

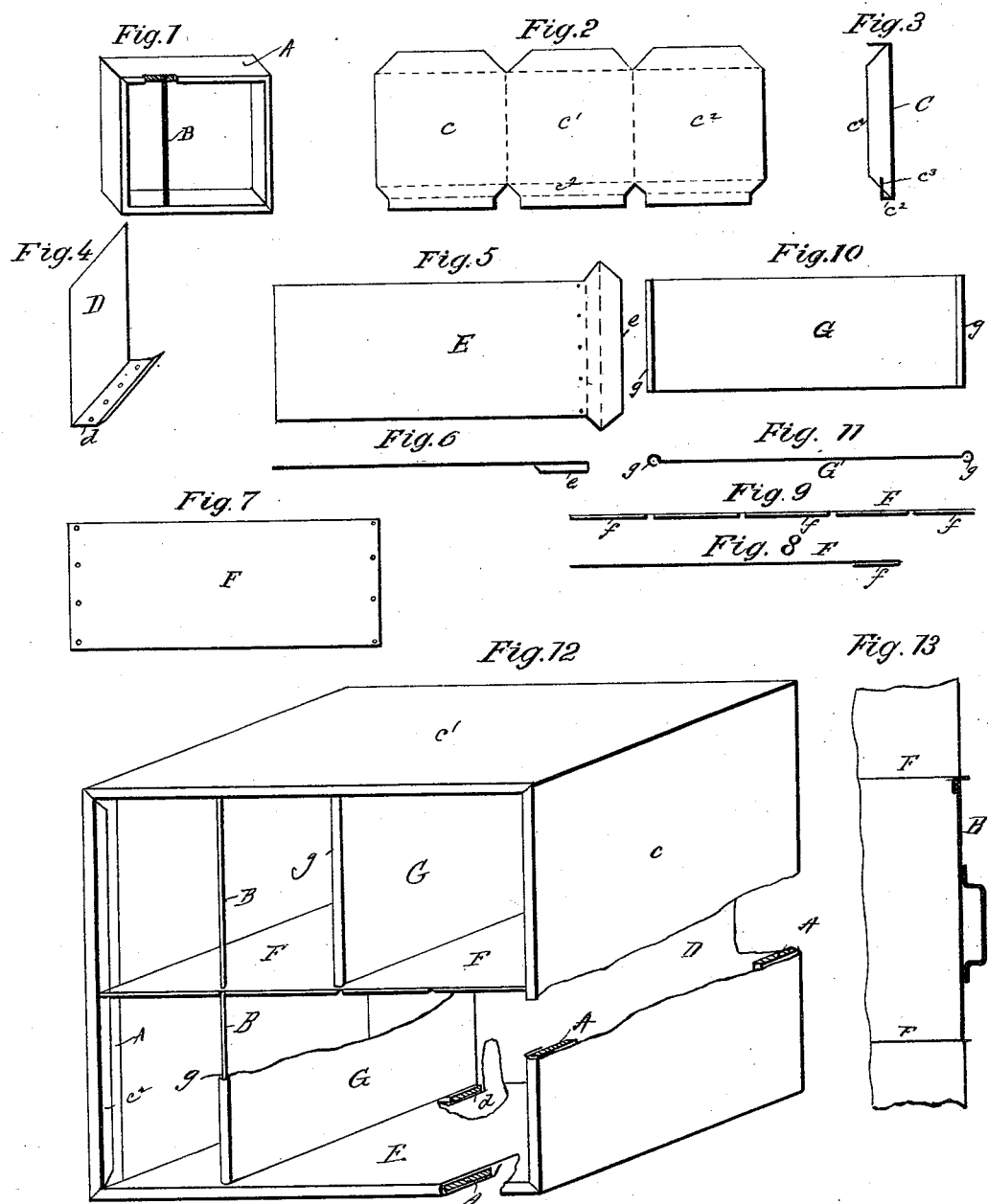
(Model.)

H. J. HOFFMAN.  
CASE AND DRAWER FOR FILES.

3 Sheets—Sheet 1.

No. 455,251.

Patented June 30, 1891.



