

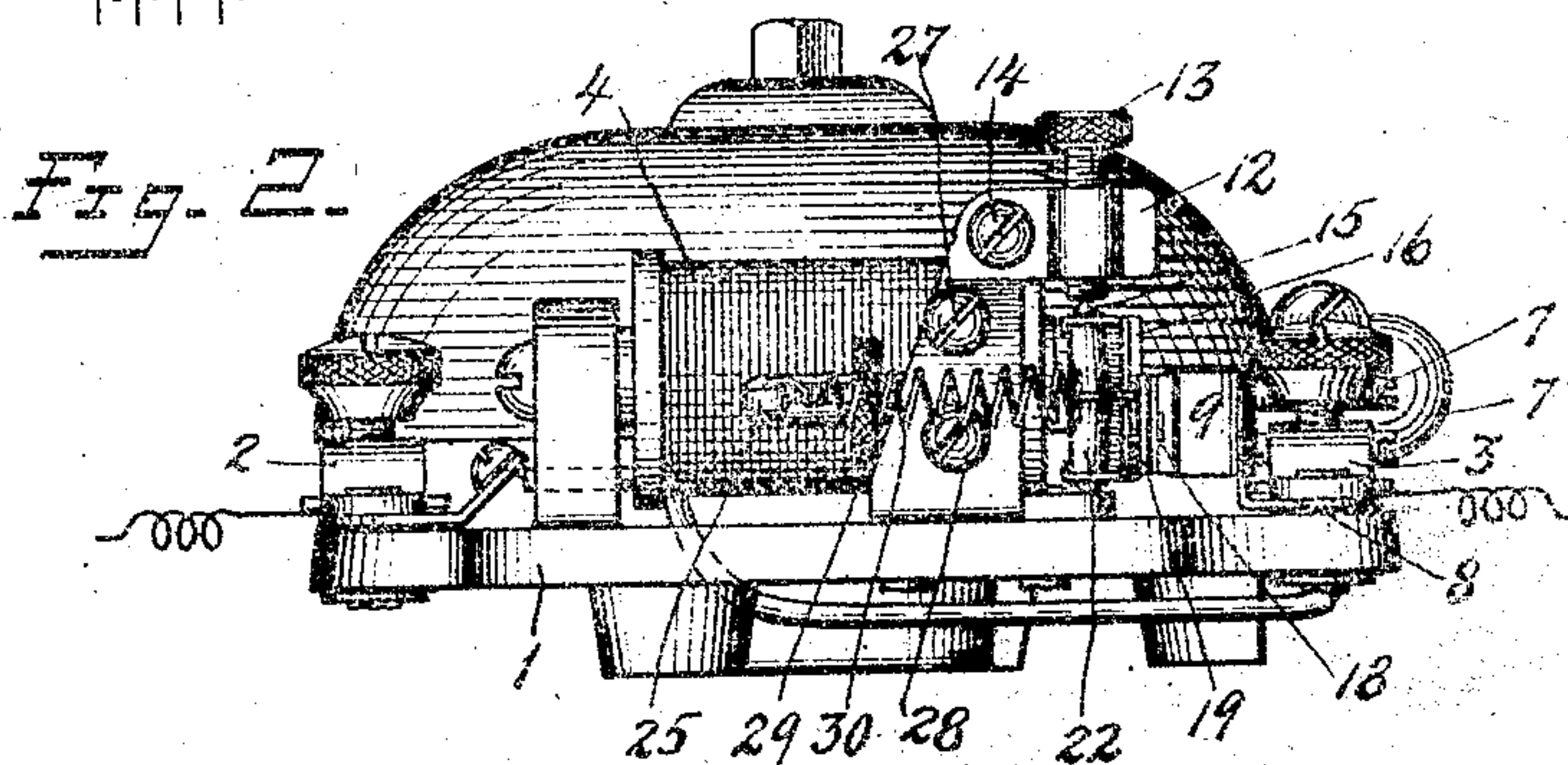
