109-85 CROSS REFERENCE SEARCH ROOM

Aug. 20, 1957 H. L. HENKEL 2,803,203

SECURITY FILE

Filed June 8, 1954 3 Sheets-Sheet 1

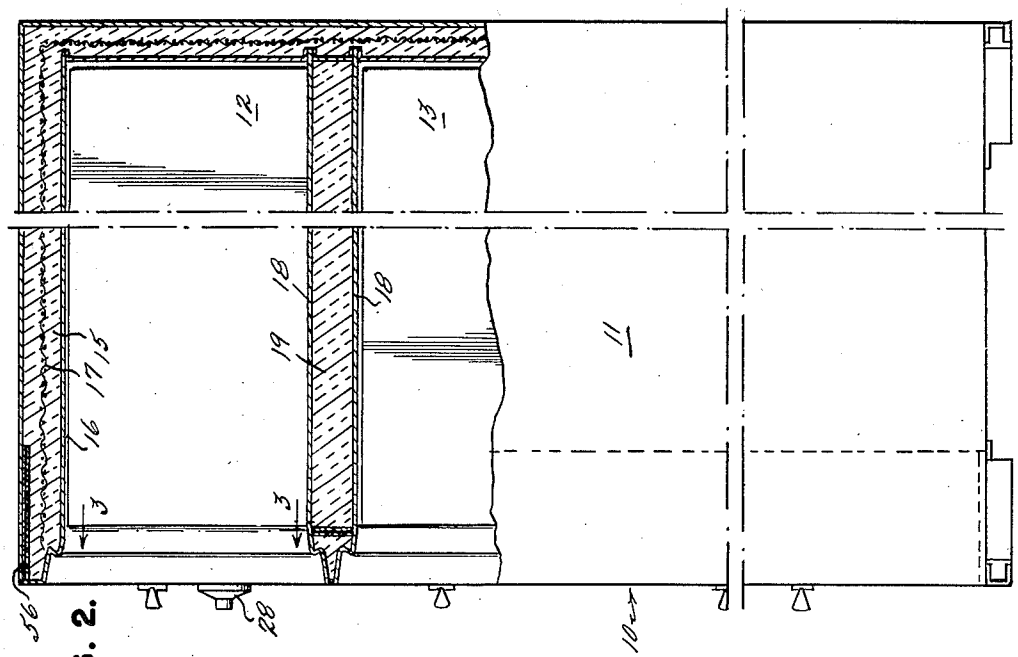


FIG. 2.

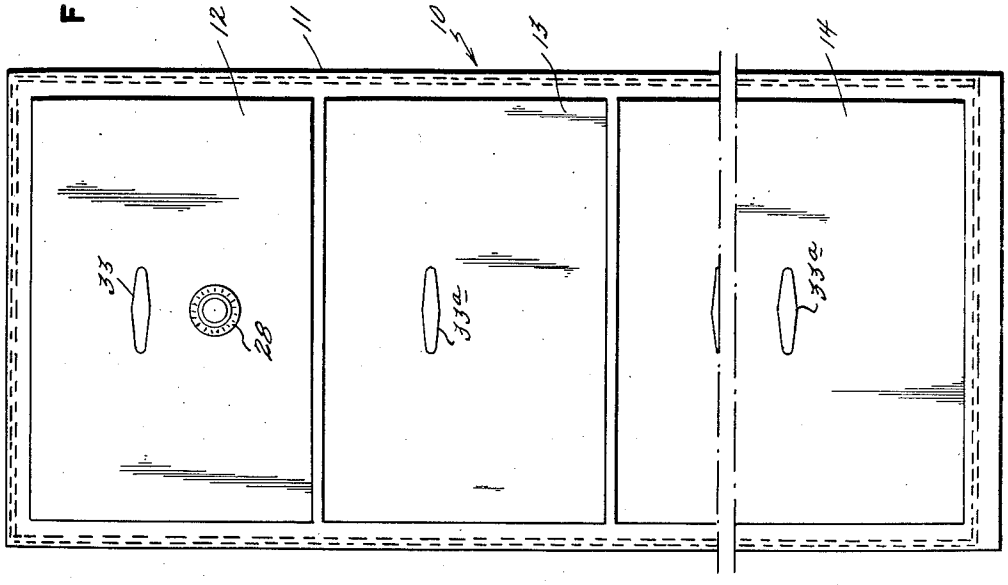


FIG. 1.