Witnesses:

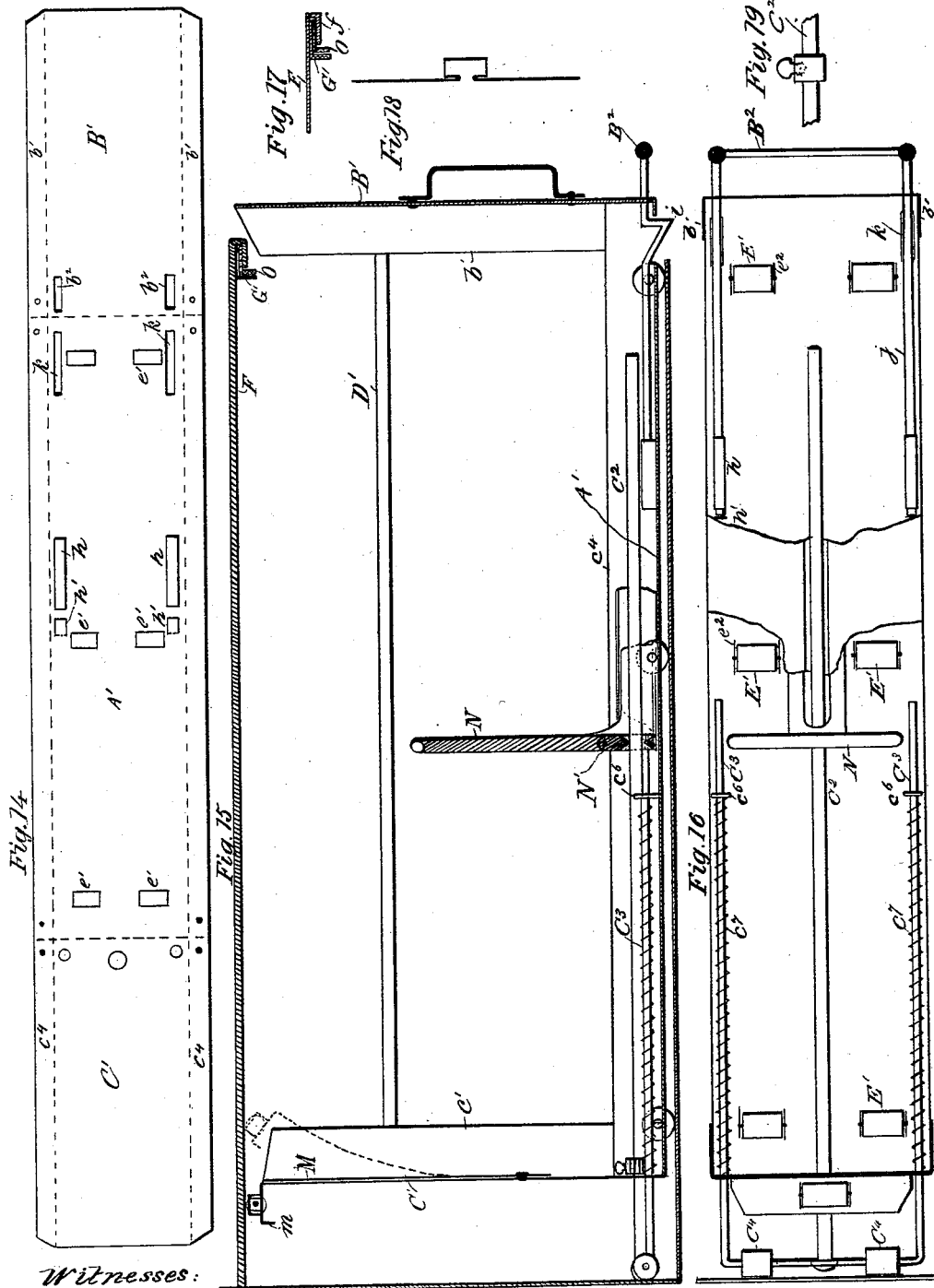
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Inventor:

H. J. Hoffman

No. 455,251.

Patented June 30, 1891.



Witnesses:

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Inventor  
Horace J. Hoffman

(Model.)

