(No Model.)

W. A. PENFIELD.

BICYCLE BELL.

No. 589,220. Patented Aug. 31, 1897.

Fig. 1

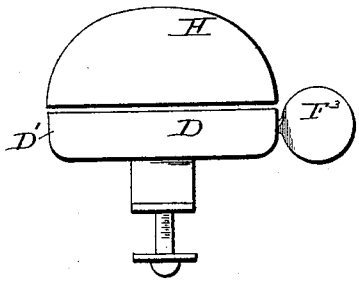


Fig. 2

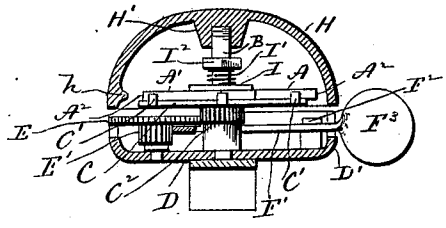


Fig. 3

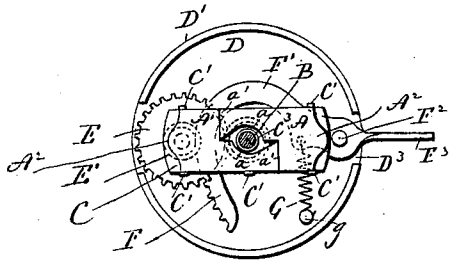


Fig. 4

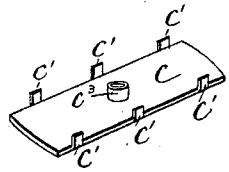


Fig. 5

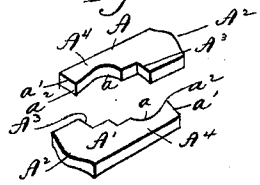


Fig. 6



Witnesses.
J. F. Shumway.
Lillian D. Kelley.

William A. Penfield
Inventor.
By attys
Earle & Seymour

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM A. PENFIELD, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE BRADLEY & HUBBARD MFG. CO., OF SAME PLACE.

BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 589,220, dated August 31, 1897.

Application filed June 14, 1897. Serial No. 640,622. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. PENFIELD, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Bicycle-Bells; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in side elevation of a bell constructed in accordance with my invention; Fig. 2, a view thereof in vertical section; Fig. 3, a plan view with the gong removed; Fig. 4, a detached perspective view of the carrier; Fig. 5, a detached perspective view showing the two strikers; Fig. 6, a view in longitudinal central section of the carrier.

My invention relates to an improvement in bicycle-bells, the object being to produce therefor a striker constructed with particular reference to making it as heavy and hence as powerful in action as is possible, considering the space available for its occupancy and operation within the bell.

A further object of my invention is to produce a striker adapted to be confined in place by simple and durable means.

With these ends in view my invention consists in a bell having certain details of construction, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention, as herein shown, I employ two flat strikers A and A', which are, so to speak, "matched" or "fitted" together so as to secure a great economy of space, whereby, considering the space available, they may be made heavy and hence powerful in the blows delivered by them. As shown, each of the said strikers has a rounded centrally-arranged striking-surface A^2, located at the outer end of its body portion, and an abutment-shoulder A^3, located at the inner end thereof. Each striker is also formed with an arm the outer edge of which is made straight, while its inner edge is cut away to form a clearance-space *a*, adapting the arm to clear the gong-post B. The ends of the said arms are formed with inwardly-projecting stop-lugs A' and square abutment-faces a^2, the face a^2 of the striker A coacting with the shoulder A^3 of the striker A', and the face a^2 of the striker A' coacting with the shoulder A^3 of the striker A. The said strikers are, as to their stop-arms, "rights" and "lefts," so to speak, so that their respective stop-arms may extend beyond each other, whereby the strikers are matched or fitted together, so as to occupy the minimum of space. The strikers are mounted for longitudinal reciprocation upon a sheet-metal carrier C, furnished along its sides with guiding-fingers C', located at equal distances from each other and six in number, three on each side. This carrier is also provided with a pinion C^2, the hub C^3 of which extends upward through it to form a long bearing for the rotation of the carrier upon the said post B, which is rigidly secured within the cup-shaped base D of the bell. The said carrier is rotated upon the stud B by means of an operating mechanism which may be of any suitable character and which consists, as herein shown, of a wheel E, meshing into the pinion C^2 aforesaid, and provided upon its lower face with a pinion E', the teeth of which are intermeshed with the teeth of a segmental rack F, formed at the inner end of the operating-lever F', which is pivotally hung upon a stud F^2, located near the edge of the cup-shaped base D, the flange D' of which is formed with a slot D^3 for the outward projection and clearance of the finger-piece F^3 of the said lever. A coiled spring G, connected with the lever at one end and at the other with a pin *g* in the base D, provides for operating the lever in one direction. The gong H is of ordinary construction and formed with a tapped hub H', adapting it to be secured to the threaded upper end of the post B. It is also provided, in the usual manner, with an inwardly-projecting striking-lug *h*, formed near its edge, and in position to be sharply struck by the rounded striking-faces A^2 of the strikers.