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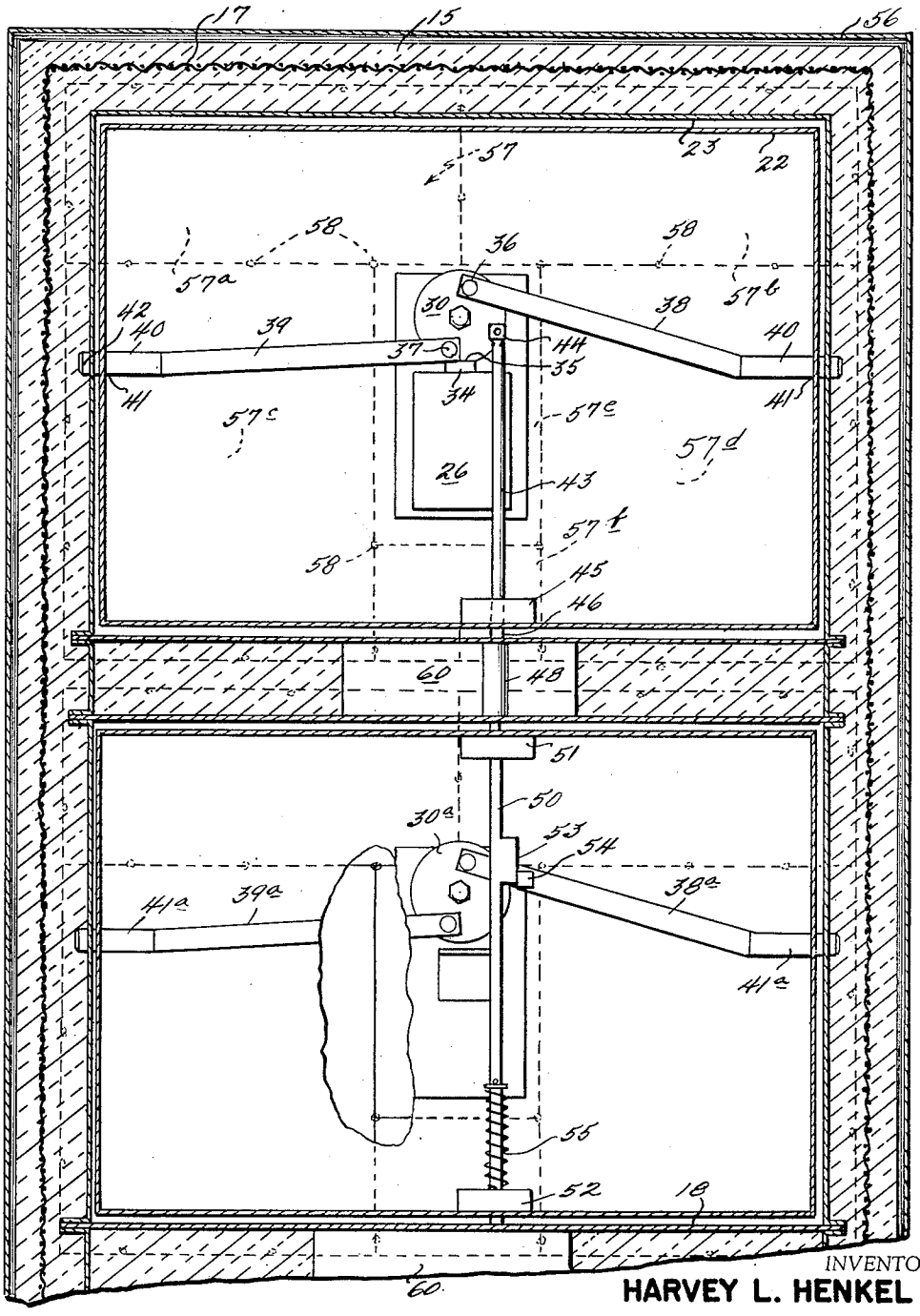


FIG. 3.