3 Sheets—Sheet 3.

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Fig. 20

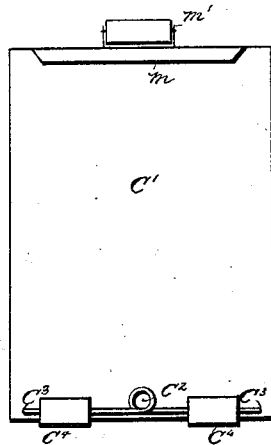


Fig. 21

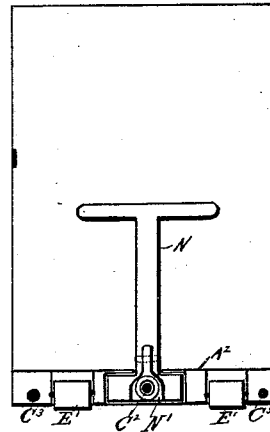
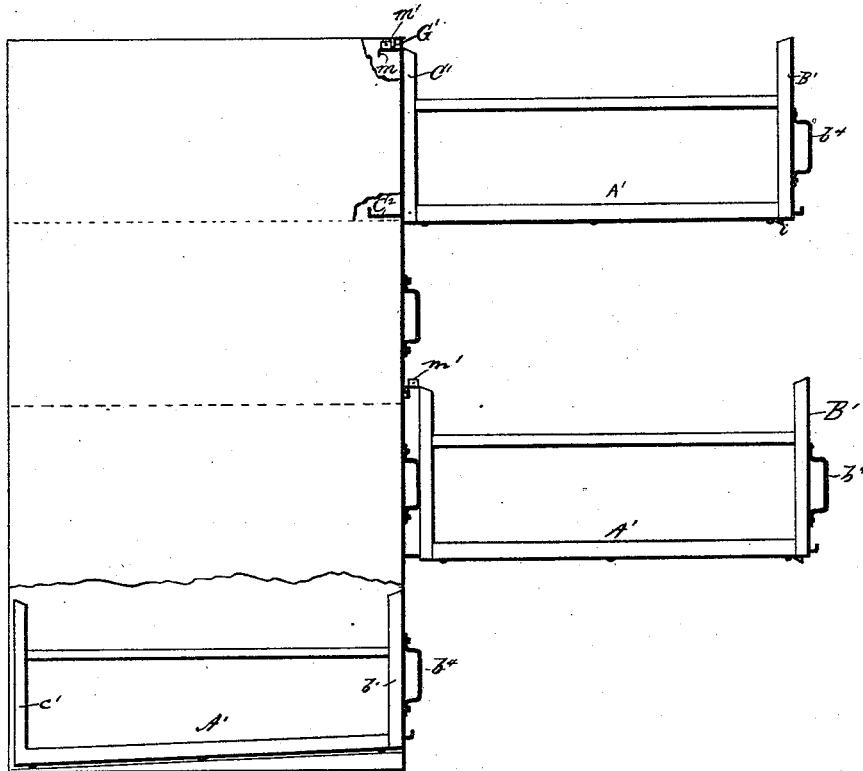


Fig. 22



Witnesses:

J. W. Gorman  
Emile Dumas

Inventor:

Horace J. Hoffman

# UNITED STATES PATENT OFFICE.

HORACE JOSEPH HOFFMAN, OF CHICAGO, ILLINOIS.

## CASE AND DRAWER FOR FILES.

SPECIFICATION forming part of Letters Patent No. 455,251, dated June 30, 1891.

Application filed January 2, 1890. Serial No. 335,728. (Model.)

*To all whom it may concern:*

Be it known that I, HORACE JOSEPH HOFFMAN, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Cases and Drawers for Files, of which the following is a specification.

My invention relates to improvements in cases and drawers for files; and it consists in various details of construction combined in a manner to materially add to the strength of the parts, to prevent any damage to the files arising from dust, smoke, or vermin, and provide for a more rapid and convenient inspection of the papers. These results of my improvements will be apparent from the hereinafter-detailed description, as illustrated in the accompanying drawings and pointed out in the claims.

