April 18, 1944. J. F. DOUGLAS 2,347,035

FILING EQUIPMENT

Filed April 14, 1941

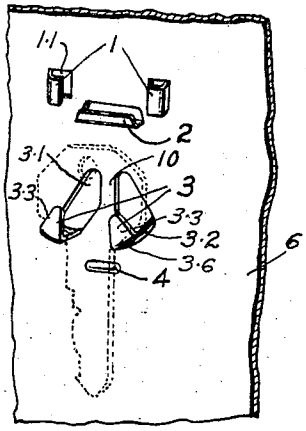


Fig. 1

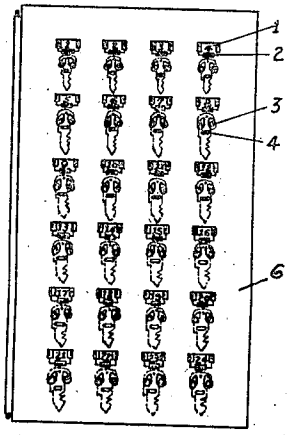


Fig. 2

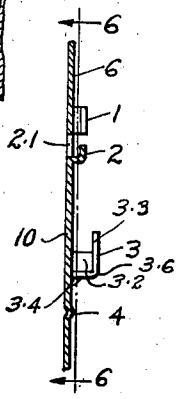


Fig. 5

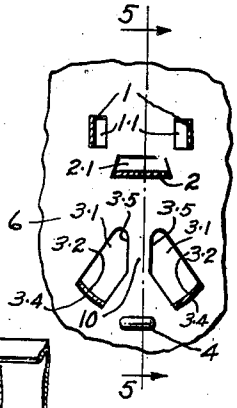


Fig. 6

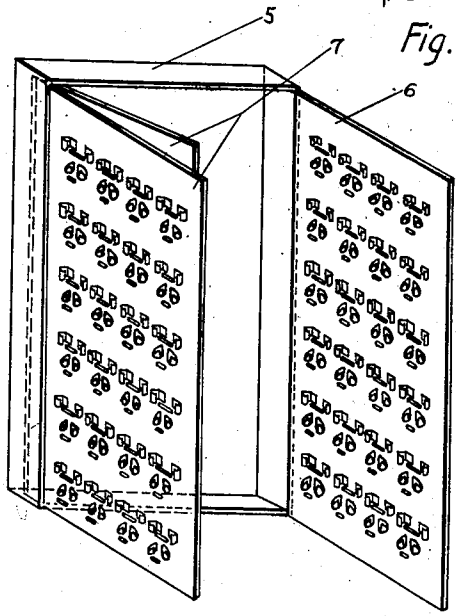


Fig. 3

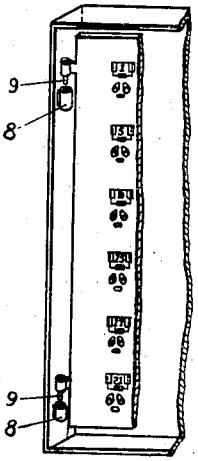


Fig. 4

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UNITED STATES PATENT OFFICE

2,347,035

FILING EQUIPMENT

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Application April 14, 1941, Serial No. 388,393

3 Claims. (Cl. 211—87)

My invention comprises an improvement in filing equipment, more particularly in the construction of steel files for keys.

Wherever, as in hotels, office buildings, etc., it is necessary to maintain considerable numbers of keys for rooms, it is important that there be available convenient key filing arrangements. It is usual to provide cabinets for the purpose, these being usually of either wood or steel construction. It has been customary to hang keys on hooks and to number each hook with a tab, usually of metal and stamped with a designation as, for instance, that applying to a particular room. Hooks and tabs are often attached by means of rivets, drive pins, screws or bolts; in some cases, hooks are formed by punching out a projection from the steel material of the file.

