J. HARRISON.

Letter-Box Alarm.

No. 161,411. Patented March 30, 1875.

Fig. 3.

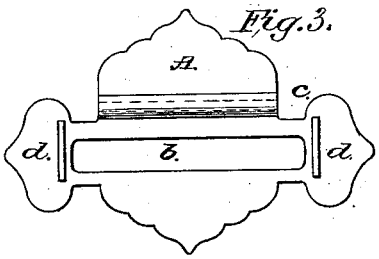


Fig. 4.

Fig. 1.

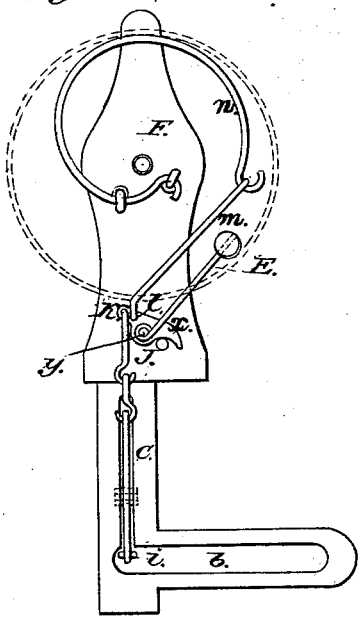


Fig. 2.

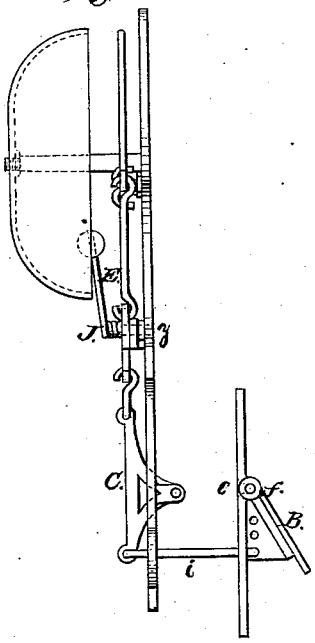


Fig. 5.

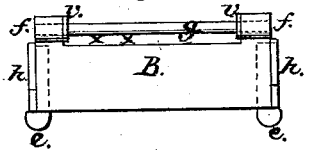
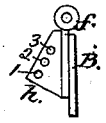


Fig. 6.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LETTER-BOX ALARMS.

Specification forming part of Letters Patent No. 161,411, dated March 30, 1875; application filed January 15, 1875.

To all whom it may concern:

Be it known that I, JAMES HARRISON, of the city of Reading, in the State of Pennsylvania, have invented a new and useful Improvement in a Combined Letter-Port with Signal; and I do hereby declare that the following is a full, clear, and exact description of the modes of making and operating the same, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 is a front view of the port-hole *b* and the bell-crank C, the bell-hammer E, the bell-stand F, the bell D, shown by dotted lines, the base of the hammer X, mounted on the center pin *y*, and the two regulating or connecting holes *k l*, the connecting-hook *m*, and the spring *n*, as they appear on the inside of the door.

Fig. 2 is a side view of the same, also a side view of Fig. 5, with the pull-wire *i* attached.

Fig. 3 is a front view of the letter-port A, showing the port-hole *b*, the groove *c*, and the base of the projecting flange *d*.

Fig. 4 is a section of Fig. 3.

Fig. 5 is a front view of the cover B, showing the tips *e e*, the butt-joints *f f*, the wire *g*, and the washers *v v*.

Fig. 6 is a side view of cover B, showing the butt-joint *f*, the angular piece *h*, in which are the regulating-holes 1 2 3.

Similar letters indicate corresponding parts.

This invention consists in making a letter port or receptacle for mail-matter, to be put on the outside of the street-door. This letter-port is provided with a cover or door to close up the port-hole and prevent the rain and dust from blowing through the port-hole into the house. To this cover is attached an alarm or signal, to put on the inside of the door, the same being operated by opening or closing the letter-port. The combined letter-port and signal is put upon the street-door of a house in a convenient position, so that the letter-carrier can deposit the mail-matter into the receptacle and strike an alarm at the same time, then pass on to the next house without waiting for the servants to open the door to receive the mail from him. It is believed that, by this means, much valuable time can be saved for the postal department.

