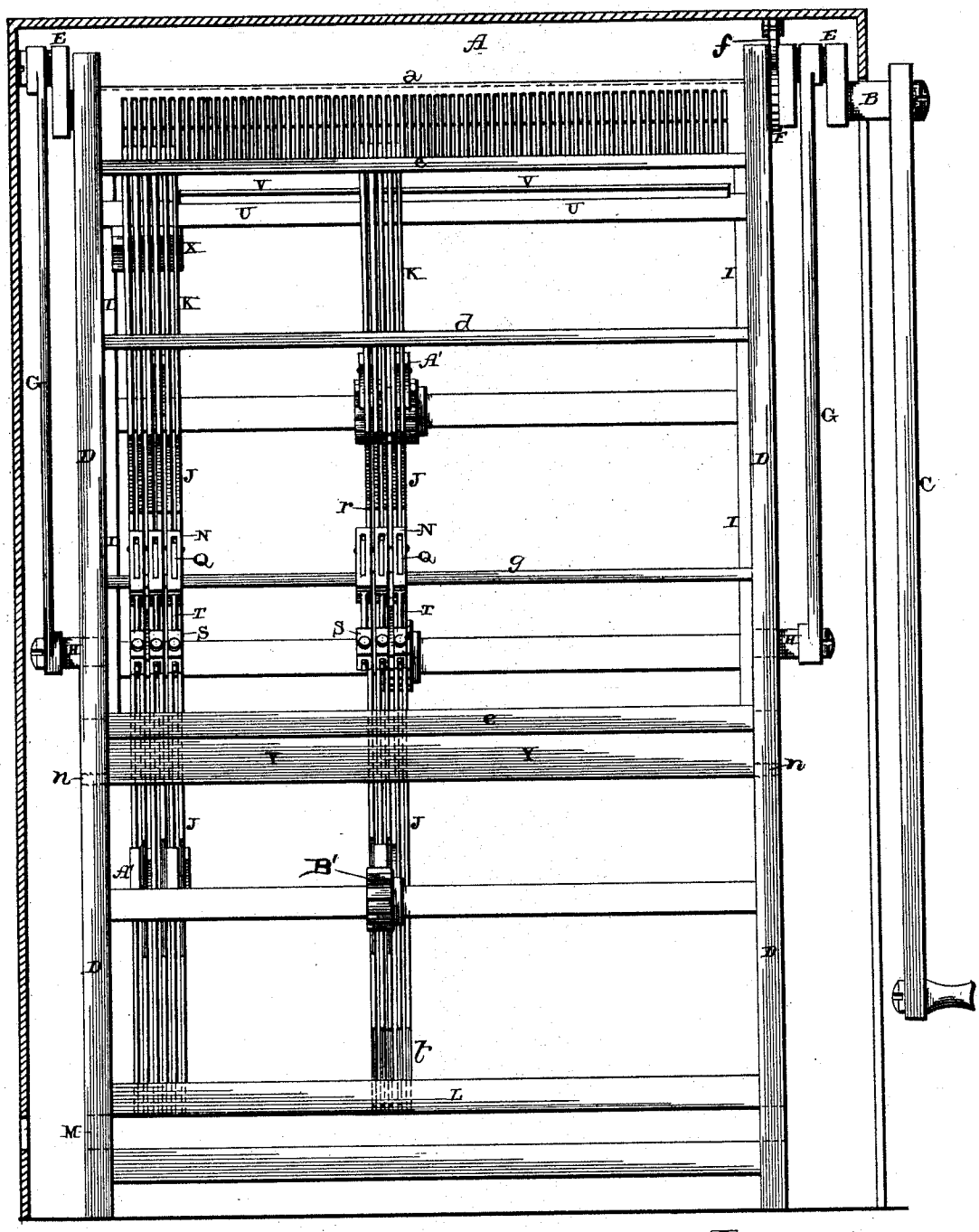
(No Model.) 3 Sheets—Sheet 1.

K. DOUGAN.

VOTE REGISTERING MACHINE.

No. 488,938. Patented Dec. 27, 1892.