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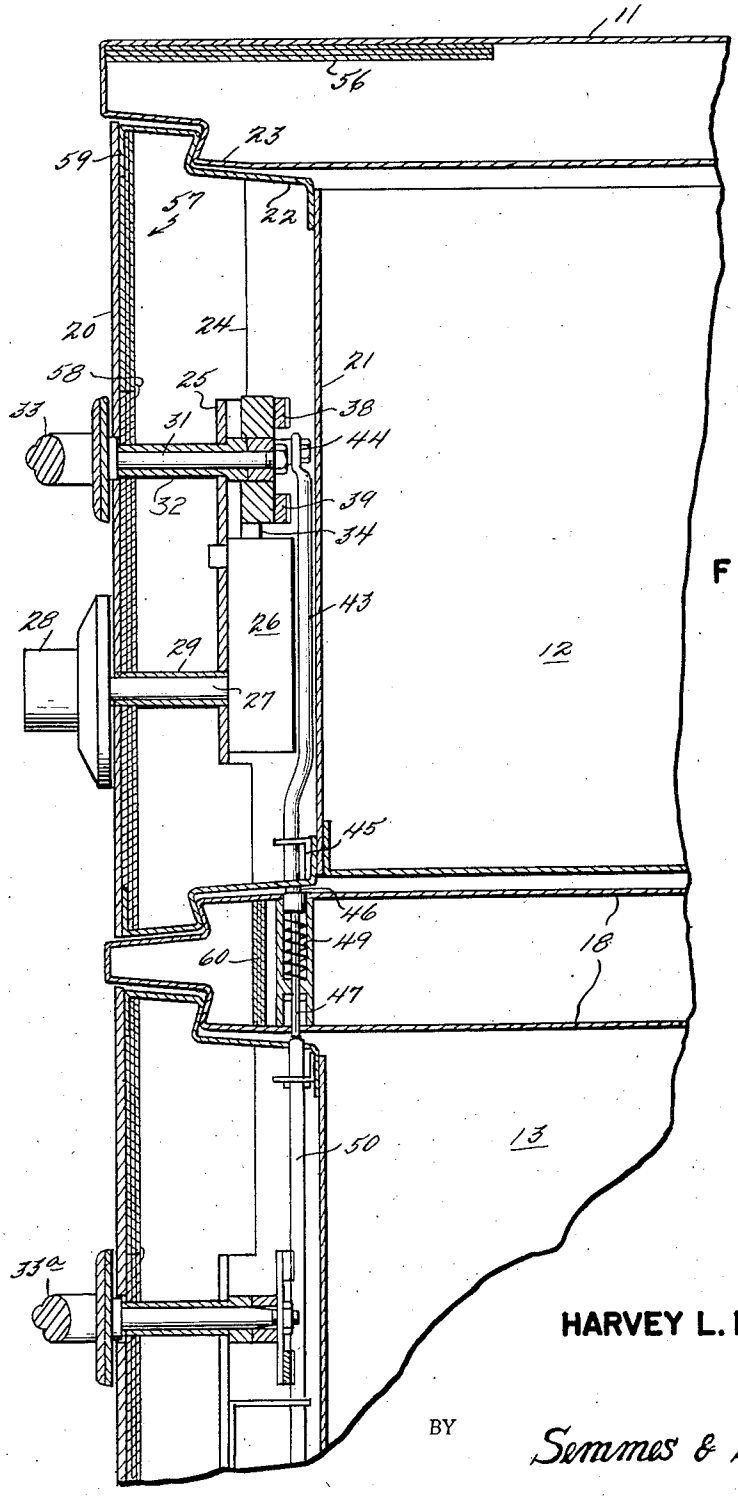


FIG. 4.

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United States Patent Office 2,803,203 Patented Aug. 20, 1957

2,803,203

SECURITY FILE

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3 Claims. (Cl. 109—59)

This invention relates to burglar proof and fire proof filing cabinets of the type comprising a plurality of drawer sections generally arranged in super-imposed relation and wherein the drawers are provided with individual locking mechanisms, collectively under the control of one master lock. More specifically, the invention consists in new and useful improvements in the reinforcement of certain critical areas of the cabinet shell and drawer fronts, with laminated steel plates so arranged with respect to the various components of the locking mechanisms as to afford maximum protection against surreptitious entry in the event an attack be made upon the locking mechanism of the file.

