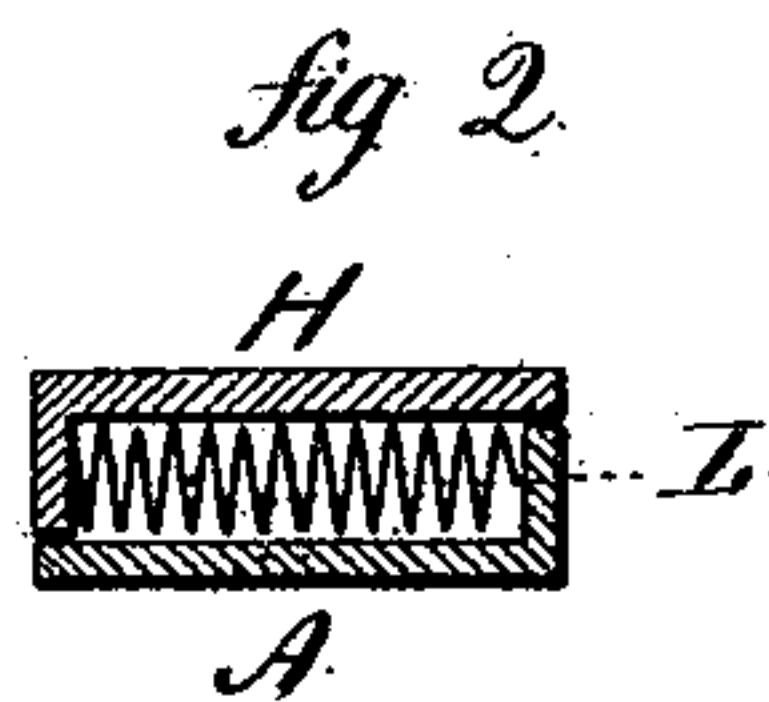
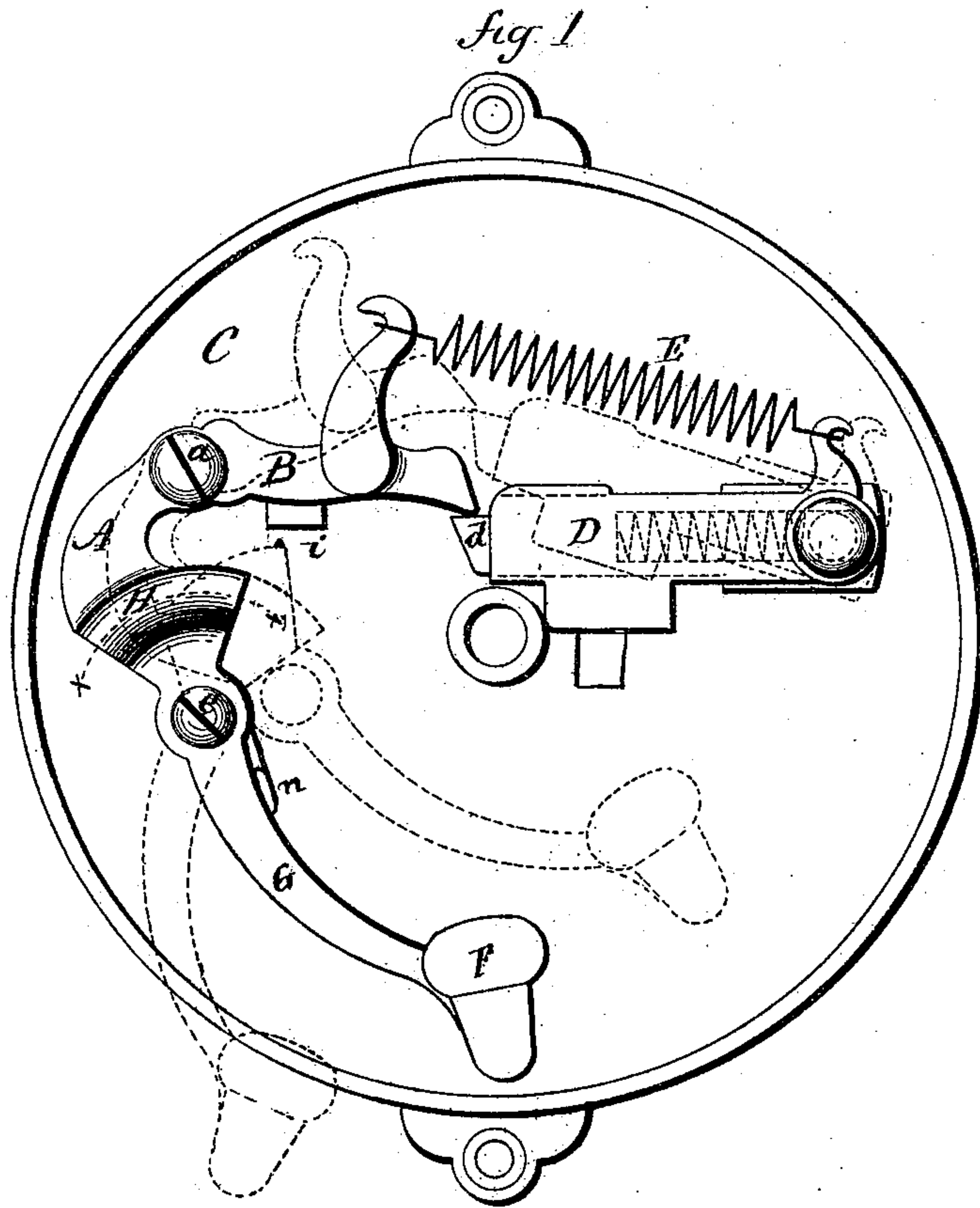


