Sept. 6, 1932. F. B. PETERS 1,875,488

BULLET RESISTING CABINET

Filed June 6, 1931 3 Sheets-Sheet 1

Fig. 1

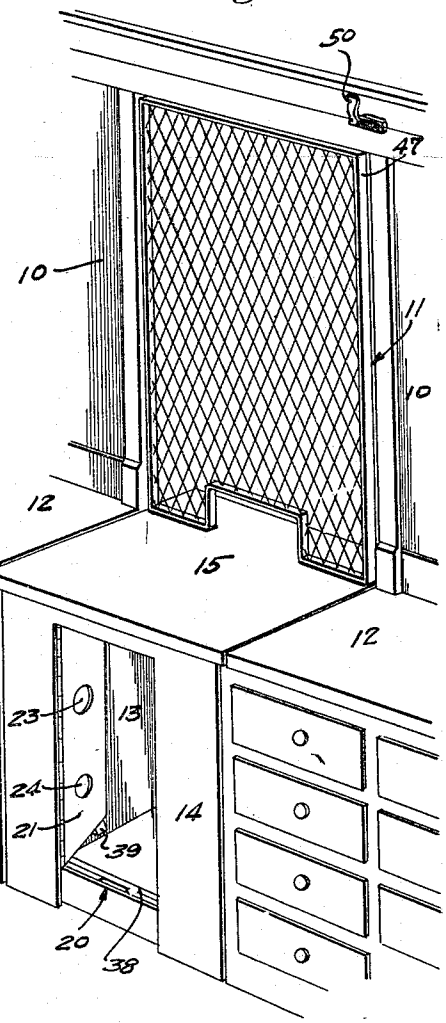
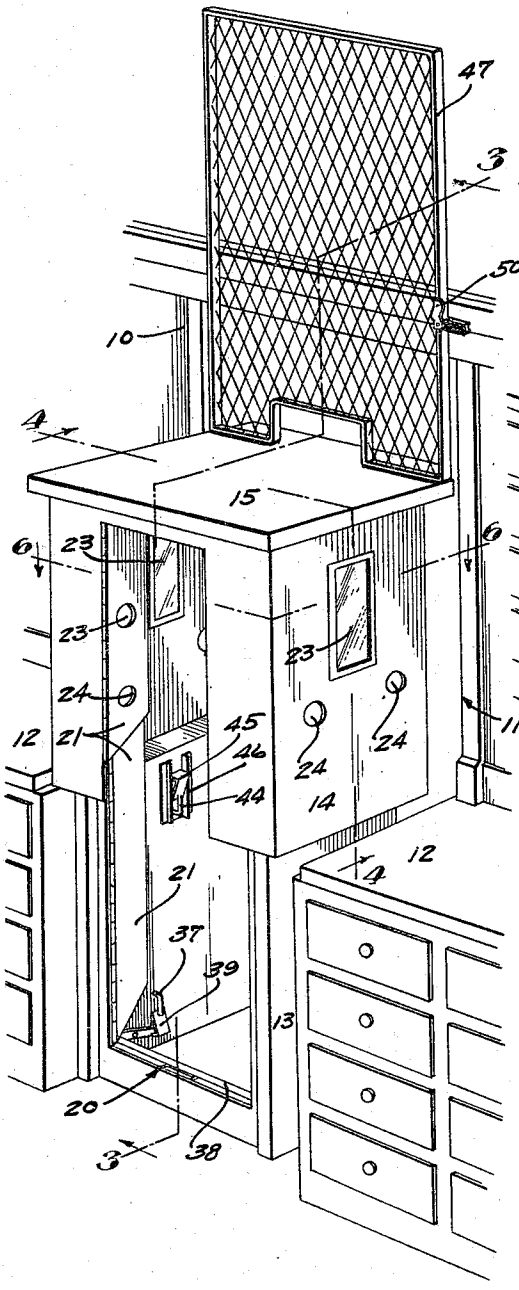