In the drawings, Figure 1 is a partially-broken perspective view of the rigid member of the case-frame. Fig. 2 shows a plan view of the sides and top of my case as cut from a single piece of sheet metal before bending to shape, the lines of bends being indicated in dotted lines. Fig. 3 is a horizontal section of the case side bent to shape. Fig. 4 is a perspective view of the rear plate of the case. Fig. 5 is a plan of the bottom plate before bending the same. Fig. 6 is a side elevation of the same bent. Fig. 7 is a plan view of a shelf. Fig. 8 is a section of the same on line *xx* of Fig. 7. Fig. 9 is a front elevation of the shelf. Fig. 10 is a side elevation of a partition-plate. Fig. 11 is a top view of the same. Fig. 12 is a perspective view of the completed case with parts broken out, showing the arrangement of the same in relation to each other. Fig. 13 is a detail. Fig. 14 is a plan view of the drawer-blank as coming out of the die and before being bent up to shape, as shown in the following figure. Fig. 15 is a longitudinal section of the case and drawer. Fig. 16 is a plan view of the drawer. Figs. 17, 18, and 19 are details on an enlarged scale. Fig. 20 is a rear elevation of the drawer. Fig. 21 is a rear view of the drawer cross-sectioned on line *xx* of Fig. 16; and Fig. 22 is a partially-broken elevation view of a case, showing drawers hanging in front thereof.

The rigid frame A has its top and bottom members perforated, as shown at *a*, to receive

the pigeon-hole rods B, the head of the latter being tapered down to wholly lodge into the countersunk upper member of the frame. The lower ends of the rods B are to be hammered down against the lower face of the bottom member after all of the constituent parts of the case have been put together.

I may use two rigid frames A, one at the front and the other at the rear; but I may also dispense with the frame at the back in cases of small dimensions, as I may also use a third frame in exceptionally large-sized cases, their object being to give to the sheet-metal body of the case the requisite strength and stability. The sides and top of the latter are cut out in a single piece in the shape shown in Fig. 2, *c c* being the sides and *c'* the top.

The blank is cut at the corners and suitably notched opposite the line of the bends to allow of the parts being bent up at right angles to each other and form the channel *c'* to embrace the side and top members of the frame A. The rear plate D is made with a flange *d*, bent at right angles inward to cover the lower face of the rear frame A. The bottom plate E has a double fold at its front, forming a channel corresponding to the top and side channels *c'*. The shelf F is provided with a flange *f* at the front, and this flange is folded against the lower face of the shelf, a slight space being left, however, between the parts to lodge therein the drawer-stop and dust-strip mentioned hereinafter. The shelf is perforated both at the front and rear, as shown at *f' f'*, to receive the body of the rods B, and the shelf-flange *f* is cut out opposite the perforations *f' f'*. The partition-plate G is cut with sufficient metal beyond that required by the depth of the case to form at each end a cylindrical or square column or pillar *g*, this latter to receive the body of the rod B and to support on its top edge the upper shelf, while it rests its foot against the lower shelf or against the bottom plate E.

All the different parts of my improved case having been described, I will now point out the order of operation followed to put these parts together. The rigid frames A are first put in the position they are to occupy. The rods B are inserted in turn in the perforations *a*, their lower end being passed on their way down through the columns *g* and the shelves

F in succession from top to bottom. The bottom plate E and rear plate D are then put in position and the rods B passed clear down through them and the bottom perforations *a* of the lower frame members A. The top and side bent plates C are then put in position and the edges of their bottom flanges turned inward against the bottom plate. The lower ends of the rods B are then hammered against the bottom, and thus complete the construction of the case.

The body of the file-drawer consists of a single piece of sheet metal cut out and bent to shape by machinery, the part A' of the blank to form the bottom of the drawer and B' and C' the front and rear ends of the same, respectively.

*a' a'* are the parts to be bent up at right angles to the bottom A', their ends to fit closely against the inner face of the parts B' and C' after these latter have been bent up at right angles with their flanges *b' c'* closing over the bottom flanges *a'*, both parts being welded together or connected by rivets.

To further strengthen the parts and to at the same time provide side guards for the files, I propose to connect the front and rear ends B' and C' by the flat brace D', with its ends attached in any suitable manner to the flanges *b'* and *c'*.