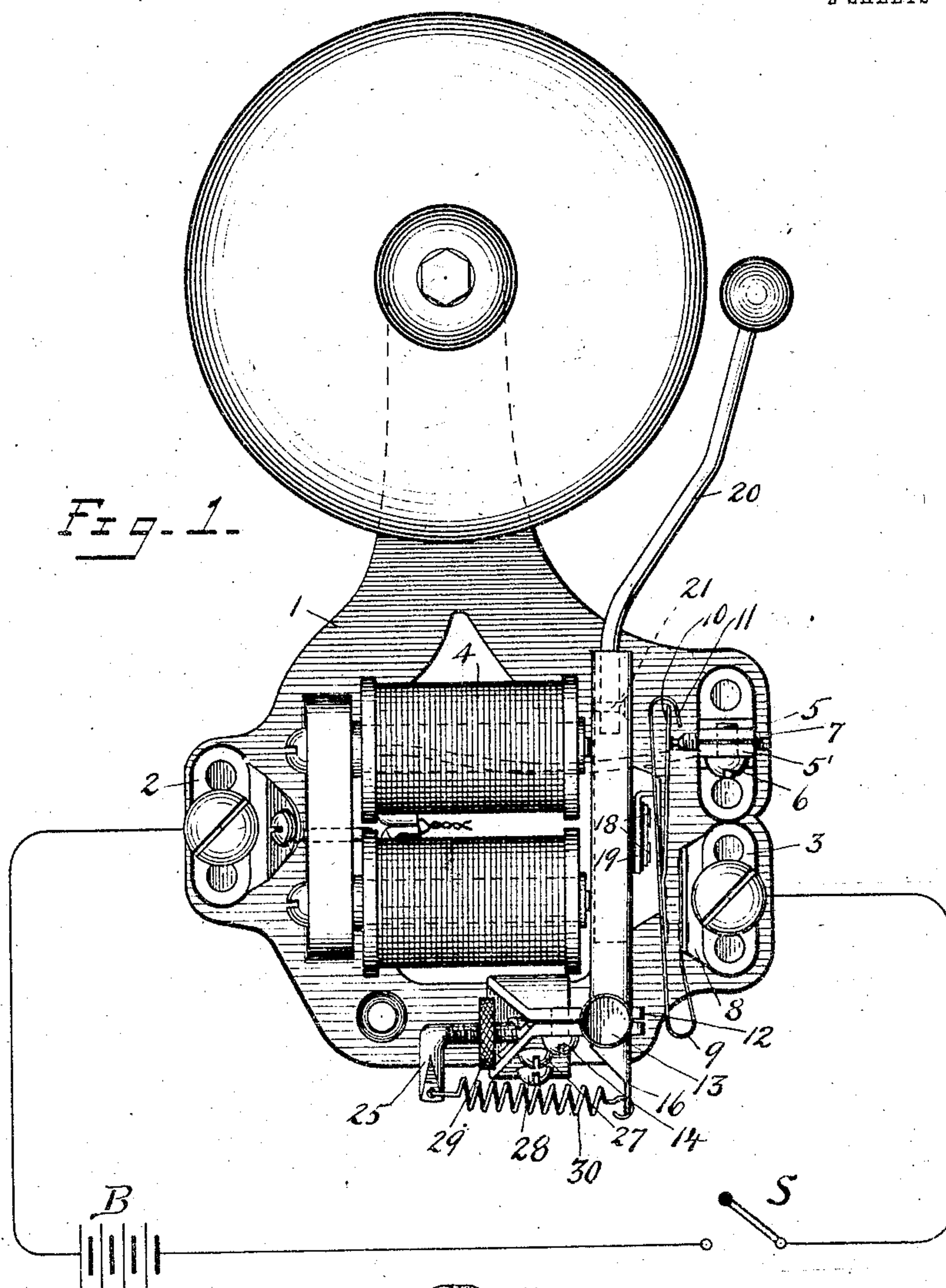
No. 842,911.