Fig. 2



Inventor
Frank B. Peters
By his Attorneys
Merchant and Evans

Sept. 6, 1932. F. B. PETERS 1,875,488

BULLET RESISTING CABINET

Filed June 6, 1931 3 Sheets-Sheet 2

Fig. 3

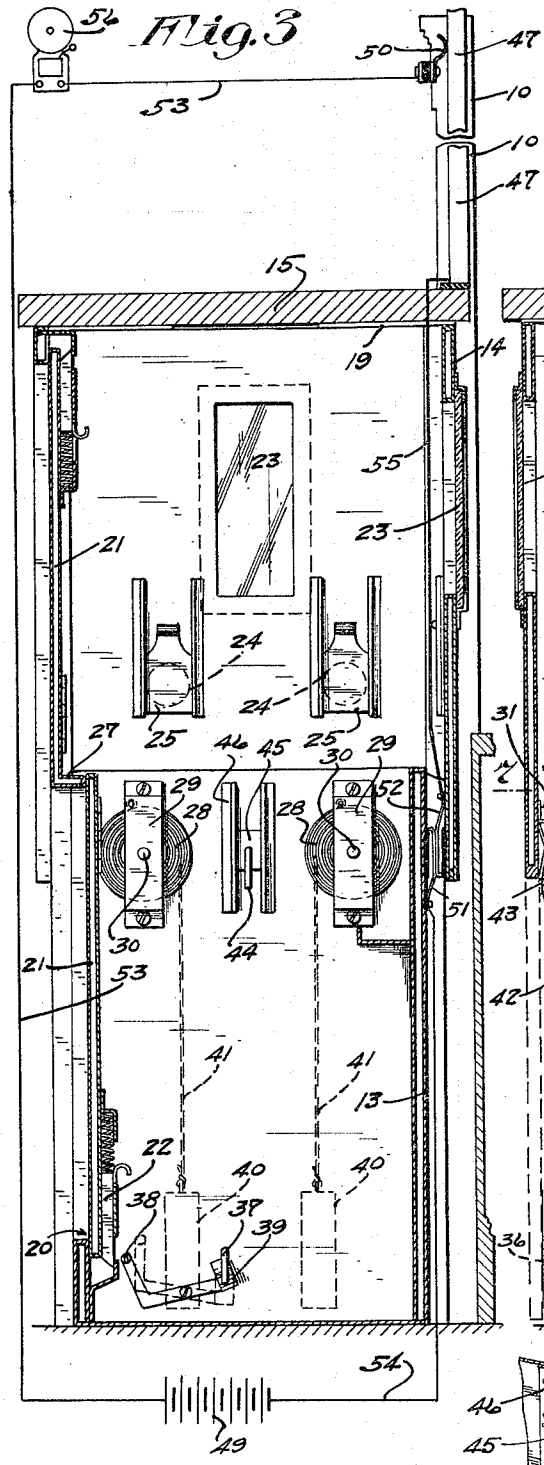


Fig. 4

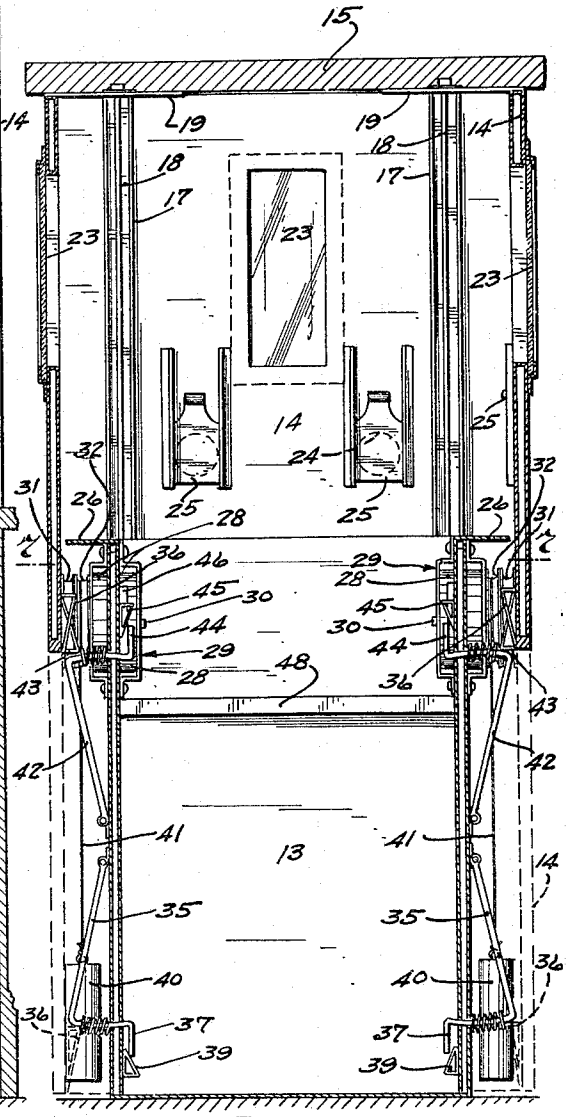
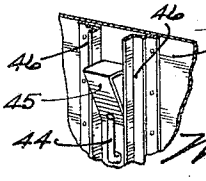


