(No Model.)

W. LUMLEY.

FILE BOX.

No. 573,020. Patented Dec. 15, 1896.

Fig. 1.

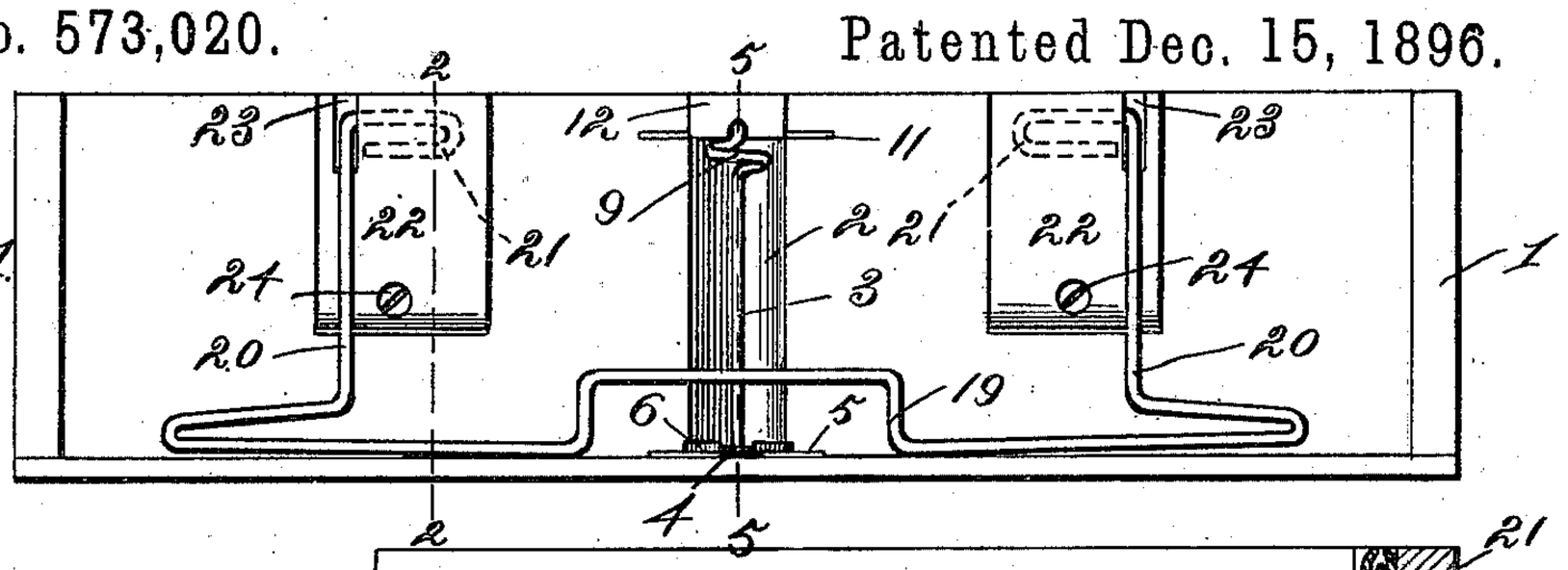


Fig. 2.

