(No Model.) 2 Sheets—Sheet 1.

J. L. DE LONG.

ADJUSTABLE ARMOR FOR BANK COUNTERS.

No. 562,712. Patented June 23, 1896.

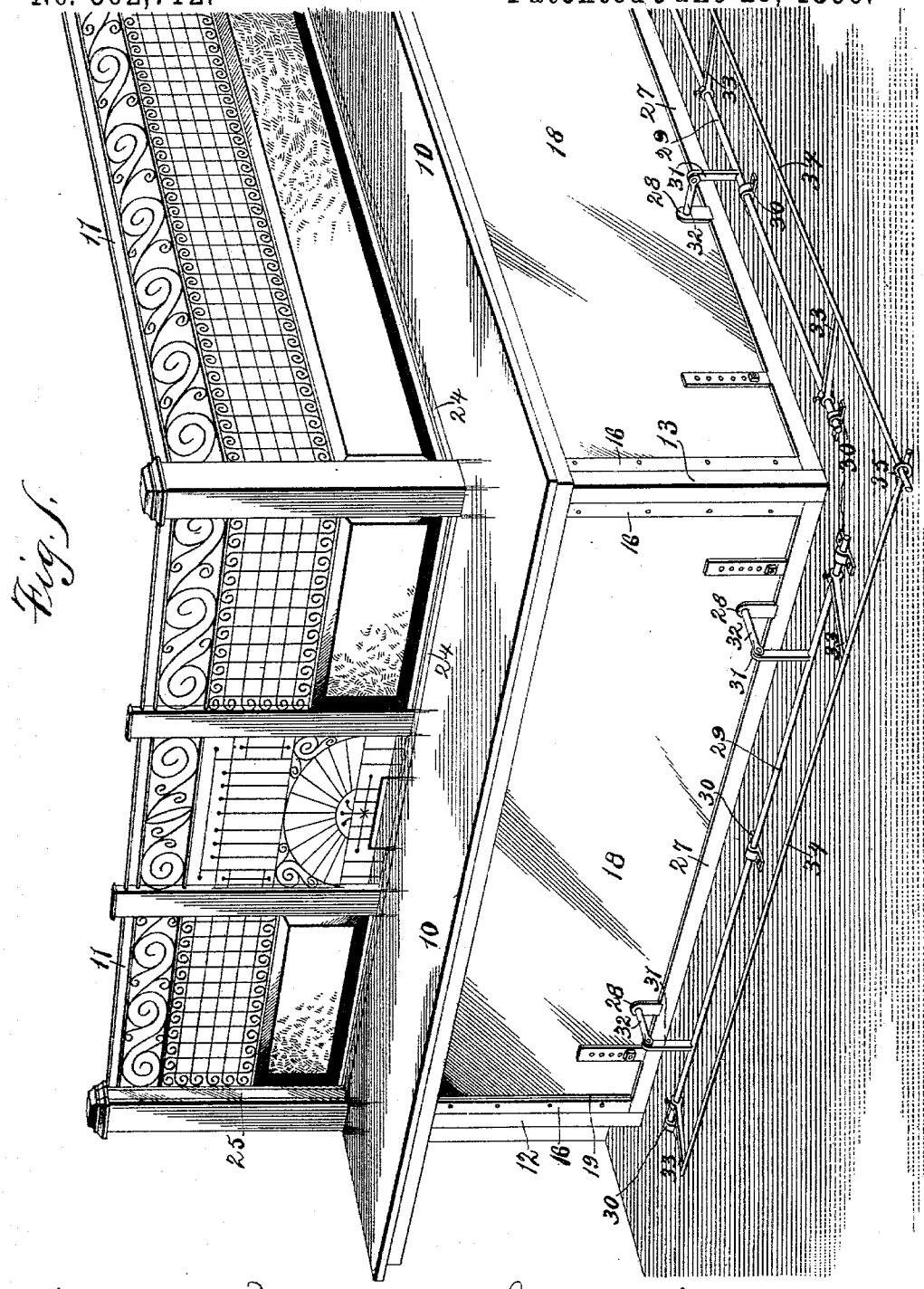

Fig. 1.

Witnesses:
W. J. Stanley.
S. C. Sweet.

