

No. 637,274.

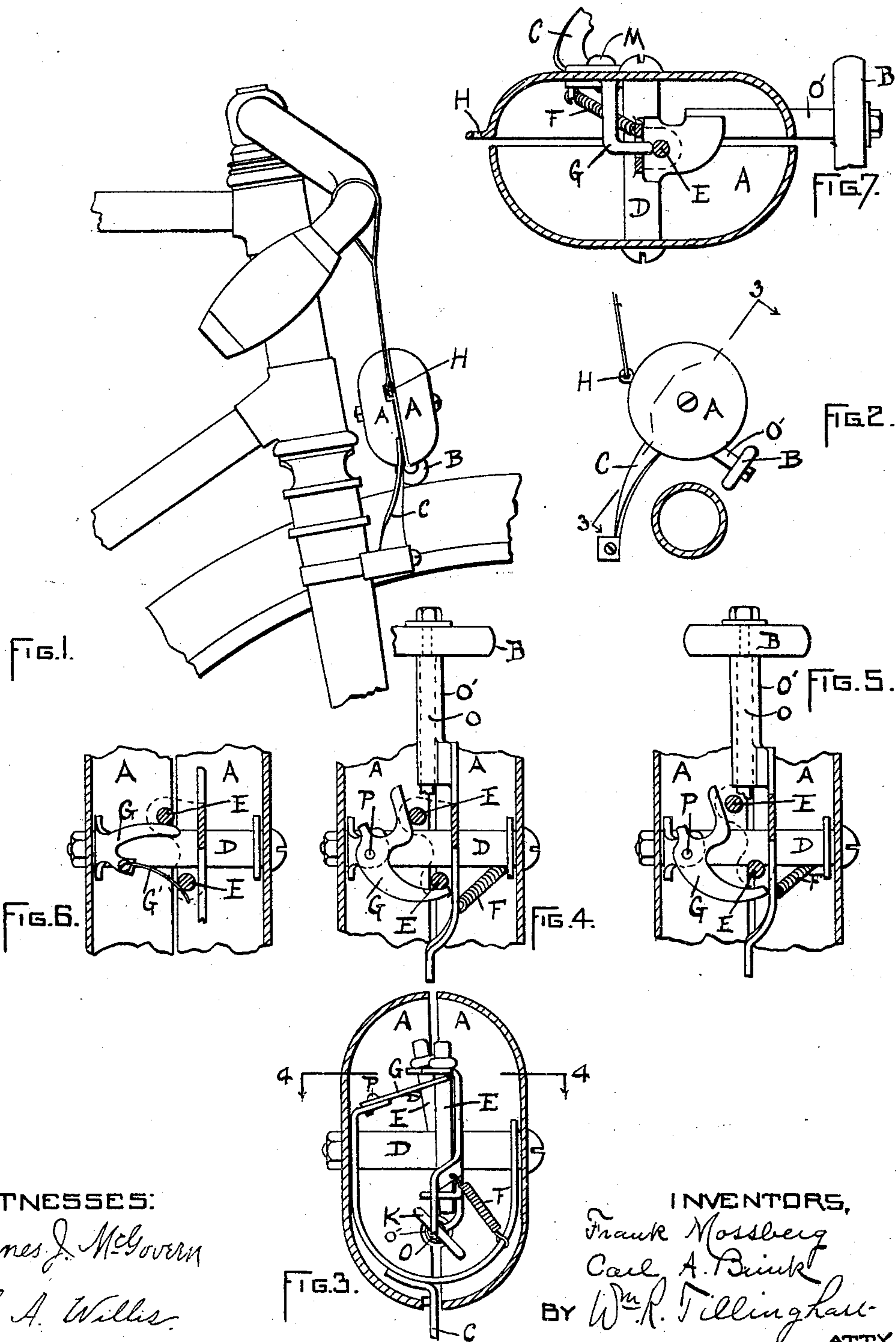
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F. MOSSBERG & C. A. BRINK.

BICYCLE ALARM BELL.

(Application filed July 28, 1899.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## BICYCLE ALARM-BELL.

SPECIFICATION forming part of Letters Patent No. 637,274, dated November 21, 1899.

Application filed July 28, 1899. Serial No. 725,401. (No model.)