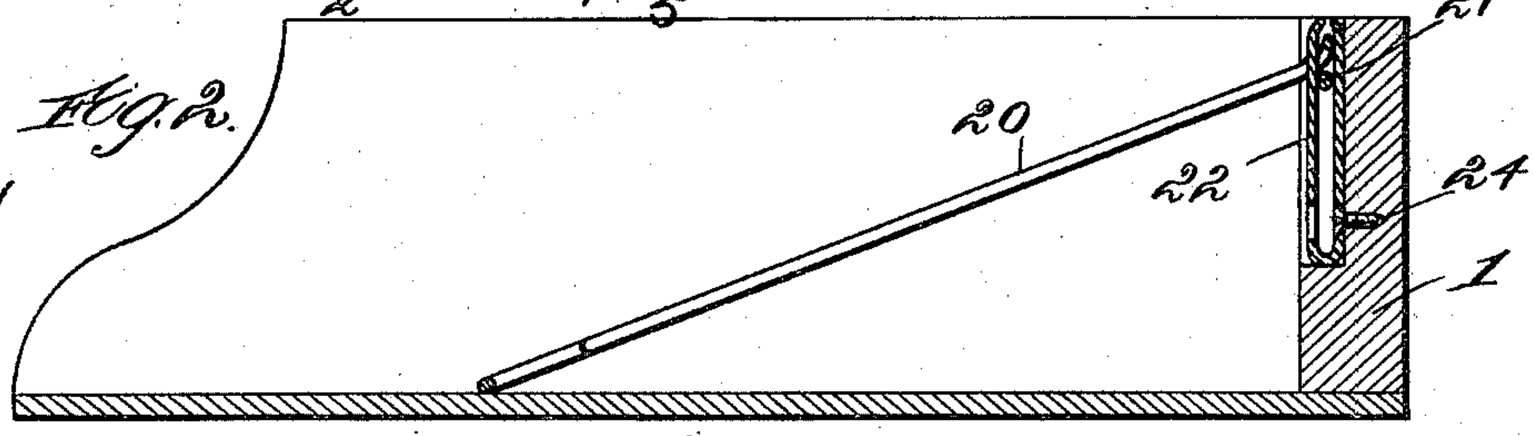


Fig. 3.

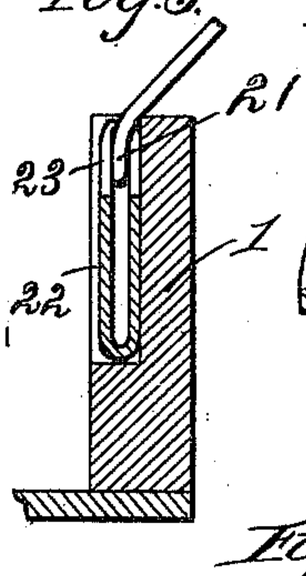


Fig. 4.

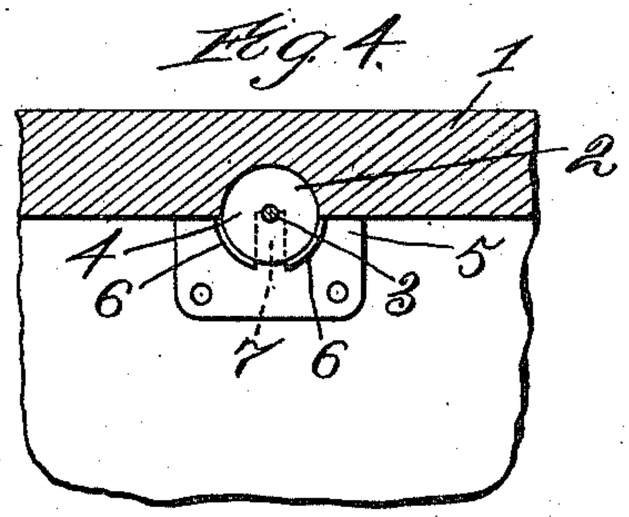


Fig. 9.

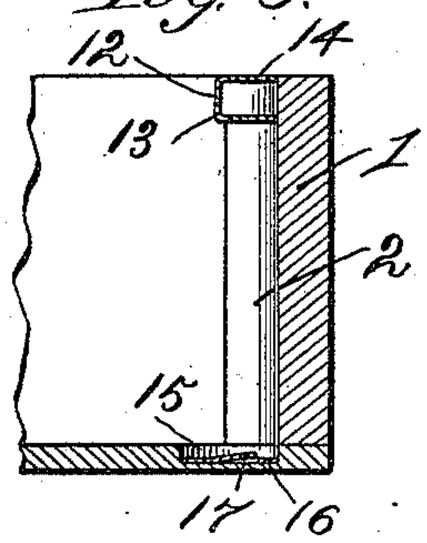


Fig. 5.

