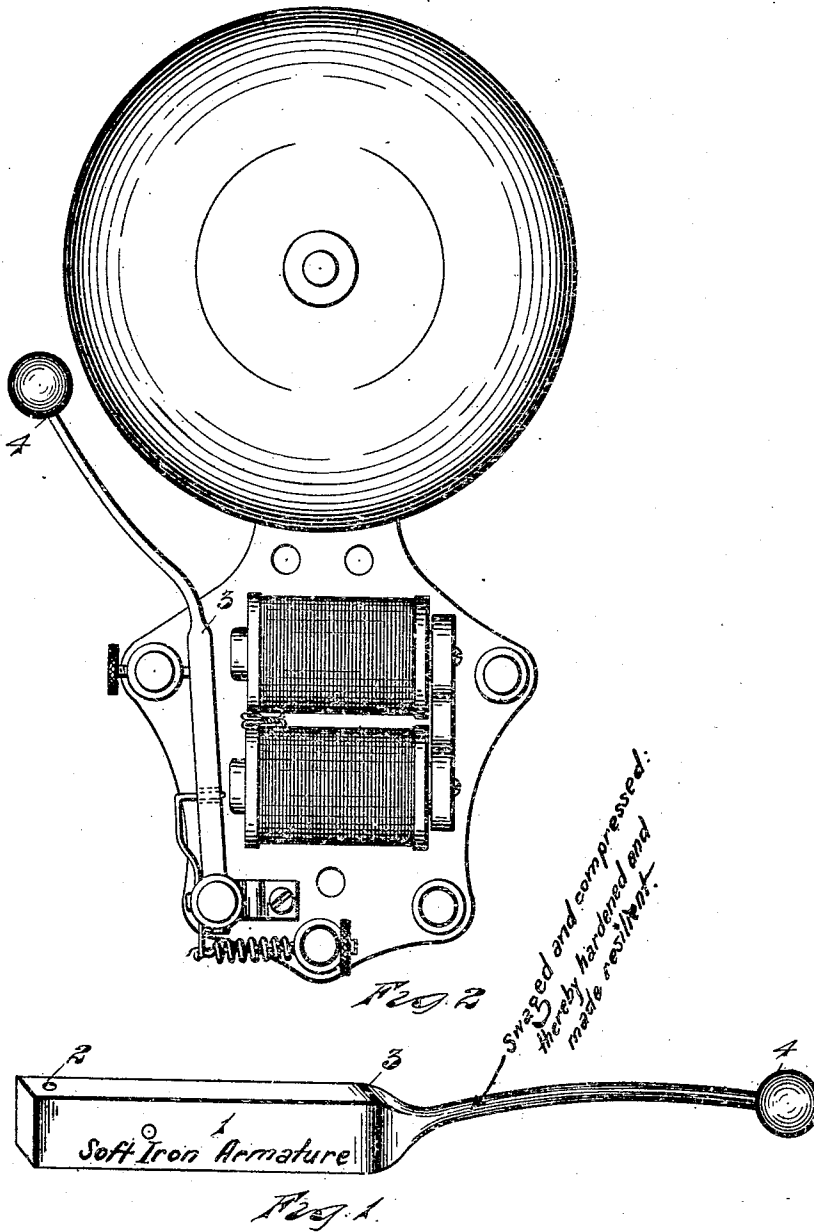


H. W. EDEN.
ELECTRIC SIGNAL BELL.
APPLICATION FILED MAR. 1, 1907.

955,636.

Patented Apr. 19, 1910.



WITNESSES

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HAROLD W. EDEN, OF DETROIT, MICHIGAN.

ELECTRIC SIGNAL-BELL.

955,636.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed March 1, 1907. Serial No. 360,051.

To all whom it may concern:

Be it known that I, HAROLD W. EDEN, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Electric Signal-Bells, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to electric signal bells; it has for its object an improved single piece construction of armature and hammer stem.

In the drawings:—Figure 1, shows a combined armature and hammer stem embodying the invention. Fig. 2, indicates the place of use of such combined armature and hammer stem.

In the construction of electric signals in which a gong is struck by a hammer and the hammer is actuated by a magnet, it is desirable and almost essential to employ for the armature part of the structure a metal that while magnetic, is not susceptible of the retention of magnetism. Such a metal is generally soft and flexible and deficient in the requisite amount of resiliency necessary in the hammer handle which should be sufficiently resilient to cause the hammer to rebound quickly after it strikes the gong.

A common way of producing the requisite union of metal suitable for the armature and metal suitable for the hammer handle has been to make the structure in two pieces of metal of different characteristics, each piece having the characteristic suitable for the place which it is to occupy. In carrying out the present invention, however, the two parts of the structure are made from a single metal in which that part intended to be used as the armature is left in what may be called its natural condition, soft and uncompressed, while that part which is intended to be employed in more intimate connection with the hammer, is worked and compressed until it acquires the requisite resilient qualities.

In the structure shown in Fig. 1, the armature part 1, lying between the pivotal end 2 and the shoulder 3, is made rectangular in shape and is left in its natural soft unworked and uncompressed condition. The part between the shoulder 3 and the hammer head 4, is reduced by pressure and compression until it is small in size as compared with the main part 1, and is preferably round in cross section, although the form of the cross section is not especially material, but the compression and consequent hardening of the material is the important feature. By such a construction the requisite characteristics required for an armature are retained in the rectangular portion and the requisite characteristics required for the spring hammer handle are imparted to that part of the structure which is used as the hammer handle.

The hammer head itself is preferably a ball of metal 4, provided with a hole through which the extreme end of the hammer handle engages and the ball is then secured upon the handle in any suitable and appropriate way.

What I claim is:—

1. A unitary armature and bell hammer made from a single bar of metal, one end being left in its naturally soft and uncompressed condition, and the other end being swaged and compressed, and thereby hardened and made resilient, substantially as described.

2. The combination, in a metallurgically integral bar, of a soft, uncompressed end of high magnetic responsiveness, adapted to serve as an armature, and a compressed resilient end of negligible magnetic character adapted to serve as a hammer handle, substantially as described.

In testimony whereof, I sign this specification in presence of two witnesses.

HAROLD W. EDEN.

Witnesses:

CHARLES F. BURTON,
ELLIOTT J. STODDARD.