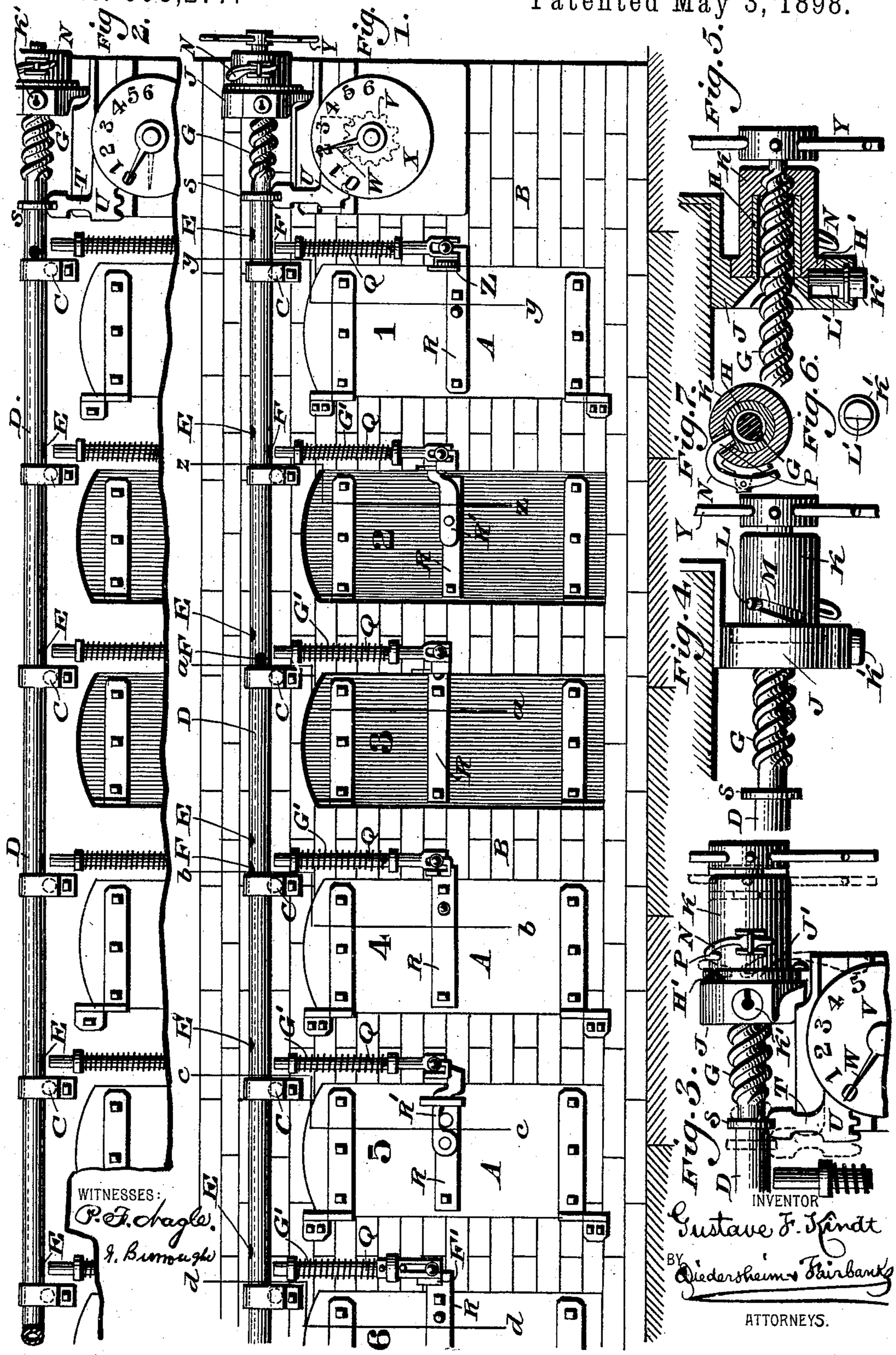
(No Model.)

2 Sheets—Sheet 1.

G. F. KINDT.

LOCK FOR PRISON CELLS.

No. 603,277. Patented May 3, 1898.