PATENTED FEB. 5, 1907.

H. E. REEVE.
ELECTRIC BELL.

APPLICATION FILED OCT. 4, 1905.

2 SHEETS—SHEET 1.



Witnesses
G. V. Rasmussen
R. P. S. Allen

Inventor
HENRY E. REEVE
By his Attorneys
Baker, Dornier & Muecke

No. 842,911.

PATENTED FEB. 5, 1907.

H. E. REEVE.
ELECTRIC BELL.

APPLICATION FILED OCT. 4, 1905.

2 SHEETS—SHEET 2.

Fig. 3.

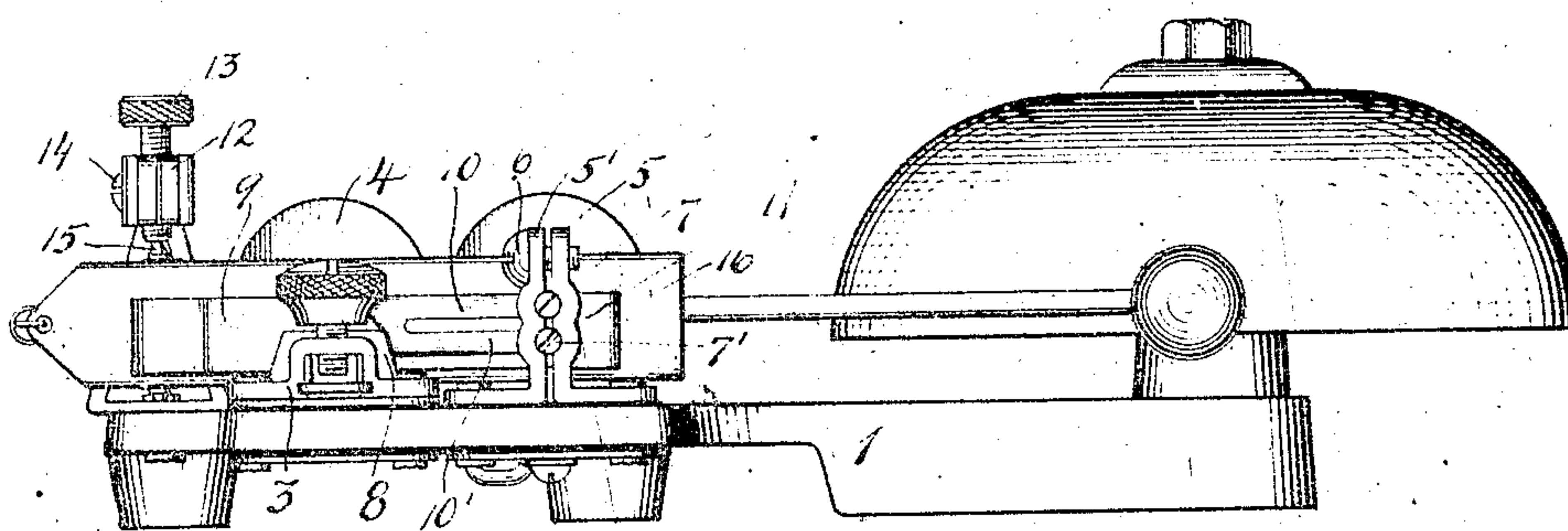


Fig. 4.