In the bottom A' are cut two rows of slots *e' e'*, and out of the metal to be thus cut enough is left on each side to form the ears *e<sup>2</sup> e<sup>2</sup>*, the latter to be perforated and serve as hangers for the rollers E' E', as also to in part support the false bottom A<sup>2</sup>. The rollers are hung between the ears *e<sup>2</sup>*, so that a small portion of their lower periphery projects below the drawer, being thus adapted to rest and roll on the case-shelf F. I form also in the said bottom A' on each side a semi-cylindrical channel *h*, projecting above the upper face of A', and at a slight distance opposite the same a lug *h'* is formed from the stock also. Through the channel *h* is inserted the rear end of the wire spring *j* to abut against the lug *h'*. The front portion of the spring *j* is provided with a downward-inclined latch or stop *i*, which is received in the slot *k* cut in the drawer-bottom A.

When the case is constructed to receive the drawer, a slot *k'* is cut in the shelf F to coincide with the slot *k* of the drawer and allow of the stop or latch *i* falling therein to lock the drawer when pushed in position within the case. The wire springs *j j* project out through the front B', which has a slot *b<sup>2</sup>* to allow of the lifting of the latch *i* out of the slot *k'* to unlock the drawer. About an inch or so beyond the front face of the part B' the projecting ends of the springs *j j* are connected in any suitable manner by the transverse bar B<sup>2</sup>, or this bar may be made integral with the springs, as desired. The rear part C' is perforated both at the center and at each side to receive the members C<sup>2</sup> and C<sup>3</sup> of the wire frame designed to carry

the actuating parts of the drawer. The members C<sup>2</sup> and C<sup>3</sup> may be made integral or connected together in any suitable manner. In the form shown the members C<sup>3</sup> are made of a single wire bent at the center, so as to give a loop *c<sup>5</sup>*, through which the member C<sup>2</sup> is passed and has its head riveted over. The members C<sup>3</sup> are then bent at right angles opposite their respective perforations and project therefrom through the drawer, or partially so only, and are received through the perforated lugs *c<sup>6</sup>* cut and bent up from the bottom A'. The central rod C<sup>2</sup>, after it has passed through the part C', is received in a perforation of the oscillating or rocking piece N' between the forked heel of the file-clamp N. This perforation *n* is enlarged all around from the central line of the rocker N', so that the rod C<sup>2</sup> is immediately embraced only at the center of the said rocker. Around each of the wires C<sup>3</sup> is wound the coil-spring *c<sup>7</sup>*, the front end of which is abutted against the lug *c<sup>6</sup>*, while the rear end of the same abuts against the washer *c<sup>7</sup>*, made fast in any suitable manner to the rod or wire C<sup>3</sup>. The resiliency of these springs tend, to move the wire frame C<sup>2</sup> C<sup>3</sup>, together with the file-clamp N, toward the drawer's back, and the distance through which the clamp and frame can thus be carried back is regulated by means of the washer *c<sup>8</sup>*, embracing the central rod C<sup>2</sup> and fastened thereon by the thumb-screw it is provided with. Both this actuating mechanism, the rollers, and the locking device are separated from the file-receiving portion of the drawer by means of the false bottom A<sup>2</sup>, which is moreover formed so as to provide a guiding-slide *b<sup>3</sup>* for the forked heel of the clamp N.

In order to provide a self-hooking device to allow of the drawer being taken its full length out of the case, I use the flexible metallic piece M, made slightly narrower than the part C' and riveted on the front face of the same at its lower end. This piece M projects slightly above the top of C', and is then bent backward a half-inch or so, then bent up vertically for about a quarter-inch and back again on itself to the plane of its first bend for about three-eighths of an inch, its end being brought down vertically to form the hooking-edge *m*, the top bend serving as another hooking-edge *m'*. In view of the pressure which the automatically-moving-out drawer will have to meet from the top of its back coming into contact with the shelf above it and to reduce the same to a minimum a roller *m<sup>2</sup>* is mounted on top of the flexible piece M just back of the hook *m'*, the hangers for this roller being cut out and bent up from the piece M itself. I may use two rollers *m<sup>2</sup>*, one at each side, instead of one at the center, as shown, and in this case I may dispense with the hooking-edge *m'*, the front edges of the hangers being used for the same purpose. Between the shelf F and its front flange *f* I propose to insert an elastic strip O, pressed and held therein by an angularly-flanged metal strip G', the verti-

