E. PERRY.

Device for Ringing Bells.

No. 212,737. Patented Feb. 25, 1879

Fig. 1.

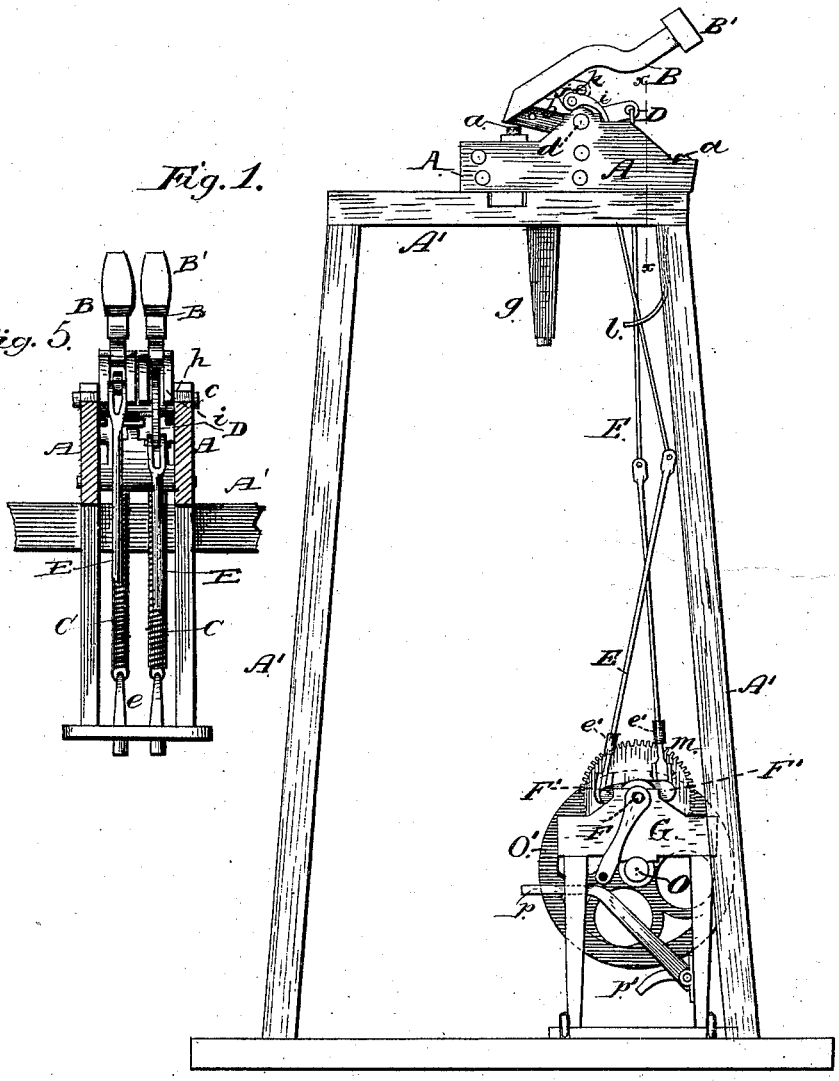


Fig. 5.

Fig. 2.

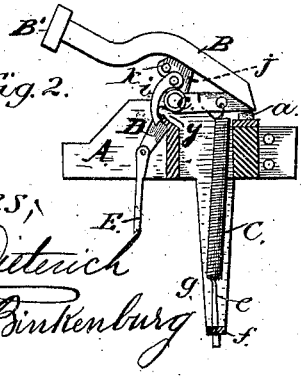


Fig. 3.

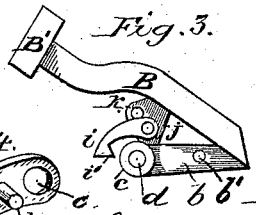
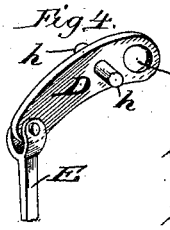


Fig. 4.



Witnesses,

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UNITED STATES PATENT OFFICE.

ELTON PERRY, OF AUSTIN, TEXAS, ASSIGNOR OF ONE-HALF HIS RIGHT TO FRED STERZING, OF SAME PLACE.

IMPROVEMENT IN DEVICES FOR RINGING BELLS.

Specification forming part of Letters Patent No. **212,737**, dated February 25, 1879; application filed December 23, 1878.

To all whom it may concern:

Be it known that I, ELTON PERRY, of Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Devices for Ringing Bells; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of my improved device for ringing bells. Fig. 2 is a side elevation of one of the hammers, with the mechanism for operating it. Fig. 3 is an enlarged side view of one of the hammers, with its hub and operating-pawl. Fig. 4 is a perspective view, on an enlarged scale, of the tripping-lever which operates the hammers; and Fig. 5 is a vertical section taken on the line *x x* in Fig. 1.

Corresponding parts in the several figures are denoted by like letters.

