J. CORBETT.

ALARM AND REGISTERING APPARATUS.

No. 188,597. Patented March 20, 1877.

Fig. 1.

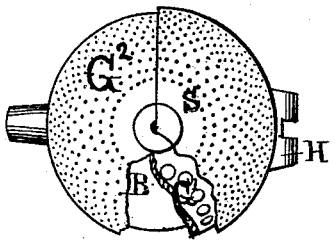


Fig. 2.

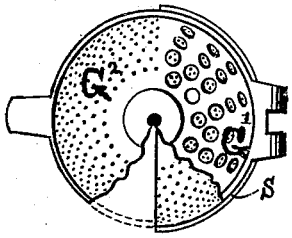
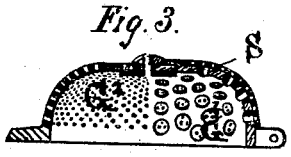


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOSEPH CORBETT, OF HARTFORD, CONNECTICUT, ASSIGNOR TO RAILWAY REGISTER MANUFACTURING COMPANY.

IMPROVEMENT IN ALARM AND REGISTERING APPARATUS.

Specification forming part of Letters Patent No. **188,597**, dated March 20, 1877; application filed February 9, 1876.

To all whom it may concern:

Be it known that I, JOSEPH CORBETT, of the city and county of Hartford and State of Connecticut, have invented certain Improvements in Alarm-Registering Machines, which improvements are also applicable to other apparatus containing alarming devices, of which the following is a specification:

The improvement relates to protecting the alarm-bell or sound-giving device from improper interference from fraudulent or mischievous motives.

It is now well known that the shields placed over the alarm-bells in bell-punches and other alarm-registering devices, with the intention and object of protecting the bells from accidental knocks and injuries, have not been found to answer these particular purposes in a satisfactory manner. Such shields were made with holes through them of such large size as to permit the introduction of instruments by which the bell was struck from outside, and thereby made to sound an alarm, while the internal registering mechanism remained unchanged, so that no registration of the alarm so given was made, and the resulting registration or record inside the machine would not correspond to the number of alarms given, whereby, in case of collections of fares or tickets, under the instructions of the managers of a railroad, for example, the railway company would be fraudulently defeated in its efforts to obtain a correct registration of the fares taken, and, consequently, would be robbed of some part of its collections.

The object of my invention is to so construct a guard over the alarm or bell as to render it exceedingly difficult to strike a deceptive blow upon the bell, and, in fact, make it practically impossible for a conductor to make any such accurate and delicate attachment (to operate through my improved alarm-guard) as would be necessary for him to ring the alarm fraudulently from the outside of the machine.

This object I secure in the peculiar, yet simple, construction of the guard itself, which is as follows, namely: In old machines, which were originally constructed with a perforated shield over the bell to protect it from external knocks and bruises, the guards have invariably been found to have such large holes in them as to make it an easy matter to apply a spring-hammer or other instrument from the outside through said holes, and thus fraudulently give the alarm. To such as are so made I apply a thin external shield, which is perforated with fine holes, of such diminutive size as to render it impossible for a conductor to successfully introduce, and to use and remove from such holes, any practical striking device during a trip of his car, the small holes in my shield allowing sound to escape nearly or quite as well as large ones, while they will not admit of the insertion of any improper instrument for producing fraudulent alarm.

The double cover or protection will be found useful in inclosing-cases of the apparatus, such as in the corner of an inclosing-box, which is provided with perforations of convenient size in the case itself, while in the interior a finer shield, of perforated metal or wire screen, is secured, in such a way as to make a double protection to the works inside, as well as the bell, so as to keep out sand, dirt, and instruments intended to be inserted for improper purposes; the two screens or perforated objects in this form comprising my invention, substantially like the others in substance and effects.

These constructions form a double protection or double shield, in which the interior guard or frame of the machine is the support for the external finely-perforated shield.

In new instruments, however, I prefer to make a guard-shield in which the above-described interior guard and the external shield are combined in one piece, which will, in such case, have adequate thickness for strength to resist moderate knocks and sustain ordinary bruises without injury, while at the same time the perforations through such guard-shields are of the small or minute dimensions, which are only admissible in the outer cover in the first-described case of two thicknesses, in which both interior guard and external shield are employed, as above described, for the alteration of old machines requiring this protection against such fraudulent manipulation.

Figure 1 shows, at the left of the figure, the convex surface of a shield perforated with mi-

nute holes, small enough to prevent tampering with the bell through them. This part is marked G^2.

Fig. 2 shows the same shield with the concave side nearest the eye. The right half of Fig. 2 shows a guard, G^1, having the ordinary holes in it, large enough of themselves to allow improper manipulation through them, but which is prevented by the external minutely-perforated shield S of my invention.

Fig. 1 also exhibits the shield S, covering the guard G^1, broken away, so as to show the protected bell B beneath.

Fig. 3 is a cross-sectional view of the shield G^2 and G^1, covered by S, taken diametrically across Fig. 1, through the hinge H, without the bell.

For economy of space, different constructions are shown in the same figures of the drawing.

The size of the minute perforations should be in diameter about that of the thickness of the metal forming the shield or guard. When the cover is made a double shield of two thicknesses, as shown at S and G^1, Fig. 3, the outer thickness may be much less than when no inner frame or support G^1 is employed in the construction.

When the two thicknesses are used they form what I call a compound guard or guard-shield; and the holes and minute perforations may be so arranged as not to be exactly over each other, giving thereby still greater security.

In the double construction, when the external shield is thin, I prefer to secure it so as to have it lie close upon the guard or frame below; but if of sufficiently thick metal to resist the usage, it may be placed at any convenient distance from the inner piece, which, with the outer piece or shield, forms the double guard or double shield.

I claim as my invention—

1. An improvement in alarm-registering mechanism, consisting of a guard or internal supporting-frame, in combination with an external shield, the latter having small perforations, substantially as and for the purpose set forth.

2. The double guard or shield, consisting of two perforated or open-work parts or screens, placed adjacent to each other, or nearly so, substantially as set forth.

3. A perforated double guard or shield, adapted to cover the alarm device in an alarm instrument, and protect the alarm device from improper interference, and permit the egress of sound, all substantially as shown and described.

Signed and dated this 22d day of December, 1875.

JOSEPH CORBETT.

Witnesses:
WM. E. SIMONDS,
R. F. GAYLORD.