In the drawings, the letter A designates the letter-port, into which is cast a port-hole, *b*, also a groove, *c*, and a projecting flange, *d*, the purpose of which is fully explained in another part of this specification. B designates the port-cover, upon which are two projecting tips, *e e*—one on each end of the port-cover—for the purpose of raising the cover either with the right or left hand. There are two solid butt-joints, *f f*, made on this cover, into which is cast a wire, marked *g*. This wire *g* is intended to work into groove *c*, Fig. 3. It will be observed that the outside diameter of the two butt-joints *f f* on the port-cover B is the same as the outside diameter of the groove *c*, Fig. 3; consequently the distance from the wood to the outside surface of the butt-joints *f f* and the groove *c* is the same. By this means I get a bearing on the wood for the two butt-joints *f f*, which always keeps the cover B in its place, and prevents any lateral motion. It will be seen that it is necessary to have a smooth, even joint between the butt-joints *f f* and the groove *c*. This I do by driving two washers, *v v*, onto the wire *g*, so that, when the wire is laid into the mold in casting, the washers *v v* will form the inside of the two butt-joints *f f*. These washers *v v* are the same size of and fill up the print in the mold, and prevent the metal, in casting, from getting beyond them. In this way a good smooth joint is made. (See Fig. 5.) On the under side of the port-cover B is cast an angular piece of metal, *h*, in which are three regulating-holes, marked 1 2 3. To one of these regulating-holes is fastened the pull-wire *i*. These regulators are used for different sized bells and different kinds of signals. In using a four-inch gong-bell for the signal I connect the pull-wire in the hole No. 3. In using a five-inch gong-bell I connect the pull-wire in the hole No. 2. In using a six-inch gong-bell I connect the pull-wire in the hole No. 1. It will be readily understood that a large bell gives a longer sweep to the bell-hammer than a small bell does, and in a common house-bell this is overcome by pulling the bell-pull out farther for the large bell than we do for the small bell.

By using these regulating-holes I can strike a large or small bell the same, by raising the port-cover B the same distance. This is important, as the port-cover B can only be raised so far.

C, in Figs. 1, 2, is a bell-crank, combined with and working into the end of the letter port-hole *b*, for the purpose of connecting the pull-wire *i* with the base *x* of the bell-hammer E. E in Figs. 1 and 2 is the bell-hammer, working on the center-pin *y*. This bell-hammer has a cast-iron base, *x*, with a hole in the center to work on the center-pin *y*, and two holes on the left of the center hole. One of these holes is round, the other is oblong, to admit the pull-wire *i* and the connecting-hook *m* to be connected in the same hole, when a large bell is used for the signal. The round hole is marked *k*, the oblong hole *l*. The pull-wire *i* is connected in the hole marked *k* for small bells, and in the hole marked *l* for large bells, for the same reason as stated in describing the regulator *h* on the port-cover B. In the oblong hole *l* is put a connecting-hook, *m*, which connects the spring *n* with the base *x* of the hammer E. This connecting-hook *m* is crooked at the eye to make it fit the base *x* when the port-cover B is opened wide.

It matters not whether the two holes *k l* are on the left or the right of the center hole, and when you raise the port-cover B the hammer E is made to strike the bell on the left side. If you reverse the holes *k l* to the right of the center hole, you reverse the striking of the bell also. This is unimportant, as the signal will work equally well on either side; but it is very important that the pull-wire *i* and the connecting-hook *m* be placed on the same side of the center hole.

The projecting flange *d* on the letter-port A is for the purpose of raising the port-cover B from the wood, to give room for the hand in raising the port-cover, and to allow the port-cover B to be raised high enough to put the letter through the port-hole *b* by the time the bell-hammer strikes the bell. It also assists in preventing the dust and rain from blowing through the port-hole, and it enables me to make the door or cover B to push inward, instead of lifting outward, when circumstances require it. This projecting flange *d* is of peculiar construction, it being wide on one side of the port-hole and tapering to a point on the other side.

In Fig. 5, at B, it will be noticed that there is a space left between the cover B and the wire *g* marked *x x*. This space is made for the purpose of passing that part of the letter-port A that is connected to the groove *c* through it, and allowing the wire *g* to slip into the groove *c*. This is the way that the letter-port A and the port-cover B are put together.

The mode of operating these devices is to lift the port-cover B with a quick motion, so as to strike the bell with one hand. Put the letters through the port-hole *b* with the other; then let go the port-cover B, and the spring *n* will bring the cover B back to its place very quick, making the hammer E to strike the bell on the opposite side in its backward motion. The port-hole *b* is cut through the door.

A small box or basket can be put on the inside of the door to receive the letters as they fall through the port-hole.

It will be seen that with these devices signals can be struck upon different kinds of bells, or steel bars, or steel springs, such as are used for clocks to strike upon. I therefore do not wish to be confined to striking a particular kind of bell, but would prefer the striking of a signal upon a bell, or its equivalent, by opening or closing the letter-port A.

It will be seen that many modifications can be made in the manner of putting the letter-port A with its connections and signal upon the door.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the letter-port A, the cover B, and the projecting flange *d*, substantially as described.

2. The combination of the cover B, having the regulator-piece *h*, with the plate A, and a bell mechanism, constructed substantially as shown and described.

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