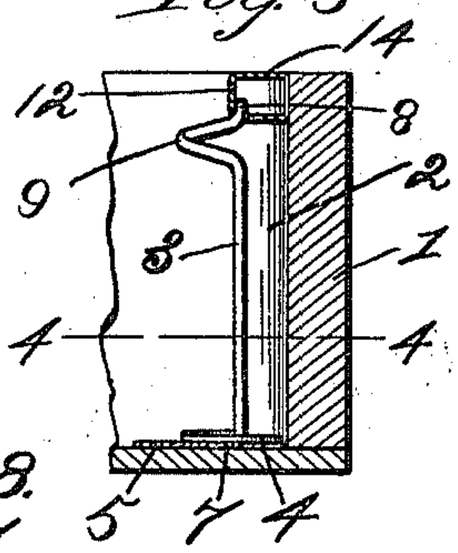


Fig. 6.

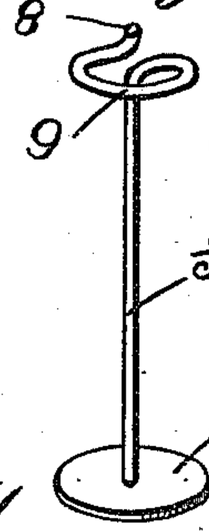


Fig. 8.

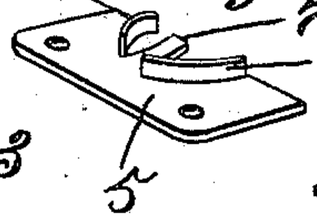


Fig. 7.

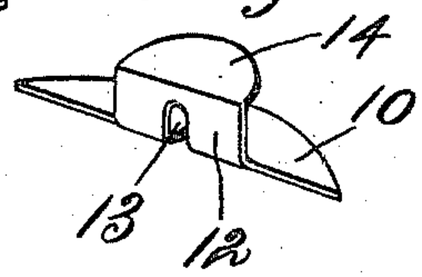


Fig. 10.

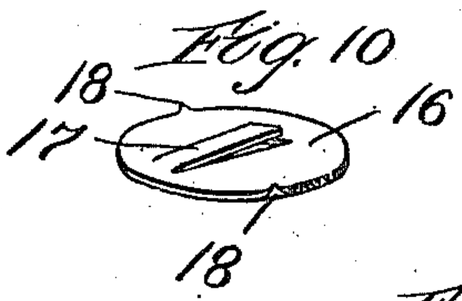
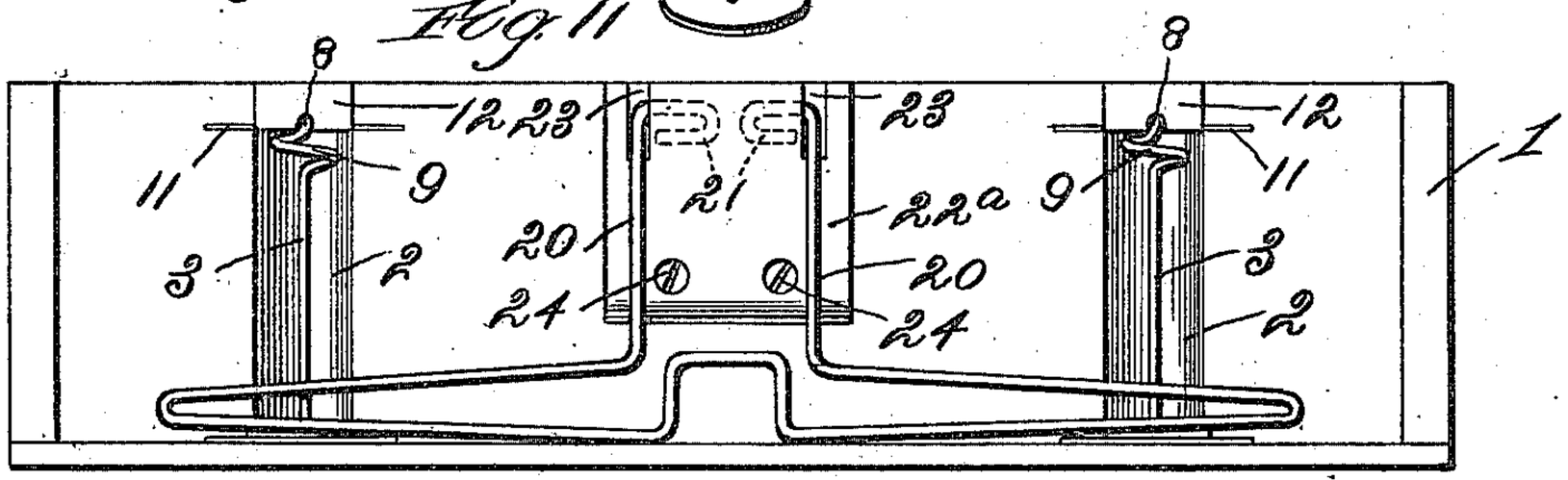