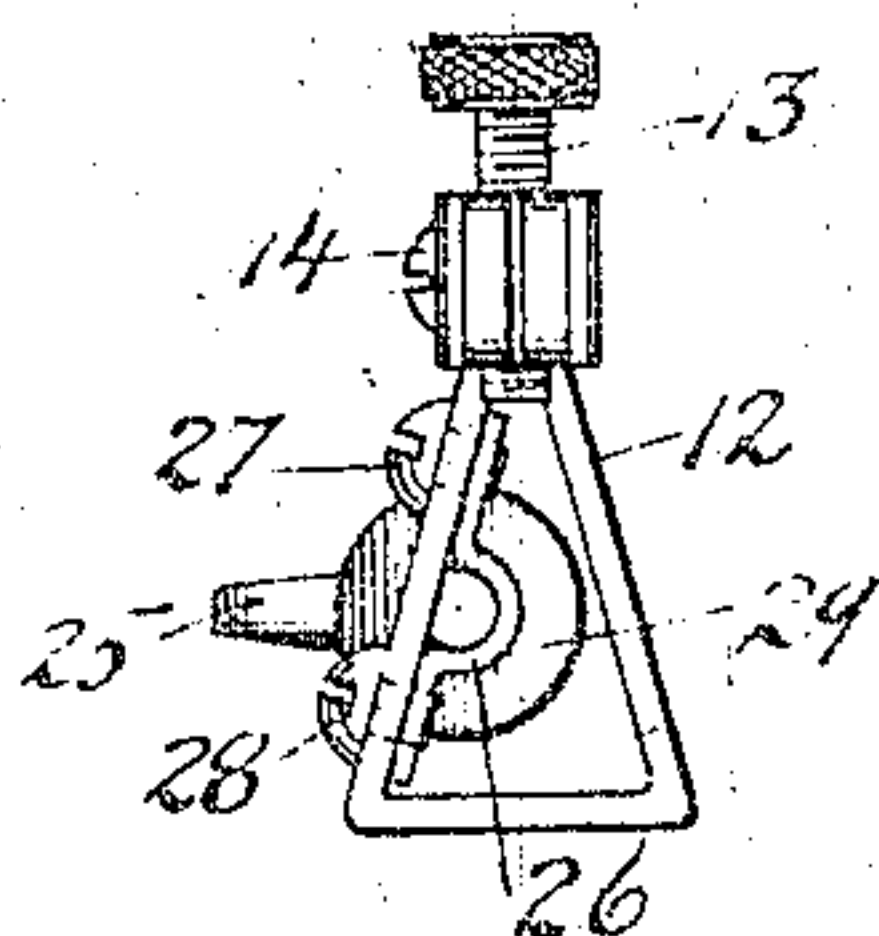


Fig. 5.