cal portion of which serves two purposes. First, the elastic strip O, which hangs in front of the same, is held flat against its face when the drawer's front comes in close contact with it, and, second, when the drawer is pulled out its whole length the strip G' opposes its rear face to the hook *m'* of the drawer. The drawer-bottom will completely come out of the case when the hooking parts have come together; but its downward motion will be promptly arrested by the wire frame C<sup>2</sup> C<sup>3</sup>, which then rests upon the shelf G. Around the rear bent portion of this frame on each side I may mount the roller C<sup>4</sup> to run on the shelf and prevent the drawer-heel bearing against any point of the shelf as it comes out of the case. When the drawers are either too high or too low in the case to allow of a convenient examination of their contents in front of their own compartments, the hook *m* becomes serviceable. The drawer is then completely taken out of the case and the hooking-edge *m* is slipped over the bar B<sup>2</sup>, which projects in front of all the drawers at any suitable height desirable. The rear face of the drawer-back rests then against the handle, attached in any suitable manner in the center of the drawer-front.

The operation of the drawer is easily understood from the above description and the accompanying drawings. The files having been already put in position by the pushing of the drawer clear back into the case causes the outward-projecting ends of the wire frame C<sup>2</sup> C<sup>3</sup> to be forced forward against its springs *j j* and carry forward the clamp N, whereby the files are compressed. At the moment the felt or elastic strip O is met by the front of the drawer the locking-latches *i i* have come opposite the shelf-slots *k' k'* and falling therein secure the drawer with its front pressed tightly against the strip O, thus closing it hermetically and proof against dust, soot, or vermin until it is desired to bring the drawer out, which is done by a slight pull upward of the transverse bar B<sup>2</sup>. The drawer is then rolled out in front of the pigeon-hole with the files or papers already expanded. The rocking piece N' in its normal position impinges tightly on the edges of the rod C<sup>2</sup> and obliges the clamp N to follow the movements of the wire frame, except when the said rocking piece N' is held in hand parallel with the edges of the clamp to move it along the rod C<sup>2</sup> for more or less space, according to the number or thickness of the files in the drawer.

I may construct my drawer and case so as to do away with the locking device and the automatic mechanism to eject the drawers. In this instance, to provide against the liability of the drawer-front being gradually thrown out of the case by jars, thus rendering the dust-strip ineffectual, I propose to give to the case-shelf F a slight incline downward from the front and to bend the front and rear of the drawer so that its bottom corresponds to that incline, as is shown in the lower part of Fig. 22. With this arrangement if

anything should happen to shake or jar the case whatever slight motion the drawer could thereby receive would be instantaneously annulled, and the dust-strip would thus do its duty without fail. This inclined bottom can be used without the rollers and without the dust-strip, according to circumstances.

In the construction of the hooking device, by means of which the drawer is made to hang clear out of its pigeon-hole as needed for the convenient examination of the files, I may without departing from the spirit of my invention transpose the acting parts and make the hook *m'* stationary and the stop G' movable, and the form shown for the movable part M so used either at the rear of the drawer or at the front of the shelf may be variously modified and the displacement needed for its effect may be had through any suitable hinge-pivot or sliding attachment whatever.

The construction of the drawer may also be modified by substituting the false bottom for the bottom proper and attaching it suitably to the side flanges *a' a'* of the same, the rollers E' depending then from or attached to said bottom.

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

1. The combination of the channeled and flanged sides and top plate, the rear and bottom plates, the shelves extending from side to side of the case, rods passing through the shelves at intervals both at the front and rear, and upright partition-plates held in place by the rods between the shelves and supporting the latter, substantially as and for the purpose set forth.

2. The combination of upright partition-plates having hollow columns formed at each end, rods passing through the said columns and through the shelves at the front and rear, and the said shelves extending from side to side of the case and supported on top of the partitions, substantially as and for the purpose set forth.

3. In a case for files having its shelves slightly inclined downward from the front, a drawer made with its bottom downwardly inclined toward the rear to correspond with the inclined shelves, as set forth.

