bell to the said arm. The standard *b* is shown as an integral part of the base-plate *d* and as curving upward therefrom, though it might be otherwise

connected with the base-plate and be otherwise shaped. The base-plate is slightly curved in cross-section, as will be apparent from an inspection of Fig. 1, and is provided with laterally-extended arms *e e*, which, with a curved cross-bar *f*, constitute a yoke whereby the bell structure may be secured to the handle-bar *g* of a bicycle, screws *h h* being employed in this connection and for this purpose in a not unusual way. A curved arm *i* extends outward from the base-plate and affords a support for the striker arm or lever *j*, which is pivoted thereon, as at *k*. On the inner end of the striker-lever there is secured a striker *l* of any suitable form, though it is obvious that the striker may be an integral part of the lever.

m is a length of spring-wire bent around the pivot *k* in the form of a helical spring and having one end, as *n*, extended inward, so as to rest against the striker *l*, which construction and arrangement of parts, supposing the other end of the spring to be fixed, will enable the spring *m* to operate to move the inner end of the lever and striker in the direction of the arrow 2 and against the bell or gong. The opposite end of the wire *m* is bent about the arm *i* and the lever *j* in such manner as to bear the striker slightly away from the bell or gong, so that normally it may not be in contact therewith, as is clearly represented in Fig. 3.

Under the construction mentioned, the parts being normally in the position in which they are represented in Fig. 3, the user of the bell, by drawing the outer end of the striker-lever around in the direction of the arrow 3 and releasing it, will leave the end *l* of the spring to operate upon the striker to impel it toward the bell and cause it to impinge thereon and sound the bell, the momentum overcoming the resilient force of the other end of the spring to effect a stroke of the bell, the said other end of the spring acting, however, to assist in the rebounding of the striker and holding it away from the bell, so as not to check in any degree the vibrations thereof, all as will be readily understood by those skilled in the art without further description or illustration.

The advantages of these improvements re-

side in their simplicity and efficiency. Being simple in construction and mode of operation, they greatly cheapen the cost of production and provide a device which is readily
 5 adjusted in place, not easily put out of order, is rendered durable, and if by accident it should become disorganized may be easily repaired. The construction and arrangement of the spring make one end have the effect,
 10 substantially, of counterbalancing the other, and, hence, while the striker-lever is easily operated the spring acts with certainty to both cause an impingement of the striker against the bell or gong and to bear and hold it off
 15 therefrom after the impingement and rebound of the striker.

The lever may be extended in any direction that may best suit circumstances and convenience, and the spring may be varied in
 20 position and form within the limits of mechanical skill without departure from the nature or spirit of the invention.

In bell constructions of this general character the striker-lever or striker are "buffed"
 25 and the striker is held back after rebound by a stop, the resilience of the lever or striker being relied upon to allow of the impingement of the striker on the bell. By the employment of a spring-buffer, as in my invention,
 30 I am enabled to secure certainty of operation by slight strike-impelling force on the lever, certain rebound of the striker, and less wear and shock to the parts.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. A bell of the character described comprising in its construction, a gong proper, a supporting plate or frame, a striker-lever fulcrumed on the supporting-plate and provided on its inner end with a striker, a spring to
 40 impel the striker against the bell, and a buffer-spring acting upon the striker-lever to hold the striker away from the bell after a rebound.

2. A bell of the character described, comprising in its construction, a gong proper, a supporting plate or frame, a striker-lever fulcrumed on the supporting-plate, and provided on its inner end with a striker, a spring to
 50 impel the striker against the bell, a single spring coiled about the fulcrum of the lever, one end of the said spring acting upon the lever to impel the striker against the bell or gong, and the other end serving to hold the striker back from contact with the bell after
 60 impingement and rebound.

3. The combination, with the bell and base-plate provided with a standard to support the bell, yoke-arms, and a striker-lever-supporting arm, of the striker-lever fulcrumed on the last-mentioned arm and provided with a
 65 striker to impinge upon the bell, and a spring coiled about the fulcrum of the lever and acting to impel the striker against the bell and buff and hold it away therefrom after rebound.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 31st day of
 70 May, A. D. 1895.

ALBERT F. ROCKWELL.

Witnesses:

JOHN J. JENNINGS,
 ALICE E. BROWN.