Inventor. James L. DeLong.
By Thomas G. Orrig, Attorney.

ANDREW B. GRAHAM, PHOTO-LITHO. WASHINGTON D.C.

(No Model.) 2 Sheets—Sheet 2.

J. L. DE LONG.

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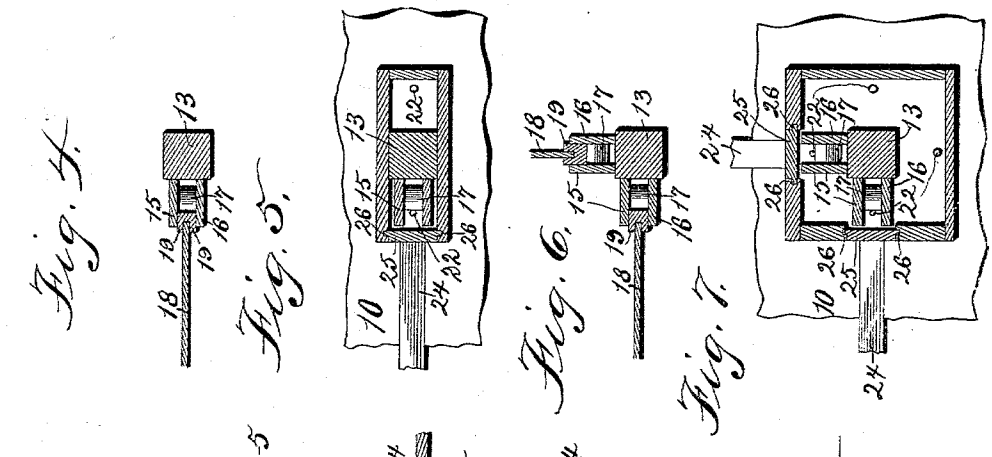

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

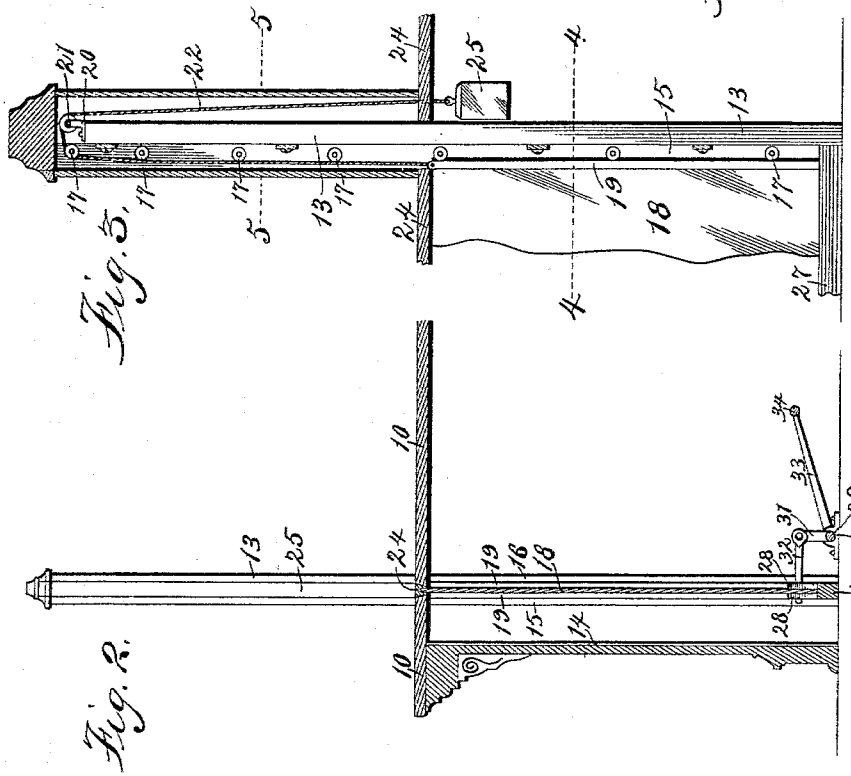

Fig. 3.

Fig. 2.

Witnesses:
W. J. Hanley.
S. C. Sweet.

Inventor: James L. De Long.
By Thomas G. Orwig. Attorney.