Fig. 11.



Witnesses:
Wm. M. Sheem:
Edna B. Johnson

Wm Lumley, Inventor:
by Elliott & Hopkins Attys.

UNITED STATES PATENT OFFICE.

WILLIAM LUMLEY, OF CHICAGO, ILLINOIS.

FILE-BOX.

SPECIFICATION forming part of Letters Patent No. 573,020, dated December 15, 1896.

Application filed March 12, 1894. Serial No. 503,229. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LUMLEY, a subject of the Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in File-Boxes, of which the following is a full, clear, and exact specification.

My invention relates to file boxes or trays which may be employed with or without impaling-pins for securing the papers or for holding a number of index-sheets between which the papers are placed, and in which box or tray is employed a follower or presser-arm for pressing the papers into a compact form.

My improvements relate to the form and arrangement of the presser-arm and the means for actuating it. My improvements also relate to the impaling-pin and the means for holding the same in place.

The primary object of my invention is to simplify and cheapen these devices without reducing their efficiency or durability.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts hereinafter described with reference to the accompanying drawings and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a view of a file box or tray provided with my improvements, looking from the inner or inserted end thereof. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a detail sectional view showing the presser-arm or follower in its thrown-back or elevated position. Fig. 4 is a plan section taken on the line 4 4, Fig. 5. Fig. 5 is a vertical detail section taken on the line 5 5, Fig. 1. Fig. 6 is a detail perspective view of the impaling-pin. Fig. 7 is a detail perspective view of the socket for holding the upper end of the impaling-pin. Fig. 8 is a detail perspective view of the device for holding the upper end of the impaling-pin in its socket. Fig. 9 is a view similar to Fig. 5, the impaling-pin being omitted, showing certain modifications in the means for holding the pin in place, hereinafter described. Fig. 10 is a detail perspective view of the device for holding the modified form of impaling-pin in its socket; and Fig. 11 is a view similar to Fig. 1, showing the box or tray provided with two impaling-pins and a single spring-plate for actuating the presser-arm.

Like signs of reference indicate like parts throughout the several views.

1 is the box or tray, which may be of the usual or any suitable construction and in whose front wall is formed a vertical channel or recess 2 for the reception of the perforated tabs (not shown) on the usual index-sheets, as will be understood. 3 is the impaling-pin, upon which the said perforated tabs are threaded in the ordinary manner. The lower end of this impaling-pin is provided with a disk or foot 4, which is preferably circular in form instead of semicircular, as heretofore, so that in the event it becomes loose and rotates on the pin it will nevertheless fit into the recess 2.

The bottom of the box or tray is usually made of very thin material, and hence it is difficult to form a socket therein for the reception of the foot-piece 4 without so weakening such bottom as to result in the bottom of such socket being pushed out when the edge of the foot-piece is forced down against it. I therefore prefer to leave the bottom of the box or tray intact and employ the means which I will now describe for holding the foot-piece in place or else form a slight countersink in such bottom and employ the modified means hereinafter described for reënforcing the bottom of the countersink and at the same time serving to force the upper end of the impaling-pin in its socket.