Where steel files are used, such forms of construction, both those applying to hooks and designation tabs, are costly, involving perforating of the file with numerous exact holes and punchings. The use of hooks involves a considerable projection beyond the surface of the file, each key must have a hole for its attachment to its hook, and, in removing a key or in replacing it upon its hook, a certain amount of care and attention is involved. Also, tabs fastened by rivets, drive pins, etc., are not readily removable in case of necessity as for renumbering or for change of designation or arrangement.

My invention provides means for securing in files tabs which are readily removable and which are in placement relation with attachments for individual keys to which such tabs refer. It reduces the projection beyond the file surface of key attachment means; it obviates the necessity for holes in key blanks; it eliminates the use of rivets or drive pins and of the numerous holes and punchings required for rivets and drive pins; it holds keys more securely than is possible with hooks; it allows removal and replacement of keys with a minimum of care and attention; it greatly simplifies manufacture, and it is adapted readily to construction of cabinets for keys wherein are multiple files so grouped that each file can be hinged to a cabinet wall. Furthermore, when multiple files are grouped in a single cabinet, the latter may be less in thickness due to the reduction in space between individual hinged files made possible by my invention, than is the case where, as at present, the customary hook or long punched prong structure is employed. In such cases as it is desirable to provide an alarm or signalling device which shows when a key is removed from a file, this is more readily accomplished where is used the comparatively rigid attachment made possible by my invention, than is the case where keys hang loosely.

My invention and its practical application to file and cabinet design and construction is made clear by the accompanying drawing in which:

Figure 1 is a perspective view of a fragmentary portion of a steel key filing panel showing the form and arrangement of a unit group of lugs for supporting a key and its corresponding designation or identification card.

Fig. 2 is a front face view of a complete filing panel showing a multiple arrangement of such unit groups, with the keys and identification card in place, the keys being represented in broken outline.

Fig. 3 is a perspective view of a filing cabinet showing an illustrative arrangement of panels.

Fig. 4 is a detail in perspective of a suitable hinge for removably mounting the panels in the cabinet.

Fig. 5 is a sectional detail of the panel structure taken on the line 5—5 of Fig. 6.

Fig. 6 is a sectional detail of the same taken on the line 6—6 of Fig. 5.

In the form shown in the drawing, the retainer prongs or devices for holding the keys and the corresponding designation, identification or placement indicating cards or tags are formed by the exceedingly simple expedient of striking tongues out of the sheet of material of the backing plate of the panel in such manner that the tongues will be of L-shape with a shank portion projecting outwardly from the panel and a head or flange overlying the margin of the key or card that is to be supported.

Each unit group of retainer devices comprises a pair of parallel vertically disposed tongues 1 having their heads or retaining flanges 1.1 disposed so as to embrace the vertical edges of a card that might be inserted between them and so as to hold the card in place against the panel 6. Immediately below these tongues 1 is a horizontally disposed tongue 2 upon which the card embraced by the tongues 1 may rest. This tongue 2 has its outer or head portion bent upwardly to form a flange 2.1 spaced from the parallel with the panel plate 6 so as to overlie the bottom margin of the card. Each group of tongues also includes a pair of key retainer prongs that are similarly formed by striking tongues 3 out of the panel plate 6 and bending these into L-shape so as to provide outstanding shank portions 3.2 with flanges or heads 3.3 at their outer ends disposed in parallel relation to the backing plate 6. The

support for each key comprises two such tongues 3 symmetrically arranged with respect to a medial line of reference, such as the line 5—5 of Fig. 6, and these tongues, as will be understood from Figs. 1 and 6, are disposed at an angle to each other so that their shank portions 3 cooperate with each other, with their flanges 3.3 and with an intervening portion 10 of the backing plate to form a seat that securely confines the handle portion of the key with the shaft of the key hanging down in the manner in which such key is shown in Fig. 1.