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UNITED STATES PATENT OFFICE.

JAMES L. DE LONG, OF DES MOINES, IOWA.

ADJUSTABLE ARMOR FOR BANK-COUNTERS.

SPECIFICATION forming part of Letters Patent No. 562,712, dated June 23, 1896.

Application filed July 26, 1895. Serial No. 557,240. (No model.)

To all whom it may concern:

Be it known that I, JAMES L. DE LONG, a citizen of the United States of America, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Adjustable Armor for Bank-Counters, of which the following is a specification.

The object of my invention is to provide improved means to serve as an armor against unwarranted and villianous attacks of persons of mercenary and criminal character intent upon burglary, robbery, or personal assault assisted by firearms or other deadly weapons.

My invention consists in the construction, arrangement, and combination of parts hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a perspective interior of a bank or office fixture to which my invention is applied. Fig. 2 is a transverse sectional elevation of the fixture, illustrating the positioning of some of the operative parts. Fig. 3 is a sectional elevation at right angles to Fig. 2. Fig. 4 is a sectional plan in detail on the line 4 4 of Fig. 3. Fig. 5 is a sectional plan in detail on the line 5 5 of Fig. 3. Fig. 6 is a sectional plan on the same line as Fig. 4, illustrating the application of my device at the corner of a fixture. Fig. 7 is a sectional plan on the same line as Fig. 5, illustrating the application of my device at the corner of a fixture.

In the construction of the apparatus as shown, the numeral 10 designates a counter, surmounted by a railing 11 and supported by posts 12 13, the post 13 forming a corner from which the counter extends at right angles. A metal plate or plates 14 is mounted beneath the counter 10 and extends to the floor, which plate forms a backing for the face of the counter and is impenetrable by ordinary deadly weapons, such as are employed by robbers and other persons intending to commit assault. The plate 14 is rigidly mounted and provides a stationary armor for the lower portion of the counter. Guides 15 16 are vertically positioned, in pairs, in vertical alinement with the railing 11 11, adjacent to the posts 12 13 and fixed thereto. Antifriction-rollers 17 are mounted between the guides forming each pair and are in vertical alinement. A metal plate 18 is provided of sufficient length to inclose the space between the posts 12 13. Sash-bars 19 19 are mounted on the opposite sides of the end portions of the plate 18 and fit between the guides 15 16. The ends of the metal plate 18 are in engagement with the antifriction-rollers 17, and the said rollers form antifriction-bearings between which the plates may be vertically reciprocated. Angle-plates 20 are mounted on the upper ends of the posts 12 13, and sheaves 21 are pivoted on said angle-plates. A cable 22 is provided for each end of the plate 18. One end of said cable is secured to the upper ends of the sash-bars 19. The bight of said cable rests upon the upper roller 17 and sheave 21, and a weight 23 is fixed to the end of said cable opposite to the plate. By this means provision is made for automatically elevating the plate 18 by the descent of the weights 23. The combined weight of the weights 23 exceed that of the plate 18.

A slot is formed in the counter 10 to permit the passage of the plate 18 through said counter, and a face-bar 24 is fixed to the upper edge of the plate 18. The face-bar 24 closes the slot in the counter when the plate 18 is in its lowest position, and is fitted to said slot so as to provide a uniform upper surface for the counter. The upper end portion of the posts 12 13 are incased and slots are formed in the casings in alinement with the slot in the counter. Grooves are formed in the casing opening to the slot, and a face-bar 25, having tongues 26 fitting said grooves, is mounted in the slot in said casing and rests upon the end of the face-bar 24. A base 27 is fixed to the lower portion of the counter, and ears 28 28 are fixed to, and vertically extended from, said base at the lower edge and at some distance from the side ends of the plate 18. The ears are separated sufficiently to permit the entrance of the lower edge of the plate 18, and alining apertures are formed in the ears and plate. A rock-shaft 29 is mounted in bearings 30, fixed to the floor or lower portion of the counter. A crank-arm 31 is fixed to and vertically extends from the central portion of the rock-shaft 29, and a locking-pin 32 is pivoted to the upper end of said crank-arm and longitudinally seated in the aper-

tures in the ears 28 and plate 18 to retain said plate in its lowest position. Crank-arms 33 33 are fixed to and extend obliquely rearwardly from the rock-shaft 29, and a pedal-bar 34 is horizontally positioned between and connects the said crank-arms 33. An arrangement of the rock-shafts and pedal-bars may be made as shown in Fig. 1, and the outer ends of the pedal-bars connected by a ring 35. Several pairs of the ears 28 and a corresponding number of the locking-pins 32 may be employed if desired.