This invention relates to certain improvements in devices for ringing bells for which Letters Patent of the United States No. 195,391 were issued to me on the 18th day of September, 1877; and consists in an improved construction and arrangement of the hammer or striker arms, having for its object to cause these to operate with greater ease and certainty of action, substantially as hereinafter more fully set forth in the drawings hereto annexed.

A′ is the timber-work or frame upon which the bell and the device for ringing it are mounted. The several parts of this ringing mechanism are arranged between two parallel plates or castings, A, which form a frame, the cross or connecting pieces of which are provided with rubber or other elastic cushions *a a*, to break the concussion of the hammers as they are vibrated in ringing the bell.

The hammers, two in number for each bell, consist each of an arm, B, having a head or striker, B′, at one end, and connected at the opposite end to a short arm, *b*, which forms an acute angle with the long arm B. The short arm terminates in a hub, *c*, which is trunnioned or pivoted upon a shaft, *d*, passing transversely through the supporting-frame A. The short arms *b* are provided with short pins or lugs *b′*, connecting them with springs C, the lower ends of which engage with screw-threaded staples *e*, passing through a screw-threaded eye in a cross-piece, *f*, secured between the lower ends of two parallel hangers, *g*, the object of said staples *e* being to regulate the tension of the springs C, and thereby regulate the force of the concussion or blow of the hammers upon the bell.

In the drawings I have shown only one of the hammers with its operating-spring, inasmuch as both are constructed and operate precisely alike, and are arranged parallel to each other between the frame-pieces A and hangers *g*.

Pivoted upon shaft *d*, within a slot in the hub *c* of each of the hammer-arms *b*, is a curved lever, D, articulated upon the other end of which is the bifurcated end of a connecting-rod, E, the function of which will be hereinafter described. Each of the levers D is provided with a transverse pin, *h*, which projects laterally under two pawls, *i*, pivoted upon a stud upon opposite sides of a plate or bracket, *j*, which forms a downward extension of the hammer-arm B; hence, when lever D is raised, its pin or studs *h h* will strike against and lift the pawls *i*, one on each side, the upward play of these pawls being limited by short studs *k*, projecting laterally from the bracket *j*. By their own gravity, the pawls *i* will, after lever D has reached the end of its upward stroke, drop down in position, with the spur *i′* projecting in under the studs *h;* and it follows that when lever D is again depressed, its studs, engaging with the spurred heads of pawls *i*, will draw these, and with them the bracket *j* and hammer B B′, in a downward direction, which extends the spring C. In the continued downward movement of lever D, the pawls *i*, following it, will strike with the beveled or slanting front part of the spurred head *i′* against a projecting arm or part of the frame A, (denoted by *y* in Fig. 2,) which trips or disengages the pawl from lever D, when arm B will fly back, operated by spring C, and with its head B′ strike and sound the bell, which is suitably disposed with reference to

the head or striker of the parallel and alternately-operating hammers.

In order to impart an alternately-vibrating motion to the levers D, these are articulated at their free ends upon jointed rods E E, the opposite ends of which are pivoted upon cranks F′ F′, set at an angle of one hundred and eighty degrees to each other upon a shaft, F, which is hung in a suitably-constructed frame or support, G, located upon the ground or lower floor of the building in which the bell is placed.

The shaft F has a gear-wheel, *m*, which meshes with a pinion (not shown in the drawings) upon the main shaft O, which is provided with a fly-wheel, O′.

p is a brake-lever, suitably arranged in frame G, and provided with a shoe, *p′*, which may be brought to bear against the periphery of the fly-wheel O′, in order to regulate the speed of the mechanism, which may be operated by hand or any other suitable power.

The lower section of each of the jointed rods E is provided, near the point where it is connected to its crank F′, with a shortening and lengthening nut, *e′ e′*, for adjusting their length, and thereby regulating the stroke of lever D as occasion may require.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The striker-arm B, connected rigidly at one end to a short arm, *b*, set at an acute angle to said arm B, and said short arm *b* terminating at the opposite end in a sleeve or hub, *c*, substantially as and for the purpose specified.

2. The striker-arm B, provided with a short arm, *b*, set at an acute angle thereto, and provided with a rigid plate or bracket, *j*, projecting downwardly from the long arm B, and having lateral lugs *k* and spurred pawls *i*, substantially as shown and specified.

3. The combination, substantially as described, of the following elements: a set of striker-arms, B B, each of which consists of a long arm, B, a short arm, *b*, and a downward-projecting plate, *j*, a common shaft, *d*, inserted through the hubs *c* of the short arms *b* and below the pawl-carrying plates *j*, the operating-levers D, with their studs *h h*, pivoted upon shaft *d*, within slots in the said hubs *c* of arms *b*, and springs C, connected at their upper ends to the short arms *b* at a point between the hubs *c* and the point of unison of arms B *b*, the said several elements operating substantially as described, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

ELTON PERRY.

Witnesses:
L. H. GOLDBECK,
E. T. EGGLESTON.