Witnesses:
E. P. Ellis,
B. Brockett,

Fig. 1.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 2.

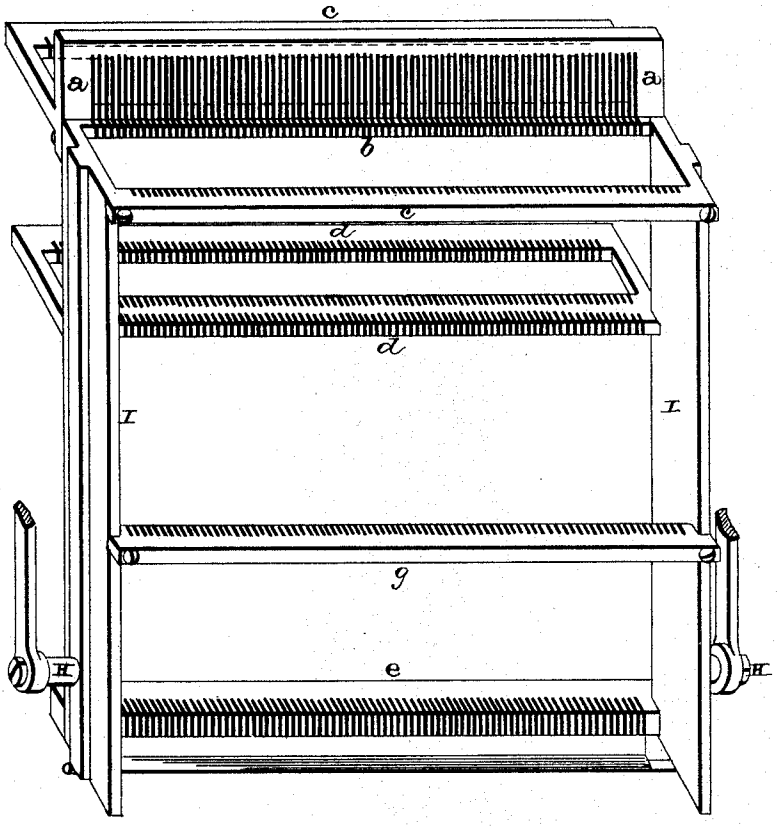


Fig. 3.

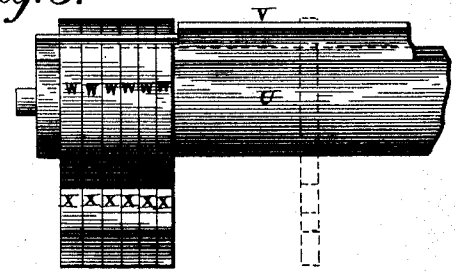
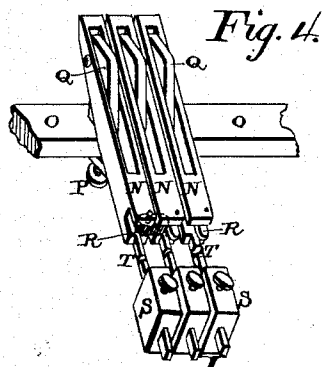


Fig. 4.