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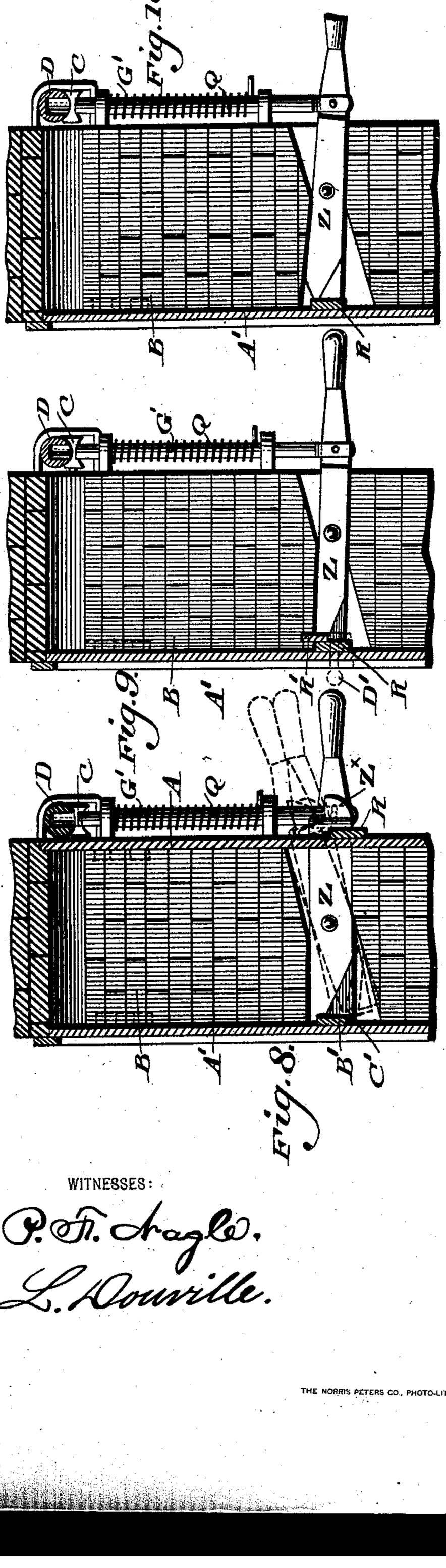

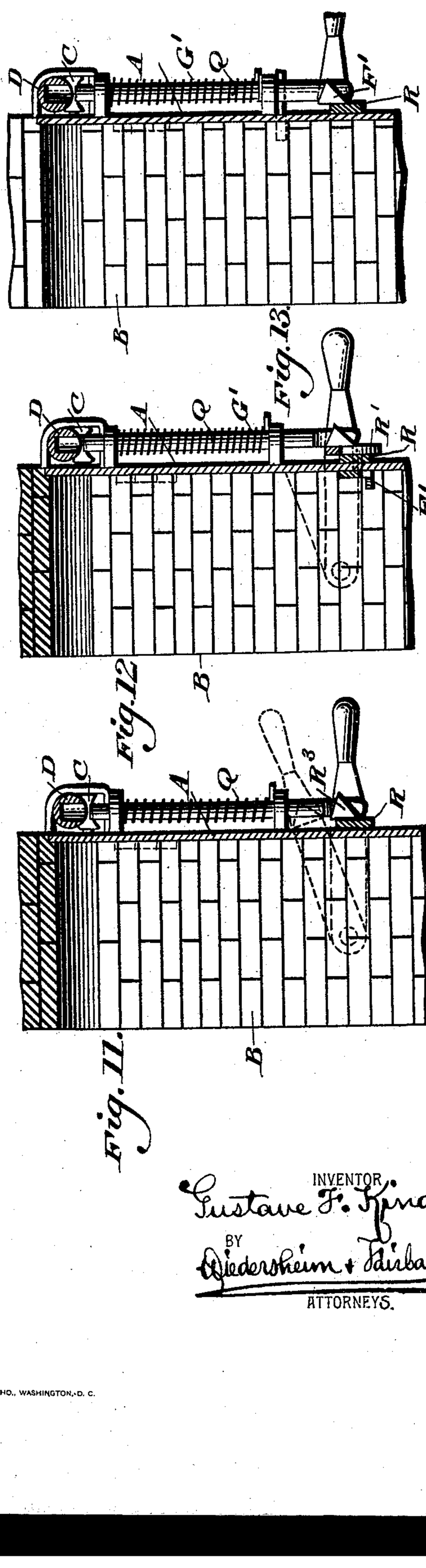

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UNITED STATES PATENT OFFICE.