Referring to Figs. 1, 4, 5, and 8, which show the first of these means, it will be seen that on the upper side of the bottom of the tray or box I secure a plate 5, composed of thin material, having a struck-up semicircular flange 6, which forms a continuation of the circle of which the recess 2 is half, and projecting inwardly from the edge of this plate is an upturned spring-tongue 7, which terminates at about the center of the foot 4, and upon which such foot rests when the impaling-pin is in place. The semicircular flange 6, which is formed in two parts, as a consequence of the manner of stamping out the plate with the tongue 7 integral therewith, is

of just sufficient vertical extent to hold the foot 4 against outward movement after the spring 7 has been slightly depressed.

The upper end of the impaling-pin is provided with an extension 8, which is preferably concentric with the main portion of the pin and which fits into a socket at the upper end of the recess 2. Thus it will be seen that by pressing the foot-piece 4 down upon the spring 7 and adjusting the upper end or extension 8 of the pin to its upper socket and then letting go the pin the spring 7 will force it upward and it will become firmly locked in place. In order that the pin 3 may be thus manipulated and may be readily and conveniently forced downward when it is desired to remove the index-sheets in mass, I provide it with a thumb-piece 9, which is preferably formed by a coil in the pin itself, and in order that this thumb-piece may not interfere with threading the index-tabs on the pin its convolutions are arranged at a considerable distance apart, as shown in Figs. 5 and 6.

As an improved means of providing a socket for the upper end of the extension 8 of pin 3, I employ a plate 10, composed of some suitable thin material, which is forced into a saw-cut 11, formed transversely of the recess 2 near its upper end, and in an upturned tongue 12 on this plate 10 is formed an aperture or slot 13 for the reception of the extension 8. This slot 13 is formed partly in the plate 10 and partly in the tongue 12, so that it will be visible from the outer side and may be readily found by placing the extension 8 anywhere on the tongue 12 and moving it along toward the aperture 13, into which it will engage, and when the pressure on the pin is released the extension 8 will be forced above the upper end of the aperture and will be held in place by coming into engagement with the upper side of the tongue 12, as shown in Fig. 5. The upper end of the tongue 12 may be bent over, as shown at 14 in Fig. 7, and given the form of the recess 2, so as to close the upper end of such recess, it being understood that the recess 2 is open at both ends, that is, formed entirely across the front board of the box, as an incident of the manner of making it.

Referring now to the modification of the plate 5 and its connecting parts, (shown in Figs. 9 and 10,) it will be seen that instead of securing the plate to the upper face of the bottom of the box I provide such bottom with a countersink 15, which is concentric with the recess 2 and takes the place of the flange 6, and in the bottom of this countersink I secure a disk 16, provided with a struck-up tongue 17, which serves the purpose of the tongue 7 before described, the disk 16 being snugly fitted in the countersink 15 and, if desired, provided with upturned spurs 18, which engage in the wood and prevent its accidental displacement. With this arrangement it will be seen that I provide the bottom of the countersink with a reinforce in the shape of the disk 16, and at the same time I provide means for holding the upper end of the impaling-pin in the aperture 13. The bottom of the countersink 15 is protected from injury not so much by the intervention of the disk 16 as it is by the action of the spring-tongue 18, which receives the impact of the foot 4 and serves to distribute the strain equally throughout the disk, whereas in prior constructions the pressure on the impaling-pin is concentrated at one side only of the countersink.

Referring now to the preferred form of presser-arm and the means for actuating it, (shown in Figs. 1 and 2,) 19 is the portion of the presser-arm which comes in contact with the papers and which may be of any appropriate design, and 20 are stems which connect such portion to the box or tray. The stems 20 and portion 19 may be conveniently formed of a single piece of wire, and the extremities of this wire are each bent in the form of a flat head 21 by bending them first at substantially right angles and then turning their extreme ends back upon themselves, as shown in dotted lines in Fig. 1. These heads 21 are each arranged between the folds of a spring-plate 22, secured to the inner side of the front board of the box or tray. The folds of each of these plates 22 exert a normal tendency to pinch the heads 21, and the upper ends of the folds are bent together, as shown in Figs. 2 and 3, so as to prevent the head from slipping out. Each of the plates 22 is provided with a slot 23, through which the stem 20 passes when the presser-arm is in its lower position, and this slot 23 is duplicated in the rear fold of the plate to permit the stem 20 to swing backward on an incline, as shown in Fig. 3, so as to be out of the way of the papers and form a rest therefor when reference is being made to them. The relation of the head 21 with reference to the presser-arm proper is such, as will be understood, that the spring-plates 22 will hold the arm down upon the papers after it has been oscillated past a certain point or aloof from the papers in the position shown in Fig. 3 when oscillated in the opposite direction past such point.