File cabinets of this type are generally provided with gang lock mechanisms, located just inside the front faces of the drawers, each mechanism being equipped with an individual control knob or handle, whereby locking bolts are projected or retracted with respect to complementary locking recesses located in the front portion of the cabinet shell adjacent the drawer fronts, the mechanisms being under the common control of a combination lock, usually located in the front of the top drawer of the series. Thus, the areas most likely to be attacked in an effort to gain unauthorized entry into the cabinet, are those in the immediate vicinity of either the lock controls or the lock bolts, which as before stated are usually located in a vertical plane lying just within the front faces of the file drawers.

It is therefore the primary object of the present invention to provide a laminated steel reinforcing structure, so located with respect to these vital areas, as to shield them against tampering with tools, drills and other implements of that nature.

Another object of the invention is to provide a composite reinforcing plate for installation in the front face of each drawer and formed in a plurality of sections, tack welded or spot welded at pre-determined points to form an integral plate which, although rigid in structure, possesses sufficient flexibility or resilience to resist punching or driving into the drawer front with metal punches, drills, etc.

Still another object of the invention is to provide laminated reinforcing and protecting plates for the vital areas of the cabinet and drawers, wherein alternate layers or plies are formed of metal capable of being tempered to a tool resisting hardness to afford maximum protection against the action of tools.

With the above and other objects in view which will appear as the description proceeds, the invention consists in the novel features herein set forth, illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

Referring to the drawings in which numerals of like character designate similar parts throughout the several views:

Fig. 1 is a front elevational view of a sectional cabinet embodying the invention;

Fig. 2 is a side view, partially in vertical section, showing the locations of the reinforcing strips and plates;

Fig. 3 is an enlarged transverse sectional view, taken substantially on line 3—3 of Fig. 2, showing two of the drawer sections and their locking mechanisms and illustrating the relationship of the drawer front reinforcement; and

Fig. 4 is an enlarged vertical sectional view, taken transversely through the drawer and cabinet front, illustrating the laminated reinforcing plate and its relationship to the lock mechanism. In this figure the insulation is omitted for clarity.

In the drawings, **10** generally represents a sectional file cabinet which may be of conventional structure including a cabinet shell **11** of suitable metal and a series of superimposed drawers **12, 13** and **14**. Obviously, any number of drawer sections may be employed as the occasion demands. The walls of the cabinet are provided with the usual insulation and fire proofing material **15**, filling the space between the outer shell **11** and an inner shell **16** and completely surrounding the top, rear, side and bottom walls of the cabinet, and if desired, a reinforcing wire mesh **17** may be inserted within the insulating sheet or body **15**.

The drawers are separated by horizontal spaced partitions **18**, between which is located similar insulating material **19**, so that each drawer is surrounded at top, bottom and rear by a thick insulating enclosure formed in the cabinet.

As best seen in Figs. 3 and 4, the front of each drawer is formed with an outer skin **20** and a rearwardly spaced inner skin **21**, joined at top, bottom and sides by a continuous web **22**. This web **22** is of an irregular cross-sectional profile which coincides with a complementary profile **23** which bounds the respective drawer receiving compartment of the cabinet, adjacent the drawer receiving opening in the front thereof. This is more or less conventional structure in file cabinets of this type, to insure an interlocking of the drawer front and cabinet opening when the drawer is closed so as to effect a sealing engagement.

The lock mechanisms of the drawers are housed in the spaces between the outer skin **20** and inner skins **21**, as seen in Fig. 4 and although these mechanisms may vary in specific structure, one practical form is illustrated in the drawings, as an example.

Here it will be seen that the front wall of each drawer is provided with a lock supporting frame consisting of vertical side pieces **24**, lying adjacent the side edges of the drawer within the spaces between front skin **20** and rear skins **21** and connected by forwardly offset horizontal strips **25**. In the uppermost drawer **12** the strip **25** supports a combination lock mechanism **26** of any conventional form, the strip **25** being drilled to receive a forwardly projecting operating shaft **27** which extends through a suitable opening in the front skin of the drawer and carries on its projecting end a combination dial **28**. A suitable sleeve **29**, enclosing the shaft **27**, may be welded in place between the cross-strip **25** and the front skin **20** of the drawer.