GUSTAVE F. KINDT, OF WOODBURY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO CHARLES E. VON STEGE, OF SAME PLACE.

LOCK FOR PRISON-CELLS.

SPECIFICATION forming part of Letters Patent No. 603,277, dated May 3, 1898.

Application filed January 28, 1898. Serial No. 668,264. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE F. KINDT, a subject of the King of Belgium, (having resided in the United States one year last past and having declared my intention of becoming a citizen thereof,) residing at Woodbury, in the county of Gloucester, State of New Jersey, have invented a new and useful Improvement in a Combination Lever-Lock for Prison-Cells, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a prison provided with locking-bolts for the doors of the cells thereof, the same being controlled by a rod or shaft in which are recesses in a right line at intervals, into which all of said bolts may be shot, so that the several doors may be opened, said rod or shaft having also recesses differentially arranged, so that only a single bolt can enter a recess at one time, whereby but one door may be unlocked, and a single rod or shaft accomplishes what has heretofore required two bars.

It also consists of a register for indicating when the rod or shaft is properly set to effect the opening of all of the doors or of a single door or all of the doors that are locked, said register having an index-finger whose axis is operated by said shaft by means of an intermediate bar which engages with said axis and is freely connected with said shaft, so that the rotary motions of the latter are not imparted to said bar.

It also consists of means for locking the collar in which the rod or shaft is fitted, so that when said collar is shifted and then locked the rod is so disposed that its recesses are out of register with the bolts and said collar cannot be returned to its normal position until unlocked.

Figure 1 represents a front elevation of locking mechanism for a prison embodying my invention. Fig. 2 represents a view of a portion thereof, showing the parts in different positions. Figs. 3 and 4 represent side elevations of detached portions on an enlarged scale. Fig. 5 represents a longitudinal horizontal section of a detached portion. Fig. 6 represents an end view of the lock employed for the shifting collar of the device. Fig. 7 represents a transverse section on line $x\,x$, Fig. 2, on an enlarged scale. Figs. 8, 9, 10, 11, 12, and 13 represent vertical sections on lines $y\,y$, $z\,z$, $a\,a$, $b\,b$, $c\,c$, and $d\,d$, respectively, Fig. 2.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A A′ designate the doors of the cells of a prison, and B designates the wall on which said doors are hinged, said doors being respectively outer and inner ones. Mounted on said walls B, above the outer doors, are the rollers C, which are movably supported on a horizontally-arranged sliding rod or shaft D, in which are the recesses E, in the same right line with each other, and the recesses F, disposed in an irregular line along said rod D. One end of said rod is of the form of a screw or has screw-threads thereon, as at G, the same passing freely through the sleeve H, which is secured to the bracket J, supported on the wall B, said screw also being fitted in threads in the end of a rotatable collar K, which latter freely encircles said sleeve H and is also supported on the bracket J. In order to connect said collar with said sleeve, the latter is provided with the pin L, which projects radially therefrom and enters the spirally-extending slot M in the collar K.

N designates a lever which is mounted on the collar K and has an arm P, which is adapted to pass through an opening in said collar and enter an opening in the sleeve H for coupling said collar with said sleeve, it being noticed that when the lever is operated, in the present case by an upward motion, rotation is imparted to said collar, and owing to the pin L and slot M sliding motion is imparted to said collar, so that sliding and rotary motions are also imparted to the rod D, whereby the several recesses E are placed in register with bolts Q, the latter being arranged in vertical direction and mounted on the wall B adjacent to the doors of the cells and having connected with them or being engaged by the latches of the doors A and A′, as will be hereinafter more fully described.