A. B. TANNER.  
 SPRING HAMMERS FOR BELLS.

No. 179,493.

Patented July 4, 1876.



Witnesses.  
*J. H. Conway*  
*Clara Broughton.*

*Alfred B Tanner*  
 By Atty. *Inventor.*  
*John E. Earle*

# UNITED STATES PATENT OFFICE.

ALFRED B. TANNER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO  
SARGENT & CO., OF SAME PLACE.

## IMPROVEMENT IN SPRING-HAMMERS FOR BELLS.

Specification forming part of Letters Patent No. 179,493, dated July 4, 1876; application filed  
June 22, 1876.

*To all whom it may concern:*

Be it known that I, ALFRED B. TANNER, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Gong-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 plan view of the mechanism, and in Fig. 2 a transverse section of the hammer-lever on line *x x*.

This invention relates to an improvement in what are termed "gong-bells," such as are applied to doors, to be struck by a lever, or may be applied to other positions, and struck by the pulling of a wire.

In this class of bells the hammer is usually attached to an elastic arm, arranged so that in its normal condition the hammer will lie near, but not so as to touch, the bell, and depending upon the momentum of the hammer to pass beyond its normal condition and strike the bell, and retreat by the reaction of the springs of the hammer-arm. This elasticity of the arm, while sufficient at first, is, from repeated use, lost to a considerable extent, so that soon the hammer will not retreat, but lie in contact with the bell, and thereby destroy the resonance of the bell.

The object of this invention is to overcome this difficulty; and it consists, principally, in hinging the hammer by a rigid arm to the operating-lever, and with an independent spring between the hammer-lever and the operating-lever, to allow the momentum of the hammer, in striking, to pass beyond its normal condition in striking the bell, and to be returned after such striking.

A B are the two arms of a hammer-lever, hung upon a fulcrum, *a*, on the base-plate C. D is the tripping-lever, which is turned, as indicated in broken lines, to turn the arm B outward until that arm B escapes, as indicated in broken lines. The tripping-nose *d* is constructed to slide longitudinally, and provided with a spring to force and hold it forward, but yet so that after the arm B has passed from the nose of the tripping-lever, and when the lever D returns, the nose *d* will

pass the arm of the lever B, and be forced inward in such passage, and thereafter return for a second operation. A spring, E, or other suitable spring, is applied to force and hold the levers B and D into their normal condition. To the end of the arm A, and on a pivot, *e*, a hammer, F, is hung, the arm G being rigid and inelastic. This extends beyond the pivot onto the lever A, where a segmental tubular chamber is made—one half in the lever A and the other half, H, on the end of the hammer-lever, as seen in Fig. 2, the inner head of the cylinder being on the part A and the outer on the part H. Within this tubular chamber is a spring, L, the tendency of which is to force the head of the part H outward, and consequently the hammer inward, and holding the arm G of the hammer against the stop *n* on the lever A. This completes the construction.

When the tripping-lever is raised the arm A will carry the hammer inward, as indicated in broken lines; but so soon as the hammer-lever is free it returns by the force of its spring until it arrives at its normal position against the stop *i*. This movement, being quick, imparts a momentum to the hammer sufficient to carry it considerably beyond its normal condition, and the spring L yields to allow it to so move, so that a powerful blow will be struck upon the bell, and the hammer instantly retracted.

The spring L may be very light, its only labor being to retract the hammer after the blow, and as the spring may be of a considerable length of wire, it would never set, and the hammer would always be retracted. It would never remain in contact with the bell, and the rigid arm of the hammer prevents the possibility of its being bent or in any way disarranged.

I claim—

In a gong-bell, the hammer-arm pivoted to the hammer-lever, and provided with an independent spring between the hammer-lever and the hammer-arm, substantially as and for the purpose described.

A. B. TANNER.

Witnesses:

GEO. U. VAN DEWATER,  
CHAS. L. BALDWIN.