Fig. 5



Inventor
Frank B. Peters
By his Attorneys
Merchant and Kilgore

Sept. 6, 1932. F. B. PETERS 1,875,488

BULLET RESISTING CABINET

Filed June 6, 1931 3 Sheets-Sheet 3

Fig. 6

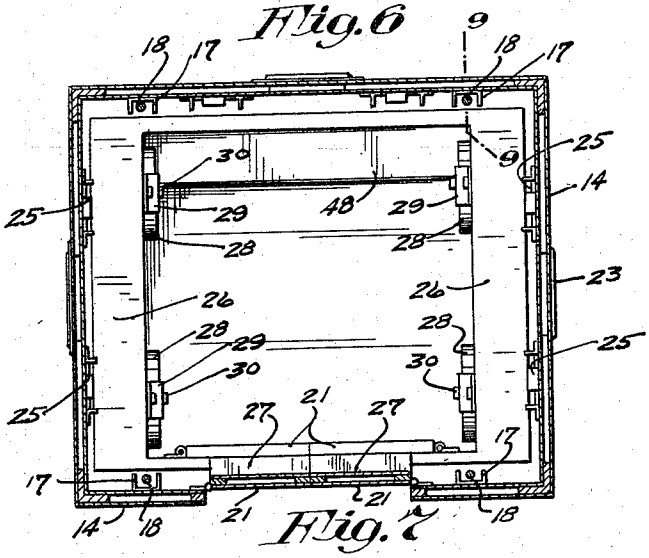


Fig. 7

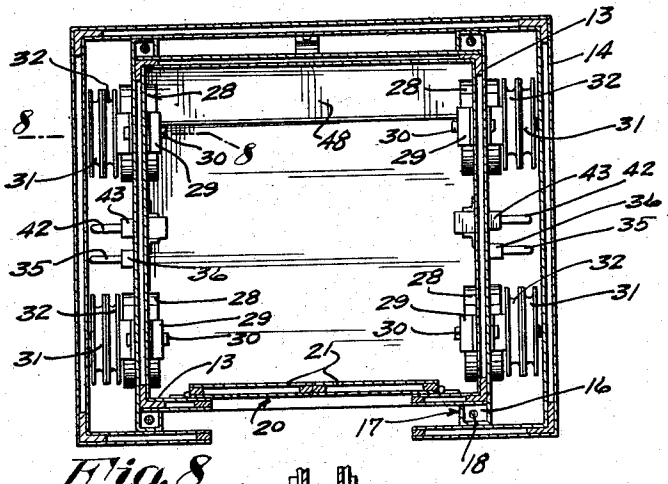


Fig. 8

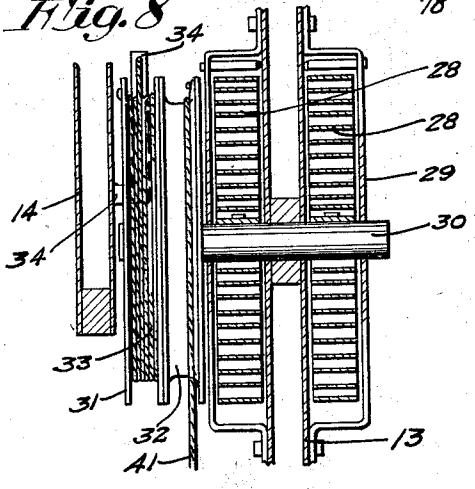
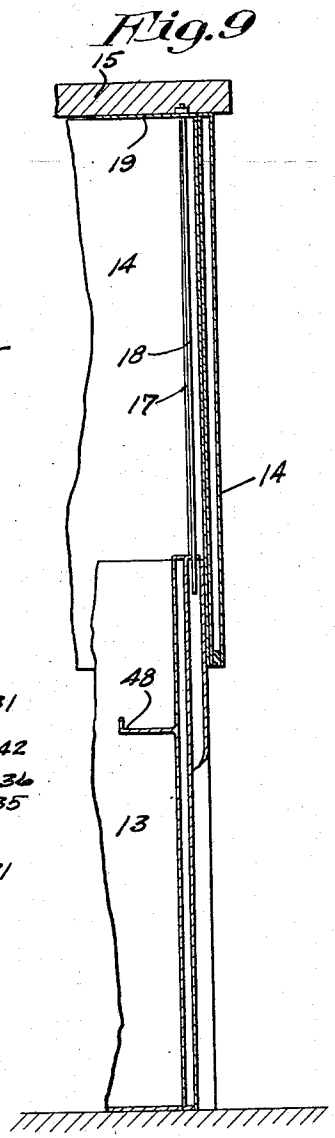


Fig. 9



Inventor
Frank B. Peters
By his Attorneys
Merchant and Kenyon

Patented Sept. 6, 1932

1,875,488

UNITED STATES PATENT OFFICE

FRANK B. PETERS, OF MINNEAPOLIS, MINNESOTA

BULLET-RESISTING CABINET

Application filed June 6, 1931. Serial No. 542,569.

My present invention relates to means for protecting banks and the like for the deposit of valuables against a daylight hold-up by a bandit.

The present invention provides a bullet-resisting vertically extensible cabinet that is normally retracted and, in its preferred form, forms a part of the office fixtures. This cabinet when extended forms a compartment in which a teller or other person may stand and is provided with an entrance door, bullet-resisting transparent inserts and normally closed gun ports. Power means is provided for instantly extending the cabinet which is normally held inactive by manually-controlled means that is within easy reach of a teller or other person working at the cabinet.

In case of a hold-up the person working at the cabinet simply releases the power means which instantly extends the cabinet and permits the person to enter the cabinet and close the door. The person in the bullet-resisting cabinet has a bandit at a decided disadvantage and may turn the tables on him.

To the above end, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a perspective view showing the invention embodied in the counter structure of a teller's cage fragmentarily illustrated;

Fig. 2 is a view corresponding to Fig. 1 but showing the cabinet extended;

Figs. 3 and 4 are views principally in vertical section taken on the lines 3—3 and 4—4 of Fig. 2;

Fig. 5 is a fragmentary perspective view of the lock for one of the upper catches;

Figs. 6 and 7 are views principally in horizontal section taken on the lines 6—6 and 7—7 of Fig. 2;

Fig. 8 is a fragmentary detail view with some parts sectioned on the line 8—8 of Fig. 7, on an enlarged scale; and

Fig. 9 is a fragmentary detail view in vertical section taken on the line 9—9 of Fig. 6.

The invention, as shown, forms a part of a teller's cage 10 having a wicket opening 11 and a counter structure 12 in which is a gap below said wicket opening.