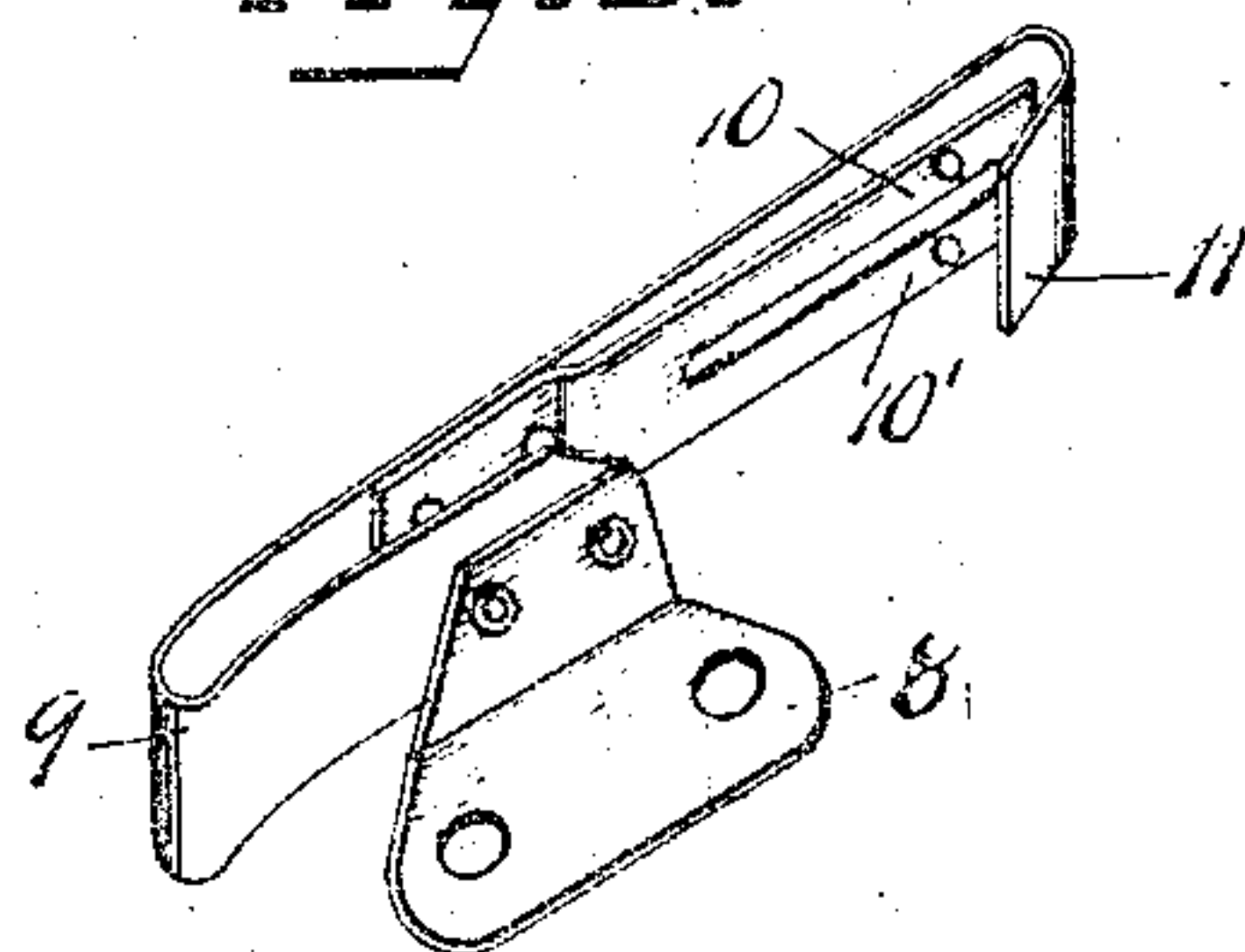
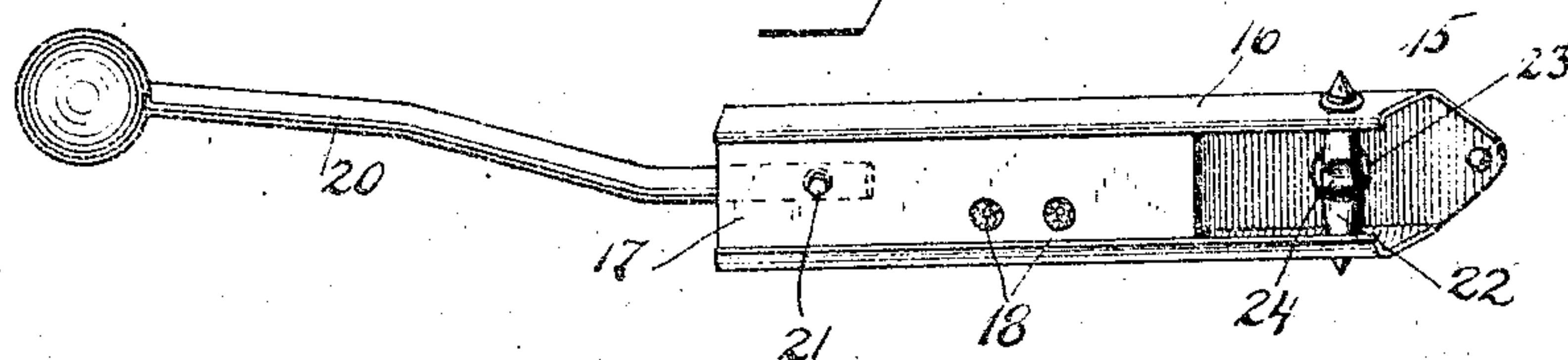


Fig. 6.