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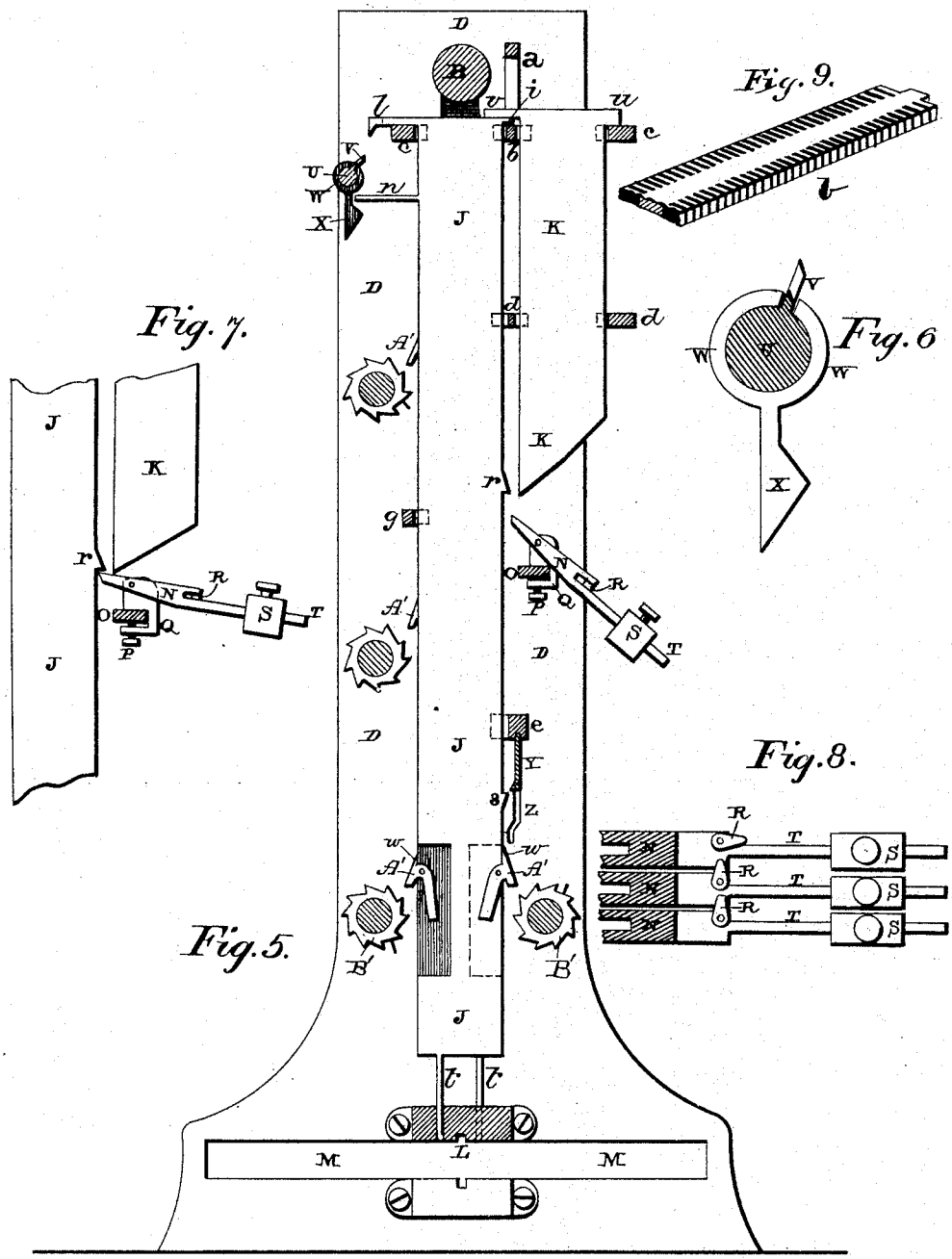

Fig. 5.

Fig. 7.

Fig. 9.

Fig. 6.

Fig. 8.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

KENNEDY DOUGAN, OF MISSOULA, MONTANA, ASSIGNOR TO THE MONTANA VOTE REGISTERING MACHINE COMPANY, OF SAME PLACE.

VOTE-REGISTERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 488,938, dated December 27, 1892.

Application filed April 19, 1890. Serial No. 348,657. (No model.)

To all whom it may concern:

Be it known that I, KENNEDY DOUGAN, of Missoula, in the county of Montana and State of Montana, have invented certain new and useful Improvements in Vote-Registering Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in vote registering machines; and it consists in first, the combination of two or more stops provided with pivoted locking devices whereby any desired number of the stops can be connected so as to move as a single piece. Second, the combination of the registering plates provided with catches, and arms or projections at their upper ends, a partially revolving shaft provided with a rib or flange which is partially cut away at one end and which extends nearly the full length of the shaft, a series of narrow collars placed upon the shaft and provided with projections against which the arms upon the plates strike for the purpose of partially revolving the shaft to which the collars are attached, so as to cause the catches upon the upper ends of the plates to catch over the flange and thus prevent the plates from dropping and registering individual votes at the same time that a straight ticket is voted. Third, the combination of the registering plates, weighted dogs which are pivoted upon the plates, and registering mechanisms for recording the votes. Fourth, the arrangement and combination of parts, which will be more fully described hereinafter.