The bullet-resisting cabinet is fitted in the gap in the counter structure 12 and forms a part of said structure. This cabinet, as shown, is rectangular in cross-section and comprises a fixed base section 13, which rests on the floor, and a vertically movable top section 14 having a cover 15 that is normally flush with the top of the counter structure 12 and forms a part thereof. Each cabinet section 13—14 is made up of connected inner and outer spaced shells of bullet-resisting steel.

The upper cabinet section 14 is guided during its raising and lowering movements and held in assembled relation with the base section 13 by four internal vertical track rails 16 on the base section 13 at the corners thereof and external channeled ways 17 on the front and back of the upper cabinet section 14 and into which ways the rails 16 loosely extend. The upper cabinet section 14 is further guided during its raising and lowering movements by four upright guide rods 18 which extend longitudinally in the ways 17 and are anchored at their upper ends to corner gussets 19 in the upper corners of the cabinet top section 14. These guide rods 18 extend longitudinally into the hollow track rails 16 from the upper ends thereof and work endwise in bearings therefore in said ends.

Formed in the backs of the cabinet sections 13—14 is a door opening 20 and a door 21 for said opening comprises a pair of sections hinged to each cabinet section 13—14. Spring latches 22 are provided for holding the sections of the door 21 closed. These latches 22 include spring-projected bolts that are automatically retracted by the closing of the door and snap into operative positions when the door sections are closed to lock the same and can only be released from the inside of the cabinet. The sections of the door 21 are constructed of the same material and in the same manner as the walls of the cabinet.

In the front and sides of the upper cabinet section 14 and in the upper sections of the

door 21 are transparent inserts 23 in the form of bullet-resisting glass. Closely associated with each transparent insert 23 are gun ports 24 normally closed by slides 25 on the inside of the cabinet. These slides 25 are mounted in ways for vertical sliding movement, are gravity closed and can be opened only from the inside of the cabinet.

Formed on the upper end of the base section 13 are outturned horizontal flanges 26 which form relatively tight joints with the top section 14. Horizontal joint flanges 27 on the lower ends of the upper sections of the door 21 form relatively tight joints with the sections of the door 21 hinged to the base section 13.

As previously stated, the top section 14 is normally in its lowered position and the top 15 thereof used as a counter at the wicket opening 11. Manually-controlled mechanism is provided for instantly raising the top section 14 in case of a hold-up so that a person working at the cabinet may enter the same before a bandit has time to shoot. This raising mechanism must lift the top section 14 at a very fast speed and includes, as shown, four pairs of spiral springs 28 mounted in pairs of brackets 29. These pairs of brackets 29 are secured to the base section 13 at the four corners thereof with the brackets of each pair on opposite sides of the shell of said section. The outer ends of each pair of springs 28 are anchored to the respective pair of brackets 29 and their inner ends are attached to a short shaft 30 which extends axially through said pair of springs and is journaled in said brackets and the shell of the base section 14, see Fig. 8.

Fixed on each shaft 30 between the two sections 13—14 is an outer grooved sheave 31 and an inner grooved sheave 32. Cables 33 having one of their ends attached to the sheaves 31 are arranged to be wound thereon or unwound therefrom. The other ends of the cables 33 are attached to brackets 34 on the top section 14 near the bottom thereof. The arrangement of the cables 33 is such that a downward movement of the upper section 14 on the base section 13 will unwind said cables from the sheaves 31 and place the pairs of springs 28 under tension. When the upper section 14 is released from its lower position the tensioned springs 28 will wind the cables 33 on the sheaves 31 and lift the top section 14 at a very fast speed.

To hold the top section 14 in its lowered position against the lifting action of the springs 28 a pair of lower spring latches 35 and cooperating lock lugs 36 having cam surfaces are provided. These latches 35 are hinged one to each side of the base section 13 and the lock lugs 36 are secured to the top section 14. The cam surfaces on the lock lugs 36 are arranged to move the latches 35 out of the paths of movement of said lugs during the downward movement of the top section 14 and said latches are arranged to snap over said lugs when said lugs have passed the latches 35 and hold the top section in its lowered position. The free end portions of the latches 35 work in apertures in the shell of the base section 13 and have within said section depending cam fingers 37.