Witnesses
G. V. Rasmussen
H. E. Reeve

Inventor
HENRY E. REEVE
By his Attorneys
Barrett, Brown & McArthur

UNITED STATES PATENT OFFICE.

HENRY E. REEVE, OF BROOKLYN, NEW YORK.

ELECTRIC BELL.

No. 842,911.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed October 4, 1905. Serial No. 281,213.

To all whom it may concern:

Be it known that I, HENRY E. REEVE, a citizen of the United States, residing at Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Electric Bells, of which the following is a full, clear, and exact description.

My invention relates to improvements in electric bells.

The objects of the invention are to provide a construction which may be manufactured economically, installed in any place without danger of leakage of the current to its support, adjusted readily, and held securely in its proper adjustment, be free from liability to injury, and less subject to deterioration due to oxidation or coating of the terminals than structures heretofore in use.

It consists in improvements the principles and details of the preferred form of which are illustrated in the accompanying two sheets of drawings.

Figure 1 is a front view of an electric-bell construction and circuit embodying the improvements of my invention. Fig. 2 is an end view of the same, omitting part of the circuit. Fig. 3 is a side view. Fig. 4 is a side view of the supporting-post for the armature. Fig. 5 is a perspective view of the vibrator contact member. Fig. 6 is a perspective view of the armature and striker, together with its pivot.

1 indicates the base, which is usually constructed of metal.

2 and 3 are the main binding-posts, suitably insulated from the base.

B indicates a battery in the circuit.

S indicates a switch.

4 is the coil of an electromagnet of suitable construction, supported by the base.

The contact-post for the making and breaking of the circuit is formed of sheet metal and bifurcated. The two parts 5 and 5' are insulated from but riveted securely to the base.

6 is a clamp-screw.

7 and 7' are two contact-screws adjustable in the post when the clamp-screw 6 is released. These two screws are tipped with platinum, as is customary.

8 is a standard electrically connected to the binding-post 3 and together with it riveted securely to the base.

9 is a spring-arm carried by the standard 8 and having two contact-strips 10 and 10' adapted to cooperate, respectively, with the

contact-screws 7 and 7'. The normal tension of the spring-arm 9 is in a direction to hold the contact-strips 10 and 10' away from the contact-points 7 and 7'. The end 11 of the arm is bent around the ends of the contact-strips 10 and 10' to protect the same.

12 is a post constructed of sheet metal, riveted to the base and carrying a pivot-screw 13 at the top.

14 is a clamp-screw for holding the pivot center-screw 13 in the position desired.

15 is the pivot-pin for the armature. The armature is formed in two parts, a sheet-metal shell 16 and the iron bar or magnetizable member 17. These are secured together by rivets 18, which also secure the stop 19. This stop is insulated from the armature and adapted to press against the vibrator-arm 9.

20 is the striker for the bell, the shank of which extends into a recess in the armature-bar 17 and is secured therein by pin 21, which is inserted before the bar 17 is inclosed in the shell 16.

22 is a tubular sleeve for the armature-pivot, having its ends extending to the top and bottom of the shell 16 and spun over.

23 is a perforation in the shell 16, through which a tool may be inserted for the purpose of indenting the metal of the sleeve into the metal of the pivot-pin 15.

24 indicates the result of the indentation on the back of the sleeve, formed by the anvil-tool-employed.

25 is an L-shaped support having one branch seated in the yoke 26 and clamped to the post 12 by screws 27 and 28. The nut 29 may be rotated on the shank of the support 25.

30 is a spring attached to the projecting arm of the support 25 at one end and to the rear end of the armature member at the other end. The tension of the spring 30 may be increased when the screws 27 and 28 are loosened by moving the nut 29 to the right or decreased by releasing the nut 29 and tapping the support to move it in the yoke 26 to the right.