In the practical operation of this device, upon the approach or unwarranted demand of a robber or other person exhibiting a palpable intent to assault, a person within the inclosure, formed in part by the counter, pedally depresses one of the pedal-bars 34, thus oscillating the rock-shaft 29, withdrawing the locking-pins 32, and permitting the rapid and forcible ascent of the plate 18 under the influence of the weights 23, the face-bars 24 25 rising with the plate 18. Upon the elevation of the plate 18, a shield is thereby interposed between the parties, which forms an armor or defence impenetrable by ordinary projectiles or cutting weapons.

Where two or more of the plates 18 are employed and connection is made by the rings 35, it will be observed that the said plates will be simultaneously elevated after a synchronous release by the depression of the pedal-bars in common, through the actuation of any one of said pedal-bars.

When two or more of the plates 18 are connected to a counter at right angles to each other, the guide-bars are arranged in pairs on the posts 12 13, as indicated in Figs. 6 and 7.

It is obvious that this device may be applied to an ordinary office desk or table and wherever applied and intelligently operated will afford a complete protection to the user pending the arrival of help or the securance of deadly weapons.

What I claim is—

1. An improved protected counter, comprising the counter-shelf 10, posts supporting said shelf, casings for said posts, a metal plate 14 rigidly mounted below said shelf and secured to said posts, a railing 11 mounted on and extending above the shelf, guides 15, 16, vertically positioned in pairs on the posts and alining with the railing, antifriction-rollers mounted between the guides, a metal plate 18 located between the posts and normally positioned below the shelf, passages or slots for the plate 18 in the post-casings and the shelf, sash-bars on the ends of the plate 18 fitting between the guides, a face-bar on the upper edge of the plate 18 fitting the slot in the shelf, face-bars 25 tongued and grooved in the post-casings and normally closing the passages or slots therein, angle-plates on the upper ends of the posts, sheaves pivoted on said angle-plates, cables run over said sheaves and fixed at the inner ends to the said sash-bars, weights suspended by the opposite ends of the cables, means for locking the plate 18 in its lowest position and pedally-operated tripping mechanism for releasing the lock and permitting the weights to elevate the plate through the passages and slots to a position above the shelf.

2. An improved protected counter, comprising the counter-shelf 10, posts supporting said shelf, casings for said posts, a metal plate 14 rigidly mounted below said shelf, a railing 11 mounted on and extending above the shelf, guides 15, 16, vertically positioned in pairs on the posts and alining with the railing, antifriction-rollers mounted between the guides, a metal plate 18 located between the posts and normally positioned below the shelf, passages or slots for the plate 18 in the post-casings and the shelf, sash-bars on the ends of the plate 18 fitting between the guides, a face-bar on the upper edge of the plate 18 fitting the slot in the shelf, face-bars 25 tongued and grooved in the post-casings and normally closing the passages or slots therein, angle-plates on the upper ends of the posts, sheaves pivoted on said angle-plates, cables run over said sheaves and fixed at the inner ends to the said sash-bars, weights suspended by the opposite ends of the cables, a base 27 rigidly positioned at the lower ends of the posts, ears fixed to said base and vertically extended in pairs therefrom, which ears embrace the lower edge of the plate 18 and have apertures registering with apertures in the plate, a rock-shaft 29 journaled in bearings 30 fixed to the floor, a crank-arm 31 on said rock-shaft, a locking-pin 32 pivoted at one end to the upper end of said crank-arm, and adapted to traverse the apertures in the ears and plate and lock the plate, crank-arms 33, 33, fixed to and extending obliquely rearwardly from the rock-shaft and a pedal-bar fixed to the outer ends of the latter said crank-arms.

JAMES L. DE LONG.

Witnesses:
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THOMAS G. ORWIG.