4. A case for files, having its bottom and shelves slightly inclined downward from the front and a dust-strip depending from the case-top or the shelves across the drawer-space, in combination with a drawer having rollers projecting below its bottom, this latter being made with a downward incline from front to rear to correspond with the inclined case-bottom or shelves, substantially as and for the purpose set forth.

5. In a case for files, a drawer having a locking-latch and a series of rollers projecting below its bottom and a spring-frame mounted above its bottom and projecting behind the drawer, in combination with the case-bottom or the shelves having a receptacle for the

locking-latch and the back of the case, substantially as set forth.

6. In a case for files, a drawer having a locking-latch in its bottom, in combination with the case-bottom or the shelves having a receptacle for the latch of the drawer, substantially as set forth.

7. In a case for files, a drawer having a flexible flap mounted in its back, with a hooking-edge projecting above the top thereof, in combination with the case having a projection depending at the front from the shelves or the case-top and extending slightly through the drawer-opening, substantially as and for the purpose set forth.

8. In a case for files, a drawer having a flexible flap mounted in its back and provided with a downwardly-inclined hooking-edge projecting outward beyond the drawer's back, in combination with the case-front or with any other drawer of the same, substantially as and for the purpose set forth.

9. In a case for files, a roller mounted in its back upper edge, in combination with the top plate or shelves of the case, substantially as and for the purpose set forth.

10. In a case for files, a drawer having an air-tight-fitting closing device at its front, substantially as set forth.

11. In a case for files, drawers provided with an automatic device adapted to partially push the drawers out of their respective pigeon-holes, in combination with a locking device interposed between the case and each drawer of the same, as set forth.

12. In a case for files, a drawer having a self-compressing device operated by the closing and opening of the drawer, respectively, as set forth.

13. In a case for files, a drawer having a locking-latch and a series of rollers projecting below its bottom, and a spring-frame mounted in the drawer's bottom and projecting behind the back of the same, and having a series of rollers journaled in its outward-projecting portion, in combination with the case-bottom and shelves having a receptacle for the locking-latch and the back of the case, substantially as set forth.

14. In a case for files, shelves having a downwardly-inclined flange at the front cut away a slight distance from the pigeon-hole partitions, in combination with a drawer having a backwardly-turned flange on each side of its front, substantially as and for the purpose set forth.

15. In a case for files, a shelf having a downwardly-turned flange at the front, in combination with a drawer having a stop or hook-

ing device adapted to engage with the rear face only of the shelf-flange, substantially as shown and described, and for the purpose set forth.

16. In a case for files, a latch mounted in the front of the drawer and having a hook formed in its handle, in combination with a hooking device attached to the back of each other drawer of the case, whereby said drawer may be hung in front of any compartment except its own, substantially as set forth.

17. In a case for files, a movable hook or stop mounted in the rear of the drawer and adapted to engage with a suitable stop at the front of the case and to hold the drawer thereon in practically the same position which the said drawer occupied in the case, substantially as set forth.

18. In a case for files, a drawer having a groove in its bottom for a compressing-clamp, in combination with a series of rollers on each side thereof, depending from or attached to the said bottom, whereby the space needed for the clamp is utilized also for the rollers, substantially as described, and for the purpose set forth.

19. In a case for files, a shelf projecting in front beyond the upright partitions, whereby as the drawer is pushed in position and the front thereof is in line with said partition the top of the same is forced under the projecting edge of the shelf and forms a tight joint therewith, as and for the purpose set forth.

20. In a case for files, a shelf projecting in front beyond the upright partitions and having a flange depending therefrom and in line with the front edge of the partitions, whereby as the drawer is pushed in position in the case the head of the same is forced under the projecting edge of the shelf and in close contact with the said depending flange, thus forming a tight joint both above and in rear of the said drawer's head, as set forth.

21. In a case for files, a strip of felt or any other elastic material, in combination with a flange depending from the shelf, whereby as the drawer is pushed in position in its case an air-tight joint and dust-proof connection is formed between the drawer and the shelf, as set forth.

In testimony whereof I have signed this specification, before two witnesses, this 31st day of December, 1889.

HORACE JOSEPH HOFFMAN.

Witnesses:

EMILE DUMAIS,  
ARTHUR TOWER.