The spring 30 normally holds the armature to the right with the stop 19 pressing against the vibrator-arm 9 and holding it with the contact-strips 10 and 10' against the points of the contact-screws 7 7'. When the circuit is closed, the current passes from the binding-post 2 through the magnet-coils to the contact-post, through the contact-screws 7 7', the contact-strips 10 10', and arm 9 to

the binding-post 3. The energizing of the magnet attracts the armature and withdraws the stop 19, allowing the arm 9, with the contact-strips 10 10', to move away from the contact-points 7 7', breaking the circuit, which deenergizes the magnet and releases the armature. The necessary vibration is thus set up, but none of the current passes through to the base. The bell is therefore particularly adapted for installation where fire-proof construction is demanded. There being two contact-points, there is little danger of their both being disabled at the same time. All of the parts are particularly adapted to be formed of sheet metal except the screws and rivets, which materially reduces the cost of construction. The riveting of the binding-posts, contact-post, and armature-supporting post to the base also insures permanent stability of the parts and renders their loosening up by vibration in ordinary use impossible.

The advantages of this construction will be apparent to those skilled in the art.

What I claim is—

1. In an electric vibrator mechanism, a base, an electromagnet, a pivoted armature therefor, a spring vibrator-arm, a spring contact-strip secured thereto, a stationary post, an adjustable contact-screw carried thereby and contacting with said strip, an insulated stop carried by the armature and engaging the vibrator-arm, and an adjustable tension device for said armature, the circuit passing through the magnet-coils, contact-screw, strip and vibrator-arm and being insulated from the base.

2. In an electric bell, a base, an electromagnet, binding-posts, a contact-post, a contact-screw carried thereby, a vibrator-arm connected to one binding-post, a contact-strip carried thereby engaging said contact-screw, the end of said arm being turned round the end of said contact-strip for guarding the same.

3. In an electric bell, a base, an electromagnet, a binding-post and a contact-post carried by said base, two independently-adjustable contact-screws carried by said contact-post, a vibrator-arm and two contact-strips carried thereby for engagement with said contact-screws.

4. In an electric vibrator mechanism, an electromagnet, an armature therefor, a vibrator-arm having a plurality of contact-

points, and a plurality of independently-adjustable contact members adapted to engage said contact-points.

5. In an electric bell, a base, binding-posts therefor, an electromagnet, an armature therefor, a supporting-post for said armature formed of sheet metal having two arms, and a pivot center-screw clamped between said arms.

6. In an electric bell, a base, an electromagnet carried thereby, an armature therefor, a pivot for said armature, a supporting-post for said pivot, a supporting member carried by said post having a screw-threaded arm, a yoke for clamping said arm to said post, an adjusting-nut on said screw-threaded portion, and a spring connecting said armature to said supporting member.

7. In an electric bell, a base, an electromagnet, an armature therefor consisting of a sheet-metal shell and a magnetizable member or bar secured in said shell, and means for pivotally supporting said armature.

8. In an electric bell, a base, an electromagnet carried thereby, an armature for said magnet formed of a sheet-metal shell and a bar, a pivot-pin for said armature, a tubular sleeve for said pivot-pin, and means for securing said pivot-pin in said sleeve.

9. An electric-bell construction including a base, an electromagnet carried thereby, an armature therefor, having a part formed of sheet metal, with side top and bottom, a pivot-pin passing through the top and bottom portions, a sleeve for said pivot-pin, the side of said sheet-metal portion having a perforation for access to said sleeve, and a portion of said sleeve being indented into said pin.

10. In an electric bell, a base, an electromagnet, an armature therefor formed of a sheet-metal shell and an iron bar, a striker member having one end seated in a recess in said bar, and a pin for securing said striker member to said bar, the head of said pin being covered by said shell.

11. In an electric vibrator mechanism, an electromagnet, a plurality of vibrating contact-strips and a plurality of independently-adjustable contact-screws coacting with said strips.

HENRY E. REEVE.

Witnesses:

G. A. ARMOKLE,
ROBT. S. ALLYN.