Immediately above the combination lock **26** in the front of drawer **12**, is an operating cam **30**, rotatably mounted on a forwardly projecting shaft **31**, supported by the cross-strip **25** and the front skin **20** of the drawer. A similar protecting sleeve **32** surrounds the shaft **31**. An operating handle **33** is fixed to the projecting outer end of the shaft **31** to effect rotation of the cam **30**. A latch member **34** under control of the combination lock **26**, projects upwardly into retractible engagement with a flattened surface **35** in the periphery of the cam **30**, so that until the latch **34** is retracted, the cam cannot be

rotated by the handle 33. As best seen in Fig. 3, the cam 30 is pivotally connected at opposed eccentric points 36 and 37, to laterally projecting lock bars 38 and 39 respectively. The outer ends of these lock bars form lock bolts 40 which are slidably supported as at 41 in suitable openings in opposite side webs 22 of the drawer, so as to be projectible and retractible with respect to complementary recesses 42 in the adjacent side faces of the drawer receiving recesses of the cabinet. Thus, upon rotation of the cam 30 the lock bolts 41 are either engaged or disengaged with their respective locking recesses 42.

Similar locking mechanisms are installed in each of the drawers of the series and all are under the collective control of the master combination lock 26. To effect this collective control, the top drawer 12 is provided with a main actuating rod 43 which is pivotally connected at its upper end at 44, to the top cam 30 and is supported for vertical sliding movement by a bracket 45 in the lower portion of the drawer. The lower end of the rod 43 is arranged in abutting relation with the upper end of a spring pressed intermediate plunger 47, located in a supporting tube 48 extending between the horizontal walls 18 which form the bottom of the drawer receiving recess in the cabinet. A spring 49 normally urges the plunger 47 upwardly to its limit, but upon rotation of the cam 30 the rod 43 is urged downwardly to depress the plunger 47 against the tension of its spring, so that the plunger acts as a connecting link between the main actuating rod 43 and a second control rod 50 in the drawer 13, next below. The rod 50 is slidably supported in vertically spaced brackets 51 and 52 in drawer 13, and is provided with an offset projection or abutment 53, adapted to be brought into and out of abutting relation with a lug 54 projecting laterally from the lock bar 38*a* of the lock mechanism of drawer 13. Thus, when the rod 50 and abutment 53 are in the position shown in Fig. 3, counterclockwise rotation of the lock cam 30*a* is prevented by engagement of the projection 54 with the abutment 53, so that retraction of the lock bolts 41*a* is prevented. The rod 50 is normally urged upwardly by a coil spring 55, against which it is depressed upon the downward movement of the upper rod 43. A similar arrangement is installed in all of the succeeding drawers.

It will be apparent that when the rods 43 and 50 are in their uppermost positions, the lock bolts of all drawers are in locked engagement. The lock control handle 33 of the top drawer cannot be operated until the combination lock 26 is released and the handle or handles 33*a* of the lower drawers cannot be operated until the rods 50 are moved upwardly by the release of the main actuating rod 43 to clear the abutment 53 from the path of the lug 54 on the lock bar 38*a*.

As previously stated, the primary object of the present invention is to shield the critical locking areas of the cabinet against unauthorized tampering. It is highly important that the area immediately surrounding the lateral edges of the drawers fronts, be encased so as to prevent the entrance of any tool in the vicinity of the front portions of the drawers. This is accomplished in the present invention by providing an encircling band 56 which in actual practice is approximately ¼ inch thick and laminated in five plies of suitable tool resistant metal sheets. This band extends entirely around the top, sides and bottom of the cabinet 11, and projects rearwardly from the very front edge of the cabinet to a point sufficiently beyond the critical locking area to completely shield the latter.

Preferably, this laminated protecting band consists of hardened steel plates, at least two alternate inner layers of which have been tempered to a tool resisting hardness. The material is generally known to the trades as tool resisting jail and bank steel and can be tempered to a degree of hardness which will resist tool cutting to a very practical degree.