To operate the spring latches 35 and release the lock lugs 36 there is provided a foot-actuated bail 38 which extends transversely through the base section 13 just below the door opening 20 and near the back of said cabinet. The arms of the bail 38 are intermediately pivoted to the sides of the base section 13 and have on their outer ends wedge blocks 39 which extend between the inner shell of the base section 13 and the cam fingers 37, see Fig. 4. Normally the bail 38 is raised with the blocks 39 which are just entering between the inner shell of the base section 13 and the cam fingers 37 so that a downward movement of said bail will lift the blocks 39 and retract the spring latches 35 to release the same from the lock lugs 36. Obviously, a teller standing back of the cabinet simply has to place his foot through the door opening 20 and operate the bail 38 by a downward pressure thereon to release the latches 35 and cause the springs 28 to lift the top section 14. This operation may be performed without any apparent movement of the person in the cage 10 to a person in the front of the cabinet.

Counter-weights 40 are provided to assist the springs 28 in lifting the top section 14. These counter-weights 40 are attached to the lower ends of cables 41, the upper ends of which are attached to the sheaves 32 with said cables arranged to be wound on said sheaves or unwound therefrom. When the top section 14 is lowered the cables 41 are wound on the sheaves 32 and hold the counter-weights 40 raised.

To prevent the raised top section 14 from being lowered while there is a person therein, there is provided a pair of spring latches 42 and cooperating lock lugs 43 having cam surfaces. These latches 42 and lock lugs 43 are identical with the latches 35 and lock lugs 36 except they project in opposite directions and the cam fingers 44 on the latches 42 project upward. During the upward movement of the top section 14 the lock lugs 43 cam the latches 42 out of their paths of movement and after said lugs have passed the latches 42 said latches snap thereunder and lock the upper section 14 in its raised position.

To release the latches 42 from the inside of the cabinet wedge blocks 45 are slidably mounted in ways 46 on the shell of the base section 13. These wedge blocks 45 are frictionally held in inoperative positions in which they are just entering between the shell of the base section 13 and cam fingers 44, see Fig. 2. Downward pressure on the blocks 45 will retract the latches 43 from under the lock

lugs 43 and thereby release the top section 14 and permit the same to be lowered. While the latches 35 and 42 are on the outside of the base section 13 they are covered by the counter structure 12 so that they can not be tampered with.

A wicket 47 for the wicket opening 11 is secured to the top 15 for movement with the upper section 14 during its raising or lowering movements. The purpose of moving the wicket 47 with the top section 14 is to prevent a person from poking a stick between the wicket, in case the same was fixed, and top of the cabinet to prevent the cabinet from being raised.

Within the base section 13 is a shelf 48 on which may be kept firearms.

To prevent a bandit from scaling the wicket 47, when the upper section 14 in the cabinet is raised, the same is energized by means of a high tension circuit. This circuit, as shown, includes a battery 49, a fixed contact 50, which is engaged by the metallic wicket 47 when the upper section 14 is raised, a pair of cooperating contacts 51 and 52, the former of which is on the base section 13 and the latter of which is on the upper section 14 and movable therewith into and out of engagement with the contact 51. A lead wire 53 connects the contact 50 to one side of the battery 49, a lead wire 54 connects the contact 51 with the other side of the battery, and a lead wire 55 connects the contact 52 with the bottom of the wicket 47 which is insulated from the top 15. When the top section 14 is lowered the wicket 47 is out of engagement with the contact 50 and the contact 52 is out of engagement with the contact 51.

From the above description it is evident that in case of a hold-up it is only necessary for the teller standing back of the cabinet to operate the bail 38 and cause the upper section 14 of the cabinet to be projected, the doors of which are always open. The teller then enters the cabinet and closes the sections of the door 21 which are automatically locked by the catches 22.

