

(No Model.)

2 Sheets—Sheet 1.

W. H. WRIGHT.
BELL.

No. 580,747.

Patented Apr. 13, 1897.

Fig. 1

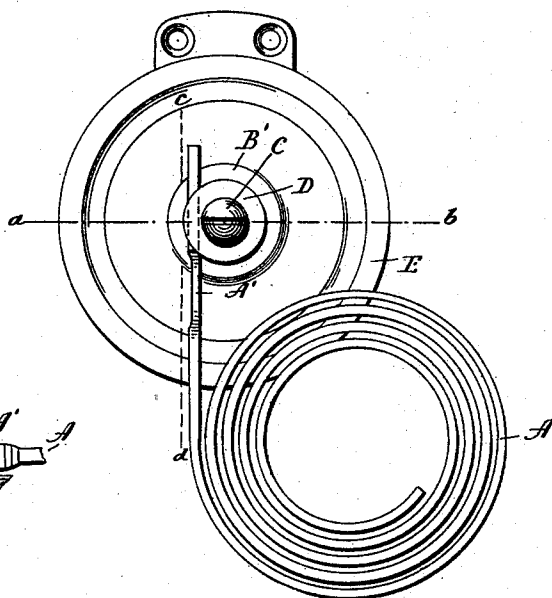


Fig. 3

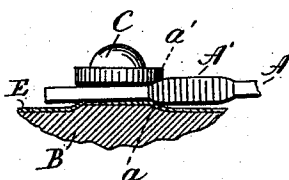
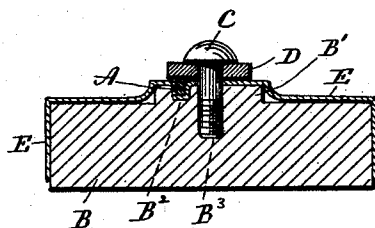


Fig. 2



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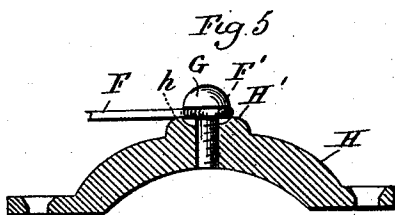
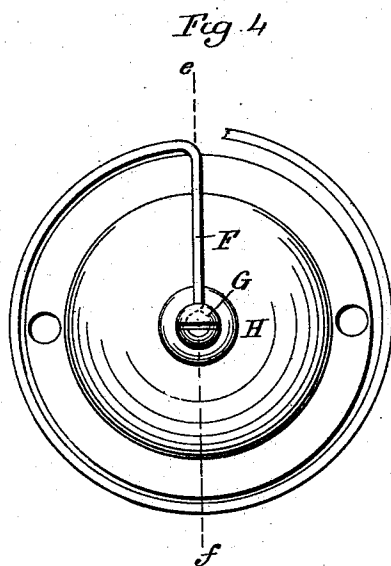
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

WILLIAM H. WRIGHT, OF BRISTOL, CONNECTICUT, ASSIGNOR TO THE E. INGRAHAM COMPANY, OF SAME PLACE.

BELL.

SPECIFICATION forming part of Letters Patent No. 580,747, dated April 13, 1897.

Application filed June 8, 1896. Serial No. 594,679. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WRIGHT, of Bristol, in the county of Hartford and State of Connecticut, have invented a new Improvement in Bells for Clocks; 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 plan view of a clock-bell constructed in accordance with my invention; Fig. 2, a view thereof on the line *a b* of Fig. 1; Fig. 3, a broken view, partly in elevation and partly in section, on the line *c d* of Fig. 1; Fig. 4, a plan view of another form which my improved bell may assume; Fig. 5, a view thereof, in central section, on the line *e f* of Fig. 4.

My invention relates to an improvement in that class of bells for clocks which comprise a spirally-coiled wire forming a gong and a standard to which one end of the same is secured.

In constructing bells of this character great difficulty has been found in establishing such a connection between the wire and standard as will obtain a full and resonant tone, for ordinarily bells of this class give but a twanging sound or else a tone which, though sweet, lacks fullness and sustaining power. One way of connecting the wire with the standard has been through the medium of a washer, to which the wire is firmly soldered and which receives a binding-screw entering the standard. Such a construction is passably effective, but is objectionable on account of its expense. Another way has been to slot the standard and drive the end of the wire into it; but that construction, though cheap, does not uniformly secure a fine tone.