The front area of each drawer is similarly protected

by a laminated shield generally indicated by the numeral 57, which is located just inside the front skin 20 of each drawer and extends both vertically and transversely across the entire front. This shield 57 is also formed in five plies of metal with the two alternate inner layers being tempered to a tool resisting hardness and is preferably built up of a series of sections 57*a* to 57*f* inclusive as shown in Fig. 3. These sections are cut to fit into the drawer front in edgewise engagement and are spot welded or tack welded as at 58, at selected points so as to form a composite plate which completely overlies the locking area. The plate 57 may be secured in place by providing a downturned flange 59 at the front edge of the web 22 of the drawer front as shown in Fig. 4, to which the plate is welded.

The primary purpose in forming the plate 57 in sections and spot welding or tack welding the sections together, is to provide a certain degree of flexibility or resilience to the plate, to increase its resistance to punching or driving into the file at these areas. This is accomplished without sacrificing any of the strength of the plate, and it will be obvious that it is far more difficult for a punch or drill to attack a plate having lateral resilience or flexiblity, than a rigid one piece plate.

Furthermore, the assembly of this plate in sections, provides a certain degree of manufacturing convenience due to the necessity to accommodate the various elements of the locking mechanism.

In order to prevent tool entrance into the horizontal spaces between the super-imposed drawers, transverse strips 60, also laminated in five plies, are provided at the forward extremity of the spaced partitions 18 of each drawer receiving recess. As seen in Fig. 4, these plates 60 are located immediately in front of the area containing the spring pressed plungers 47.

It will thus be seen that a file cabinet constructed in accordance with the present invention is practically inaccessible to unauthorized tampering. The front faces of each of the drawers is shielded by the plates 57, which completely cover the locking mechanisms, and the lateral edges of the drawers are protected by the surrounding band 56.

From the foregoing it is believed that the invention may be readily understood by those skilled in the art without further description, it being borne in mind that numerous changes may be made in the details of construction without departing from the spirit of the invention as set forth in the following claims.

I claim:

1. In a security file, including a cabinet, at least one sliding drawer, the front of said drawer having forward and rear parallelly spaced walls defining a lock and bolt receiving compartment, and a lock mechanism within said lock and bolt receiving compartment of said drawer, a resilient protecting shield comprising a plate formed of a series of contiguous abutting sections of laminated tool resistant metal tack welded together at spaced points along their abutting edges to form an integral structure having lateral resilience and flexibility and extending entirely across the inner surface of the forward wall of said lock and bolt receiving compartment of said drawer and overlying the lock mechanism.

2. In a security file, including a cabinet, at least one drawer slidably mounted in an opening in the cabinet, the front of each drawer having forward and rear parallelly spaced walls defining a lock and bolt receiving compartment, and a lock and bolt mechanism in said compartment, a resilient protecting shield assembly comprising a plate formed of a series of contiguous abutting sections of laminated tool resistant metal, spot welded together at spaced points along their abutting edges to form a composite structure having lateral resilience and flexibility extending entirely across the inner surface of the forward wall of said compartment, overlying the lock and bolt mechanism and a band of laminated tool resistant metal

laterally surrounding the front portion of said cabinet adjacent the drawer receiving opening therein and extending rearwardly from the extreme front edge of said cabinet for a distance to provide an encircling shield which intersects the plane of both walls of said compartment when the drawer is in closed position.

3. In a security file, including a cabinet, a series of superimposed drawer receiver openings in said cabinet, a drawer slidably mounted in each of said openings, the front of each drawer having forward and rear parallelly spaced walls defining a lock and bolt receiving compartment, and a lock and bolt mechanism in the lock and bolt receiving compartment of each said drawer, said drawer receiving openings being separated by horizontal partitions, a protecting shield assembly comprising a plate of laminated tool resistant metal extending entirely across the inner surface of the forward wall of said lock and bolt receiving compartment of each of said drawers, overlying the respective lock and bolt mechanism, a band of laminated tool resistant metal laterally surrounding the

front portion of said cabinet adjacent the drawer receiving openings therein, and extending rearwardly from the extreme front edge of said cabinet for a distance to provide an encircling shield which intersects the planes of both walls of said compartments when the drawers are in closed position, and laminated tool resistant metal plates extending vertically across each horizontal partition.

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