The two strikers are held down in place upon the carrier by means of a washer I, a coiled spring I', bearing upon the upper face of the washer and encircling the post B, and a nut I^2, mounted upon the post and adjust-

able thereupon for regulating the tension of the spring, which presses the washer down upon the inner ends of the strikers, so as to prevent them from moving too easily, but without imposing enough restraint upon them to prevent them from reciprocating as required for the operation of the bell.

It will be understood that as the carrier is rotated by means of the finger-lever F the two strikers are thrown outward by centrifugal force, their outward movement being limited by the engagement of the inwardly-turned stop-lugs a^2 of their stop-arms with the post B at opposite points thereon. When the strikers strike the lug h of the gong, they are thrown inward, their inward movement being limited by the engagement of the abutment-faces a' of their stop-arms with the abutment-shoulders A^3 of their body portions. The clearance-spaces a, formed in the inner edges of the stop-arms, permit the strikers to reciprocate with sufficient range for all purposes. By constructing and arranging the strikers as shown I am enabled to make them relatively large and heavy and hence powerful in their striking action and durable.

It is apparent that the carrier and the other details of the bell may be varied without departing from my invention, and I would therefore have it understood that I do not limit myself to the exact construction herein shown, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention. Thus, if desired, I may use one striker instead of two, although I prefer to employ two.

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

1. In a bicycle-bell, the combination with the gong-post and gong thereof, of a carrier rotating upon the gong-post as upon a center, means for actuating the said carrier in rotation, and one or more strikers mounted upon the carrier for reciprocation thereupon, and each having an arm which extends to one side of and beyond the gong-post.

2. In a bicycle-bell, the combination with the gong-post and gong thereof, of a carrier rotating upon the gong-post as upon a center, means for actuating the said carrier in rotation, and one or more strikers mounted upon the carrier for reciprocation thereupon, each having an arm which extends to one side of and beyond the gong-post, and which is formed with a clearance-space for clearing the gong-post, and with a stop-lug for coacting with the gong-post.

3. In a bicycle-bell, the combination with the gong-post and gong thereof, of a carrier rotating upon the gong-post as upon a center, means for actuating the said carrier in rotation, and two strikers mounted upon the carrier for reciprocation thereupon, and each having a stop-arm arranged to extend to one side of and beyond the gong-post, the stop-arms being rights and lefts so that the two arms are respectively located on opposite sides of the post, and means for holding the said strikers down upon the carrier under frictional restraint.

4. In a bicycle-bell, the combination with the gong-post and gong thereof, of a carrier rotating upon the gong-post as upon a center, means for actuating the said carrier in rotation, two flat strikers mounted upon the carrier for reciprocation thereupon, and each having a stop-arm arranged to extend to one side of and beyond the gong-post on the opposite sides of which the arms of the respective strikers are located, and adjustable means applied to the post for holding the strikers down upon the carrier under frictional restraint.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM A. PENFIELD.

Witnesses:
W. A. HALL,
E. R. LEWIS.