The object of my present invention is to overcome the objections before encountered and to secure at a low cost for manufacture a wire bell or gong which will ring without twanging and with a pure deep-toned sustained note with the effect of a distant chime.

With these ends in view my invention consists in a wire clock bell or gong having certain details of construction, as will be here-

inafter described, and pointed out in the claims.

In practicing my invention I may resort to several constructions, two of which I have chosen for illustration.

In the construction shown in Figs. 1, 2, and 3 of the drawings I flatten the outer end of the spring *A*, so as to virtually form a double shoulder *A'*, markedly increasing the width of the wire at the point flattened. I also form a cast-metal standard *B* with a central hub or boss *B'*, having a groove or slot *B²* formed in it to receive the end of the wire and also a screw-hole *B³* to receive the binding-screw *C*, by means of which the washer *D* is drawn down upon the face of the hub and the upper edge of the end of the wire in the groove *B²* thereof. As herein shown, the standard is furnished with a scalp *E*, which is struck up to fit over the hub and into the recess *B²*; but this scalp may be dispensed with, if desired, its function being purely ornamental. In connecting the wire and standard the outer end of the wire is inserted into the groove *B²* thereof and under the edge of the washer, so that the outer end of the shoulder is just entered into the groove and under the adjacent edge of the washer, which is thus slightly tilted. The screw *C* is then turned down to tighten the washer, which, instead of exerting a uniform downward pressure throughout that portion of the wire under it and in the groove, concentrates its pressure upon the wire at the point where the shoulder is entered into the groove and under the edge of the washer. At this point the wire is caused, so to speak, to bite into the bottom of the extreme inner end of the groove at the point *a*, and also to bite into the washer at the point *a'*, as shown in Fig. 3. Very intimate connection is thus established at the points mentioned between the spring and collet and standard, with the result of securing a surprisingly deep, full-toned, and sustaining note from the wire when struck. This gain in the quality of tone seems to be due to the fact that instead of relying upon a long contact between the wire spring and standard for producing resonance the contact is limited virtually to one point, where the pressure forcing the parts together is concentrated. What-

ever the true theory may be the fact remains that a surprising gain in the quality of the bell is secured by the construction mentioned.

In Figs. 4 and 5 of the drawings I have shown a modification of my improvement. In this case the inner end of a round wire spring F is bent to form an eye F', receiving a binding-screw G, entering a circular cast-metal standard H, which is constructed with a sharp-edged annular shoulder H', concentric with the opening formed to receive the screw G. The eye F' and the shoulder H' are related in size, so that when the screw G is turned to force the eye down upon the standard the wire of the spring F will be caused to bite into the upper edge of the shoulder H' at the point *h*, close to the eye, where the drawing force of the screw will be concentrated. Of course the eye will bear more or less upon the shoulder H', but the action of the screw will be chiefly concentrated upon the wire at the point *h*. In this construction it will be seen that the shoulder is formed integral with the standard instead of with the wire, as in the construction shown by Figs. 1 and 2, but the result is the same in so far as the force of the binding-screw is concentrated at one point.

It is obvious that still other changes in the forms of the wires and standards may be resorted to in carrying out my invention, and I would have it understood that I do not limit myself to the exact construction described, but hold myself at liberty to make such changes as fairly fall within the spirit and scope of my invention.

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

1. In a wire bell or gong for clocks, the

combination with a standard having a screw-hole formed in it of a coiled-wire gong, one of said parts being constructed with a shoulder located close to the point of their connection together, and a binding-screw entering the said screw-hole of the standard for securing the coiled-wire gong thereto, and concentrating its binding action upon the said shoulder through which an intimate relation between the gong and standard is secured, whereby a pure, deep-toned sustained note is obtained by striking the gong.

2. In a bell for clocks, the combination with a standard constructed with a central boss, having a screw-hole formed in its center, and having a groove or slot formed in it adjacent to but one side of the said screw-hole; of a coiled wire forming a gong, having its outer end made straight to enter the said slot in the boss of the washer, and flattened to form a shoulder which is entered into one end of the said slot, a washer which is placed upon the said boss, and adapted to engage with the said outer end of the gong, and with the outer end of the shoulder thereof, and a binding-screw passing down through the said washer, and into the screw-hole of the boss of the standard and concentrating its binding action upon the said shoulder by means of which an intimate relation between the gong and standard is secured, whereby a pure deep-toned sustained note is obtained from the bell.

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

W. H. WRIGHT.

Witnesses:

ALFRED ROE,
LOREN A. BALLOU.