The objects of my invention are to provide a vote registering machine that will register votes properly cast, but will not register improper ones; to attach directly to the registering plates automatically acting dogs for actuating the registering mechanism; to provide a means whereby any desired number of the stops can be connected so as to move as a single piece; and to produce a machine which will automatically register all proper votes cast for candidates at an election, and which will show at a single glance the number of votes cast for each candidate.

Figure 1 is a side elevation of a machine which embodies my invention. Fig. 2 is a perspective of a vertically moving frame in which the endwise moving plates are placed. Fig. 3 is an enlarged detail view of the flanged shaft and the collars placed thereon. Figs. 4, 6, 7 and 8, are detail views of the stops. Fig. 5 is a vertical transverse section of a machine which embodies my invention. Fig. 9, is a perspective view of a portion of the rod *b*, showing its specific construction.

A represents an inclosing case inside of which the entire registering machine is placed, and through which nothing but one end of the shaft B, projects for the purpose of receiving an operating handle C. This shaft B, is journaled in the stationary frame D, and is provided with two cranks E, and a ratchet F, engaged by pawl *f* for the purpose of preventing the shaft from being turned backward. Connected to these cranks E, are the rods G, which are connected at their lower ends to projections H, formed upon the partially moving frame I, which is placed inside of the stationary frame D, and which projections H, project through slots made in the frame D, for the purpose of allowing the frame I, a free vertical movement when the shaft B, is revolved.

The frame I, is constructed as shown in Fig. 2. At the upper end of the frame is a grooved extension *a* in which the upper ends of the registering and stop plates J, K, move, and at the lower edge of this extension is a supporting rod *b* which has vertical grooves cut in its opposite edges as shown in Fig. 5. On a level with the supporting rod *b*, are the side rods *c*, which together with the rod *b*, support the registering plates J, and the stop plates K. Below the level of the two rods *c*, and at one side of the frame are the two guiding rods *d*, between which the stop plates K, move, and in one of which one edge of the plates J, catch. Near the lower end of the frame and upon the same side of the frame I, as the two rods *d*, is a single bar *e*, having vertical grooves in its edge and in which the edges of the plates J, catch. Also extending across the frame I, in between the rods *d*, *e*, is a rod *g*, also hav-

ing vertical slots in its inner edge and in which the edges of the plates also catch. All of these slotted rods and the vertical extension serve as guides in which the plates J, K, move, and which prevent the plates, which are very thin, from having the slightest lateral play or movement in any respect, and hence they will always be compelled to move in straight lines.

The plates J, are provided at their upper ends with the shoulders *i*, at their inner corners, and which shoulders catch over the top of the grooved rod *b*. At the outer corners of these plates J, are formed the catches *l*, which catch over the top of one of the rods *c*, and at any suitable distance below these catches *l*, are formed the arms or projections *n*, on the plates which represent the straight tickets. The plates J, are supported upon the rods *b*, *c*, and have their shoulders *i*, move in a vertical extension *a*. Upon the inner edge of these plates J, are formed the shoulders *r*, *s*, which are turned in opposite directions, and formed upon the lower ends of the plates are the small rods *t*, which have their lower ends held in position by the cross bar L, which projects across the lower end of the frame D, and just above the slot M, through which the ballot holder is inserted and which corresponds to the slot made through the inclosing frame A.

The stop plates K, are provided with the shoulders *u*, at their outer corners to catch over the rods *c*, and at their inner corners with the shoulders *v*, which catch over and rest upon the upper ends of the corresponding plates J. The lower ends of the plates K, are pointed so that when they descend upon the stops N, they will touch only their inner ends. In order to do away with any unnecessary friction the inner guiding rod *d*, has its slots cut sufficiently deep to allow the inner ends of the plates K, a slight inward movement after they strike upon the upper ends of the stops N, and thus allow the parts to move more freely than they otherwise would.