When the folds of the plates 22 are forced apart at their upper ends by the movement of the presser-arm, their tendency is to force the heads 21 upward, and when the arm is down in engagement with the tray or papers the pressure thereon prevents the heads 21 from slipping down between the folds of the plate, as such slipping movement would tend to force the folds apart. Consequently the heads 21 would remain in place at the upper ends of the plates 22 without the employment of the slots 23.

Each of the plates 22 is preferably set into a recess flush with the front board of the box and held in place by means of a screw 24.

When it is desired to use two impaling-pins, as shown in Fig. 11, I arrange one on each side of the center of the box, and be-

tween them I locate one of the spring-plates 22, (indicated in Fig. 11 as 22^a,) and which is like two of the plates 22 brought together and formed in one piece.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a file-box, the combination with a box or tray having a recess therein, of a plate secured in the upper end of said recess and being provided with an upturned tongue, said plate and tongue having formed therein an aperture, an impaling-pin adapted to fit in said aperture and having a foot-piece at its lower end, and a socket at the bottom of the box, provided with a spring upon which said foot-piece rests, substantially as set forth.

2. In a file-box, the combination of the box or tray having a recess formed in the side thereof and said recess being provided with a transverse cut, a plate embedded in said cut and having an upturned tongue and said tongue and plate being provided with an aperture partly in each, an impaling-pin adapted to fit in said aperture and means for holding the other end of said pin in place, substantially as set forth.

3. In a file-box, the combination with a box or tray, of a folded spring-plate secured to said tray and a presser-arm having a flat head pinched between the folds of said plate, substantially as set forth.

4. In a file-box, the combination with the box or tray, of a slotted spring-plate secured to the said box or tray, and a presser-arm having a portion projecting through said slot, and a flat head on such portion arranged to be pinched by said spring-plate, substantially as set forth.

5. In a file-box, the combination with a box or tray, of a presser-arm having a flattened head bent at substantially right angles thereto, a flat spring-plate secured to said box and bearing against said head and having a slot for the passage of said arm, the end of said plate being turned over the said flattened head so as to prevent its upward displacement, substantially as set forth.

6. In a file-box, the combination with a box or tray, of a spring-plate folded upon itself and secured to said box and having its extremities turned upwardly from the bottom of the box, one of said extremities being slotted and the presser-arm having a flattened head pinched between the folds of said plate, substantially as set forth.

7. In a file-box, the combination with a box or tray, of a folded spring-plate secured to the side thereof and having its extremities provided with opposed slots, a presser-arm having a stem adapted to fit in said slots and a flattened head on said stem arranged between the folds of said plate, the folds of said plate being turned over said head, substantially as set forth.

8. In a file-box the combination with a box or tray and a presser-arm having a flattened head, of a spring-plate folded upon itself and forming a flexible tongue between which tongue and the other fold of said plate said flattened head is loosely confined, the free extremity of said tongue being bent toward the other fold of said plate so as to prevent said head from slipping out of place, substantially as set forth.

9. In a file-box the combination with a box or tray, of a U-shaped plate having a slit formed through both sides of its free extremities, a presser-arm passing through said slit and having a flattened head arranged between the folds of said plate, both extremities of said plate being bent upwardly over said head, substantially as set forth.

10. In a file-box, the combination with a box or tray, of a spring-plate secured thereto and having its free extremity provided with a slot, a presser-arm having a flattened head pinched or pressed by said plate and said arm being arranged in said slot and having its movement limited in one direction by the end of said slot, and means for preventing said head from moving in the other direction, substantially as set forth.

WILLIAM LUMLEY.

Witnesses:
F. A. HOPKINS,
EDNA B. JOHNSON.