*To all whom it may concern:*

Be it known that we, FRANK MOSSBERG, of Attleborough, in Bristol county and State of Massachusetts, and CARL A. BRINK, of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Bicycle Alarm-Bells, of which the following, with the accompanying drawings, hereby made a part of this specification, is a description.

Our invention is an improvement upon the bicycle alarm-bell patented to us in Letters Patent of the United States No. 622,159, of March 28, 1899; and it consists in mechanism added to the bell therein described and similar bells to prevent the hammers from moving and rattling from the motion of the machine when the bell is not in actual use. An inspection of our former patent will show that the hammer or hammers are loosely mounted to fall away from the bell by gravity, thus doing away with the need of any spring to actuate or control them. When thus constructed, however, the hammers will rattle and produce a disagreeable noise when the bell is not being rung, and it is to prevent this without interfering with the action of the bell when in use that our present invention is designed. The accompanying drawings show several ways of accomplishing this result, slightly differing one from another in details, but all constructed upon the same principle of causing some part of the mechanism to press against the hammer or hammers when the bell is not in use and of withdrawing the part from contact with the hammers when the bell is to be used.

In the drawings, Figure 1 is a side view of our bell mounted upon a bicycle. Fig. 2 is a front view of the bell without other portions of the bicycle and representing the tire of the front wheel in section. This figure represents the bell when not being actuated by contact of its wheel with the tire. Fig. 3 is a sectional view on line 3 3 of Fig. 2; and Figs. 4 and 5 are also sectional views, being drawn on line 4 4 of Fig. 3, these three figures representing one of the forms, and perhaps the preferable one, of our invention. Figs. 6 and 7 are respectively sectional views similar to Figs. 3, 4, and 5, but of other modi-

fications and forms of our invention. All these figures except the last represent double bells. The last shows our invention applied to a single bell, the upper or rear portion being a dummy, serving merely to keep dirt and dust out of the bell and its working mechanism.

As already stated, our present bell is constructed in essentially the same manner as that of our earlier patent above referred to; but some present explanation of its construction and working appears to be needed to make clear the description of our present invention.

The bell is mounted upon a fixed bracket C, Figs. 1 and 2, attached to the frame of the bicycle or other vehicle, and the bell A A, with all its striking mechanism, is mounted to turn upon a pivot in this bracket. It is not at all material exactly where the pivot is located, although it is preferable to place it in or near the center of the bell. Its location, as shown in the drawings, will be pointed out as each form shown is referred to. The striking mechanism consists of the hammer or hammers E E, the most important feature of which is that they are mounted loosely, so that they will normally fall away from the bell by gravity, and of mechanism for throwing the hammers, which consists, first, of the wheel B, Figs. 1 and 2, mounted upon a shaft O, the wheel B being normally out of contact with the tire of the wheel of the machine, but so constructed that it may be turned into contact with it, so as to be driven by it when required, and, second, of a revolving dog or dogs on the shaft O, to which the wheel B is attached to throw the hammer against the bell or bells when operated by the wheel B. These dogs may be seen at K in Fig. 3, but will be better understood by referring to our prior patent mentioned above. A spring F or equivalent device is used to normally keep the bell and its striking mechanism so turned that the wheel B will not be in contact with the tire to be run by it, one end of the spring being attached to a portion of the bracket C extending inside the bell, as will be more specially hereinafter described, and the other end to some part revolving with the bell. It is evident that when this spring acts, as it does, to turn