The glass inserts 23 are so located as to give the teller in the cabinet a clear view of the banking room completely around the cabinet and the slides 25 may be opened to permit the teller to fire through the ports 24.

Interposed in the lead wire 53 is an electric bell 56 for sounding an alarm when the circuit is closed by the movement of the top section 14 to its uppermost position.

What I claim is:

1. A bullet-resisting extensible cabinet comprising a base section and a vertically movable top section telescoped onto the base section, said cabinet having a door opening formed in part in each of the two sections thereof, a door section for the door opening in each section of the cabinet and mounted on the respective section thereof, power means for raising the top section, and manually-controlled means for setting the power means into action.

2. A bullet-resisting extensible cabinet that is normally collapsed and comprises a base section and a vertically movable top section telescoped onto the base section, said top section when lowered affords a work table, power means under strain to raise the top section, and a manually-controlled trip normally holding the top section in its lowermost position and against the action of the power means.

3. A bullet-resisting extensible cabinet that is normally collapsed and comprises a base section and a vertically movable top section telescoped onto the base section, means for lifting the top section comprising a plurality of sheaves mounted on the base section, cables wound on the sheaves and having their outer ends attached to the top section and spiral springs for operating the sheaves and arranged to be placed under tension by a downward movement of the top section from its raised position to unwind the cables from the sheaves, a catch for holding the top section in its lowered position and against the action of the tension springs, and a manually-operated trip for releasing the catch.

4. The structure defined in claim 3 which further includes counterweight mechanism arranged to assist the spring in raising the top section.

5. A bullet-resisting extensible cabinet that is normally collapsed and comprises a base section and a vertically movable top section telescoped onto the base section, said top section affords a work table when lowered, power means under strain to raise the top section, a catch for holding the top section in its lowered position and against the action of the power means, and manually-operated means for releasing the catch.

6. A bullet-resisting extensible cabinet that is normally collapsed and comprises a base section and a vertically movable top section telescoped onto the base section, said top section affords a work table when lowered, power means under strain to raise the top section, a catch for holding the top section in its lowered position and against the action of the power means, and a manually set trip arranged to be manually-operated to release the catch.

7. The structure defined in claim 6 in which the catch is arranged to be automatically operated by the top section, during its lowering movement to hold said top section, without affecting the set trip.

8. A bullet-resisting extensible cabinet that is normally collapsed and comprises a base section and a vertically movable top section telescoped onto the base section, a door opening formed in part in each of the two sections of the cabinet, the height of the door

opening being progressively increased during the vertical movement of the top section, a door section for the door opening in each section of the cabinet and mounted on said sections for opening and closing movements in all positions of the top section, and power means for raising the top section.

9. The structure defined in claim 8 which further includes an automatic means that prevents the top section from being lowered when raised.

10. The structure defined in claim 8 in which the top section affords a work table when lowered.

11. The structure defined in claim 8 in which the power means is under strain to lift the top section, and which structure further includes a catch for holding the top section against the lifting action of the power means, and a manually-controlled trip for releasing the catch.

12. The structure defined in claim 8 in which the power means for raising the top section of the cabinet is springs arranged to be placed under tension by a downward movement of the top section when raised, and which structure further includes a catch for holding the top section against the tension of the springs.

13. A bullet-resisting extensible cabinet that is normally collapsed and comprises a base section and a vertically movable top section telescoped onto the base section, means for lifting the top section comprising a plurality of sheaves mounted on the base section, cables arranged to be wound on the sheaves and having their outer ends attached to the top section of the cabinet, springs and counterweights for operating the sheaves to wind the cables thereon and lift the top section, said top section being operative on the cables during its lowering movement to unwind said cables from the sheaves and thereby rotate the sheaves and place the springs under tension and lift the counterweights, and a catch for holding the top section when lowering against the lifting action of the springs and counterweights.

In testimony whereof I affix my signature.

FRANK B. PETERS.