On the rod D, adjacent to the screw G, is the collar S, which freely engages with the bifurcated arm T of the rack-bar U, the latter

meshing with the pinion V, (shown in dotted lines in Fig. 1,) the axis of said pin carrying the index W, which is adapted to sweep over the dial X, which is mounted on the wall B and has on the face thereof the numbers corresponding to those of the cells or doors thereof and also another number, which is in the present case "0," it being noticed that the end of the shaft has thereon the crank-wheel Y, whereby said rod may be operated independently of the action of the collar K, so as to place the index W at the number of the cell to be opened; but when all of the cells are to be opened said index or finger may be placed at "0" by the operation of the collar K.

In Fig. 8 the bolt Q is connected with the latch Z, the nose Z′ of which is adapted to engage with the locking-bar of the front doors of the cell No. 1 and also with the locking-bar B′ on the rear or inner door A′ in said figure, it being noticed that said latch Z has a shoulder C′ on its inner end, which is of such height that when the handle end of the latch Z is raised to partial extent it will clear the bar R of the front door without entirely clearing the bar B′ of the inner door, and thus said inner door will not be opened. When, however, the latch Z is raised to full extent, the shoulder C′ entirely clears said bar B′, when the inner door may be opened. This feature is serviceable when desperate characters are confined in cell No. 1, and it is important not to simultaneously open both doors thereof.

In Fig. 9 the latch Z is shown as locking only an inner door, which is that of cell No. 2, said door having a bar R, with which said latch engages, and also having a latch R′, which may be raised by the knob D′ by the prisoner, who, however, has no control over the latch Z.

In Fig. 10, which refers to cell No. 3, the bar R on the inner door is adapted to be engaged by the latch Z and cannot be released from within the cell, such release, however, being occasioned when the respective rod Q of said latch C is properly operated by the prison keeper or attendant.

In Fig. 11, which refers to cell No. 4, the outer door is provided with the bar R, the same being controlled by a nose R^3 on the bolt Q.

In Fig. 12, which refers to cell No. 5, the bar R on the front door is controlled by the nose on the adjacent bolt. On said bar is mounted the latch R′, which has connected with it the handle E′ on the inside of said door, whereby said latch R′ may be raised by the prisoner from within after said bolt Q has been properly raised from without.

In Fig. 13, which refers to cell No. 6, the bolt is provided with a nose F′, which engages directly with the securing-bar R on the front door.

The operation for opening all of the doors or individual doors of the cells is as follows: When it is desired to open all of the doors, the lever N is raised, whereby the rod D is shifted, and the rack U follows the same, and owing to the predetermined adjustment the index or finger W stands at "0," as shown in Fig. 2. This places the recesses E in the rod D directly over the bolts Q, and thus each bolt may be raised, its upper end entering the respective recess E. The movement of the bolts releases the noses thereof from the contiguous parts or moves the several latches, and thus the doors are unlocked and all of them may be opened. After the doors are closed the latches R′ and bars are again engaged, it being noticed that the bolts Q return to their normal position by the action of the springs G′, suitably applied to said bolts. The lever N is now lowered, whereby the rod D receives rotary and sliding motions and places the recesses E out of registry with the bolts Q, so that if the latter are raised they will strike the solid portions of said rod D without ability to enter said recesses, and so are prevented from being raised, whereby the doors remain in locked condition. In this case the index is moved by the operation of the rack and removed entirely away from either of the figures on the dial, say to that shown in dotted lines in Fig. 2, thus indicating that all of the doors are locked. Should, however, it be desired to open one of the doors, say that of cell No. 2, the wheel Y is rotated, whereby the rod D also receives rotation as well as sliding movement, and when the index or finger points at "2," as in Fig. 1, it will be seen that one of the openings F is in registry with the bolts Q of said cell No. 2. Consequently the bolt of cell No. 2 may be raised and directed into the opening F, and thus the nose Z′ of the latch Z of said cell may be raised by the keeper or attendant, so as to release the locking-bar R, and consequently permit the door of cell No. 2 to be opened. When the door of cell No. 2 is returned, it is again locked by the latch Z, the operation being the same should either of the other cells be opened, excepting that the rod D is operated by the wheel or arm Y until the index points to the number of the cell it is desired to open.

After a door is closed the rod is operated by the wheel Y until the index or finger is removed from either of the numbers of the dial, thus again placing all of the recesses E and F out of registry with the bolts Q.