the bell so as to take the wheel B out of contact with the tire of the machine there must ordinarily be some stop to prevent its turning the bell too far, and we have arranged  
 5 our mechanism to furnish this stop at the same time that it prevents the hammer from rattling. This is done by carrying some portion integral with or rigidly attached to the fixed bracket C inside the bell, to which may  
 10 be attached the special device employed. It is not material, as will be seen, exactly how or what portion of the bracket C is thus carried inside the bell, provided only some rigid part is thus carried in. These arrangements  
 15 will be best understood by a reference to the simplest form of our mechanism shown in the drawings—namely, that shown in Fig. 7. In this construction the bell and its striking mechanism turns upon a pivot in the bracket  
 20 C, located at M, and the arm G inside the bell is attached rigidly to the bracket. The arm G is then curved around, as shown in the drawings, so as to come into contact with the hammer E. When in its normal position, as  
 25 shown in the drawings, the hammer is firmly held thus in contact by the spring F, one end of which is attached, as above described, to a portion of the bracket and the other to the framework supporting the striking mechanism, and which is also preferably attached to  
 30 the bell. When the bell is turned upon its axis M by the cord which is attached to the dummy-bell at H, by pulling it in an upward direction it will turn the hammer away from the arm G, thus leaving it free to be operated  
 35 by the dog on the shaft O under the hammer, as here shown, and when the cord is again loosened the spring will turn the bell and its connecting parts back until the hammer again  
 40 comes into contact with the arm G, which thus acts as a stop against its further turning. In Fig. 6 there is represented a somewhat similar arrangement for a double bell and its two hammers, the arm G being attached to or  
 45 made integral with the bracket C, as in Fig. 7. We have generally preferred in the case of these double bells to carry the bracket C inside between the bells and then rigidly attach to it or bend the metal into a U-shaped  
 50 fork, as shown in Fig. 3, the upper end of the fork furnishing a support for the axle D, to which is attached the bells and framework carrying the hammers. The arm G in Fig. 6 is then attached rigidly to the top of one of the prongs of the U-fork, and one of the hammers E is brought into contact with this arm  
 55 under the influence of the spring (not shown in this figure) and the other hammer at the same time coming into contact with a slight spring G', attached to the arm, which is sufficient to prevent it from rattling. Figs. 3, 4, and 5, however, exhibit the form of our invention which we regard as preferable. In these  
 60 a double-pronged arm G of the shape shown in the drawings is pivoted at P in the upper end of one of the U-prongs, as in Fig. 6, in such a way that the spring F will cause one

of the hammers E to come into contact with the longer prong and by causing the arm to swing slightly about its pivot bring the other  
 70 prong against the other hammer, thus bringing an effectual and practically equal pressure against both hammers to prevent their rattling, while at the same time furnishing a stop against the bell turning too far back. 75  
 Fig. 4 shows the bell and apparatus in its normal position, as it is when not in use, and Fig. 5 shows the same mechanism when the bell is turned into operative position for ringing. As has been stated above, these drawings serve to illustrate several possible forms  
 80 of a general mechanism; but doubtless there are other arrangements of essentially the same thing, and we do not mean to confine ourselves to the exact details of any of them 85  
 further than is pointed out in the several claims annexed.

We claim as our invention—

1. The combination of a bracket to be attached to the machine, a bell, a striking mechanism including a loosely-mounted hammer which will fall from the bell by gravity after being driven against it and mechanism for operating the hammer, said striking mechanism being mounted to turn in one direction  
 90 into contact with the wheel of the vehicle to be driven by it, and a stopping device attached to the bracket to prevent the striking mechanism from turning in the opposite direction by coming into contact with the hammer, said stopping device and hammer being  
 95 normally in contact. 100

2. The combination of a bell, a striking mechanism including a loosely-mounted hammer which will fall from the bell by gravity after being driven against it and mechanism for operating the hammer, said striking mechanism being mounted to turn in one direction into contact with the wheel of the vehicle to be driven by it, and a fixed stopping  
 105 device to prevent the striking mechanism from turning in the opposite direction by coming into contact with the hammer, said stopping device and hammer being normally in contact. 110  
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3. The combination of two bells, two hammers which will fall from the bells by gravity after being driven against them, a double-pronged stopping device normally pressing against both hammers and pivoted to press in  
 120 a substantially equal degree against both, a spring to keep the stopping device and hammers in normal contact, and mechanism for operating the hammers mounted to turn into and out of contact with the wheel of the vehicle to be run by it and separating the hammer and device normally pressing against it  
 125 when turned to ring the bell.

4. The combination of a bell, a hammer which will fall from the bell by gravity after being driven against it, mechanism for operating the hammer mounted to turn in one direction into contact with the wheel of the vehicle to be driven by it, a device to stop the  
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operating mechanism from turning too far in the opposite direction by coming into contact with the hammer, and a spring to keep the stopping device and hammer in normal contact.

5     5. The combination of a bell, a hammer which will fall from the bell by gravity after being driven against it, mechanism for operating the hammer mounted to turn in one direction into contact with the wheel of the ve-

hicle to be driven by it, and a device to stop the operating mechanism from turning too far in the opposite direction by coming into contact with the hammer, said stopping device and hammer being normally in contact. 15

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