Also included in each unit assemblage is a rail or projection 4 that is pressed outward from the body of the panel for spacing the key slightly away from the panel so that it can be easily grasped for removing it. This is preferably horizontally disposed and long enough to span the gap through which the key shaft hangs.

As shown by the disposition of the apertures 3.1, Fig. 1, out of which the tongues 3 are struck up, it will be seen that the tongues 3 are disposed so as to engage the shoulders formed by the handle portion of a key at each side of its shaft portion, and in somewhat widely spaced relation to each other, so as to expose a large central area of the handle portion of the key to view. This is convenient for the placement of indicia in the form of numbers or characters on the face of the key handle for visibility thereof without interference by the supports.

It will be seen from the shape of the apertures 3.1 from which the tongues 3 are struck out that these tongues may be defined as having their base portions 3.2 spaced apart in symmetrical arrangement with respect to a vertical line of reference midway between them, so that transversely these base portions 3.2 converge downwardly while their head or flange portions 3.3 converge upwardly with respect to that line of reference. These base portions 3.2 are bowed transversely due to the rounded contour of the apertures 3.1 at the point at which they are struck up by the forming dies and thus they are given added stiffness.

With reference to the distinctive shape of the tongues that support the keys, it will be noted that in the form shown in the drawings, the tongues 3 are attached to the base plate 6 only at the arcuate line 3.4, being the juncture between the plate and the base portion 3.2. The inner opposed edges of the tongues 3 are formed on curved or bent lines as they are cut from the plate and as indicated by the corresponding contours of the apertures 3.1 in Fig. 6 so that the portions 3.5 that form the inner sides of the heads 3.3 are substantially parallel even though the tongues are formed at an angle to each other.

Then since the forming die which produces the bowed base line 3.4 also produces a similarly bowed line 3.6 of juncture between the portions 3.2 and 3.3 of the tongue, the fact that these bends are parallel to each other causes edges 3.5 to be parallel in the finished structure, but considerably drawn apart so as to provide a wide space between them to expose the indicia on the key.

As will be seen from Fig. 2, this grouping of key and card supporting tongues 1, 2, 3 admits of compact mass grouping of a large number of keys in a file with each key readily accessible and with the identifying cards in such relation that each identifying card is positioned for comparison at a glance with the identifying indicia on the head of the key.

As shown in Fig. 4, for convenience of inserting and removing panels, the same are preferably equipped with pintles 9 that can be lifted from their coacting gudgeons 8 on the cabinet.

Whereas I refer particularly to steel construction, it is to be understood that composition materials as, for instance, plastics, can be used and that my invention is applicable to any materials in which can be formed the holding means for keys and/or tabs which are here described and illustrated. It is also understood that the exact form of punching shown is subject to modification in design and arrangement by which identical or similar results are attainable.

Having described my invention, I claim:

1. A key rack comprising a plate having a plurality of key supports, each comprising a pair of tongues spaced apart laterally and struck out from the plate with their bases symmetrically inclined to converge downward toward a vertical line of reference midway between them and being bent to form shanks extending approximately at right angles to the plate and heads extending upward approximately parallel to the plate for marginally embracing a disc-shaped key handle.

2. A key rack comprising a plate having a plurality of key supports, each comprising a pair of tongues spaced apart laterally and struck out from the plate with their bases symmetrically inclined to converge downward toward a vertical line of reference midway between them and being bent to form shanks extending approximately at right angles to the plate and heads extending upward approximately parallel to the plate for marginally embracing a disc-shaped key handle, said shanks being of transversely concavo-convex arcuate section.

3. A key rack comprising a plate having a plurality of key supports, each comprising a pair of tongues spaced apart laterally and struck out from the plate with their bases symmetrically inclined to converge downward toward a vertical line of reference midway between them and being bent to form shanks extending approximately at right angles to the plate and heads extending upward approximately parallel to the plate for marginally embracing a disc-shaped key handle, said shanks being of transversely concavo-convex arcuate section, and said heads being flat in section.

J. FRED DOUGLAS.