In order to prevent operation of the rod, provision is made to lock the same, for which purpose the recess H′ is formed in the flange or end J′ of the collar K within the bracket J, and the latter has the lock K′ mounted thereon, the bolt L′ thereof having its nose of the form of the segment of a cylinder, (see Figs. 5 and 6,) which, when the collar is rotated by drawing the lever downwardly and the bolt is turned in one direction, enters the recess H′, and consequently prevents the rotation of the collar K and locking said collar in its shifted position.

The motion of the collar has destroyed the

adjustment of the rod D with reference to the registry of the different openings thereof with the respective bolts Q, and the rotation of the rod D by the wheel Y will not place the openings in register, for the screw G of said rod engages with the threaded opening in the collar K, from which point the rotation of said rod is effected, and the position of said collar determines whether the rod can be moved to the extent indicated by the numbers on the dial in order to cause the registry of one or all of the bolts with the respective opening or openings in the rod. When, however, the bolt L′ is turned so that it is semicylindrical, part is withdrawn from the recess H′ in the collar, the latter is unlocked, and the lever N may be raised, so as to place said collar in such position that by its operation the rod is set so that the index stands at "0," indicating that all of the doors may be opened or that said rod may be operated by the wheel Y until the index stands at one of the other numbers, indicating that a single door may be opened.

If desired, the different stories or floors of a prison may be furnished with the locking mechanism hereinbefore described, in which case the several shafts or collars may be geared together, so as to be operated by one attendant, if desired.

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

1. A rod or shaft having thereon a series of recesses the members thereof extending in a coincident line, and another series of recesses thereon having its members extending in an irregular line and bolts for doors, adapted to enter all of the first-named recesses at one time, or either bolt to enter only one of the second-named recesses under a different adjustment of said shaft.

2. A rod or shaft having thereon series of recesses, one series thereof having its members extending in a coincident line, and the other series having its members extend in an irregular line, bolts adapted to engage said recesses, under a different adjustment of said shaft, and a register connected with said shaft, whereby the latter may be set to cause the registration of the recesses with the respective bolts.

3. In a lock for cells, a shaft in combination with means for imparting both rotary and sliding motions thereto, said shaft being provided with different series of recesses, the members of one series extending in a coincident line and those of the other series extending in an irregular line.

4. In a lock for prison-cells, a rotatable shaft having a recess thereon, a screw on said shaft, a shifting collar in which said screw is mounted, a sleeve on which said collar is mounted, and a lever on said collar which is adapted to engage said sleeve.

5. In a lock for prison-cells, a rotatable shaft having a recess thereon, a screw on said shaft, a shifting collar in which said screw is mounted and means for locking said collar.

6. In a lock for a prison-cell, a rotatable shaft with recesses therein, means for shifting said shaft in longitudinal direction, a series of bolts adapted to enter said recesses and bars or latches for said doors connected with said bolts, said recesses being in different series, the members of one series extending in a coincident line, and those of the other series extending in an irregular line.

7. In a lock for a prison-cell, a rotatable shaft with recesses therein, means for shifting said shaft in longitudinal direction, a series of bolts adapted to enter said recesses and bars or latches for said doors connected with said bolts, in combination with a register of the number of cells having the axis of its index connected with said shaft by means of a sliding bar which engages with said axis and is freely connected with said rotatable shaft.

8. In a lock for a cell having outer and inner doors, a bolt, a shaft for controlling said bolt, and a latch operated by said bolt, in combination with locking-bars on said outer and inner doors engaged by said latch, the latter being provided with a shoulder which may partially or entirely engage the bar of the inner door, said bolt thus serving to simultaneously lock both the outer and inner doors and unlock only the outer door or both doors.

9. In a lock for a prison-cell, a bolt, a recessed shaft for controlling said bolt, a shifting collar in which a threaded portion of said shaft is fitted, and a lock on the support of said collar, the latter having a keeper and said lock having a semicylindrical bolt which is adapted to enter said keeper.

10. In a lock for a prison-cell, the latch Z, the bolt Q, and the bar R with which said bolt is adapted to engage, and the bar B′ in combination with outer and inner doors for said cell, said latch having a lug such as C′ for engagement with the bar of the inner door, said latch being adapted to release the outer door without necessarily raising the inner door.

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WM. C. WIEDERSHEIM.