G. M. STEVENS.

BELL-STRIKING APPARATUS.

No. 195,461. Patented Sept. 25, 1877.

Fig. 1.

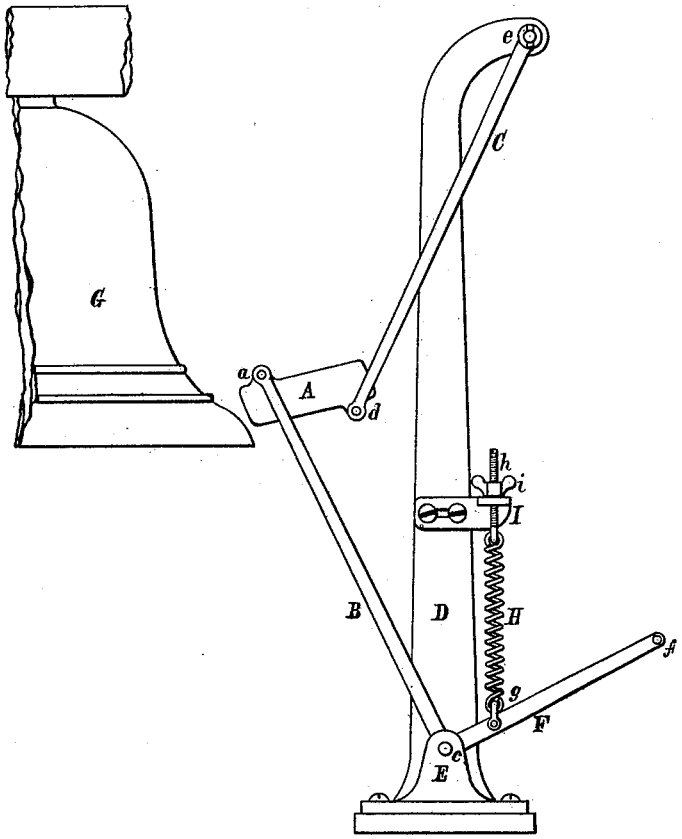
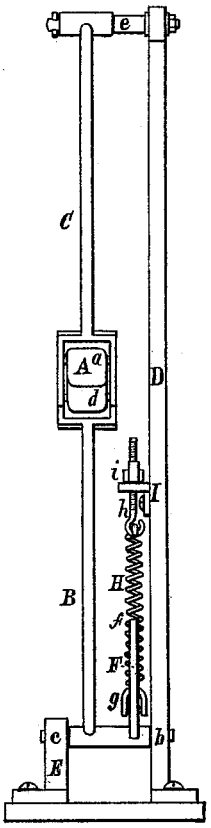


Fig. 2.



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GEORGE M. STEVENS, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN BELL-STRIKING APPARATUS.

Specification forming part of Letters Patent No. **195,461**, dated September 25, 1877; application filed April 30, 1877.

To all whom it may concern:

Be it known that I, GEORGE M. STEVENS, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Bell-Striking Apparatus, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

My invention relates to the striking apparatus for bells of fog-alarms, tower-clocks, &c.; and it consists in a hammer, supported and swung by vibrating arms, in combination with a spring, the tension of which, being increased on the retreating movement of the hammer, acts to strengthen the forward movement or blow of hammer in striking the bell.

In the drawings, Figure 1 shows a side elevation of so much of a striking apparatus and bell as serves to illustrate my invention. Fig. 2 is an end elevation of parts of striker shown in Fig. 1.

A is the hammer, which is supported by the arms B and C, the one, B, being pivoted to the hammer at *a*, and to the stationary standards D and E at *b* and *c*, and the other, C, pivoted to the hammer at *d*, and to the standard D at *e*.

It will be seen that with this suspension of the hammer, by proper adjustment and proportion of parts the center of hammer may be caused to swing the distance necessary for a stroke in nearly or quite a straight line.

To the arm B is rigidly connected, at one end, the arm or lever F. This lever is to be pivoted at the other end *f* to the pitman or other connection, with the ordinary machine, for giving the necessary reciprocating movement. The common operation of the latter is such that the hammer A is swung with nearly or quite equal force in the forward and backward strokes. It is very desirable, however, that the forward stroke—that is, the one which causes the hammer A to strike the bell G—should be as powerful, quick, and elastic as possible, while the return-movement of hammer may be of much less force; in other words, it is desirable to accumulate force in the return-movement to increase the power of the forward stroke. This I do by the use of a spring.

Different forms of springs and ways of attaching the same may be employed to carry out my invention; but I prefer, as the simplest and best, a spiral spring, H, attached at one end to the lever F, at *g*, and held at the other end by a stand, I, on the standard D. The tension of the spring H is made adjustable by means of a thread on the shank of the hook or eye bolt *h*, and nut *i* working thereon, as shown.

The parts of the striker being arranged substantially as shown and described, the operation is readily understood.

The lever F being pressed down by the usual working of the ordinary machine, (not here shown,) the hammer A is caused to swing from the bell G. At the same time the spring H, being stretched, its tension is increased, so that when a forward stroke is given by raising the lever F, the hammer strikes the bell with much greater force and a more rapid and elastic blow than it would were the spring H not used.

I claim as my invention—

1. The combination of the hammer A, arms B and C, and spring H, substantially as and for the purpose hereinbefore set forth.

2. The combination of the hammer A, arms B and C, spring H, and adjusting screw and nut *h* and *i*, substantially as hereinbefore described.

GEORGE M. STEVENS.

Witnesses:
EDW. DUMMER,
HENRY WELLER BRICHER.