The frame I, has a vertical movement in the frame D, for the purpose of allowing the plates J, K, to descend from their own gravity when the shaft B, is revolved, and to return them to their normal position as shown in Fig. 5. It is to be understood that both sets of the plates J, K, have a vertical play through their guides, the plates J, for the purpose of registering the votes cast, and the stop plates K, for the purpose of operating the stops N.

Secured to the stationary cross piece O, of the frame D, by means of the set screws P, are a number of supports Q, upon which are pivoted the stop levers N. Each one of these levers N, is as wide as two of the plates J, K, so that if two of the plates K, descend upon the inner end of one of these levers N, their combined weight causes the lever to tilt downward at their inner ends and thus catch under the shoulders *r*, upon the two corresponding plates J. If only a single plate K, descends upon a stop N, its weight is not sufficient to cause the stop to tilt, but if two of the plates descend then the stop does tilt and by catching under the shoulders *r*, upon two corresponding registering plates J, the plates J, are prevented from descending for the purpose of registering a vote. The outer end of each of these stops N, has a transverse slot cut in it and in each of these slots is pivoted a small locking device R, which when turned outward toward the next adjoining stop catches in its slot and thus locks the two stops together so as to cause them to move together as but a single piece. When these locking devices R, are turned inward in their own slots they do not interfere in any manner with the movement of the adjoining stop. If there are only two candidates for the same office then a single stop N, is all that is necessary. If there are more than two candidates for the same office a corresponding number of stops N, are connected by means of the pivoted devices R, as shown in Fig. 8, and then if a voter votes for more than a proper number of candidates for any one office a corresponding number of plates K, descend upon the inner ends of the stops N, and by their combined weight cause the stops N, to tilt and thus catch under the shoulders *r*, of the corresponding plates J, for the purpose of preventing the votes for any of the candidates from being registered. If for instance there are four candidates for the same office and a voter votes for more than one of them, when only one can be elected, two stops are connected by the locking devices R, and then the weights S, on the extensions T, of the locking levers N, are adjusted so that these two levers will tilt when any two of the plates K, descend upon them and thus cause the stops N, to prevent a vote being registered for any of the candidates for that office. The weights are made adjustable upon the extensions of the stops N, for the purpose of balancing the required number of plates K, so that the stops will not tilt until one or more plates K, have dropped than are necessary to balance the stops, and then the dropping even of a single plate more than is necessary to balance the stops will cause them to tilt downward to prevent any of the votes cast for the candidates for that particular office from being registered. If for instance in an election where there are a number of candidates jointly elected to represent a county in the legislature, as for instance Silver Bow county, Montana, which sends ten representatives to the legislature, should a great number of candidates be nominated by any number of political parties, there are a number of stops N, equal to one-half the number of candidates nominated connected so as to move as one stop. Should a voter vote for any ten candidates the ten votes will be registered as the stops N, have their weights adjusted so as not to be tilted by ten of the plates K, but should a voter vote for more than ten, which would allow more than ten of the plates K, to descend and rest upon the

stops N, the additional weight of the plates K, will more than counterbalance the weighted stops N, causing them to engage the shoulders *r*, on the plates J, and thus prevent any of the votes from being registered.

In order to make provision for the voting of straight tickets in addition to voting for individual candidates, a number of plates J, K, are used to represent the straight tickets, and a stop N, is used in connection with every two pair of these plates, the same as already described.

In order to prevent a voter who votes a straight ticket from also voting for individual candidates a partially revolving shaft U, is journaled in the upper end of the frame D, and this shaft is provided with a flange V, which is cut away opposite those plates which represent the straight tickets as shown in Fig. 1 to allow them to drop and register, but prevent the plates J, which represent the individual ticket from dropping. Placed around this shaft just opposite the plates which represent straight tickets, are a corresponding number of collars W, which have the extensions X, extending downward from them. These collars are prevented from turning upon the shaft by means of the cut away portion of the flange catching between the ends of the collars and thus causing all of the collars to partially turn or revolve when the shaft is revolved. If a straight ticket is voted the downward movement of the plate J, which represents the straight ticket and which is provided with an arm *n*, causes the arm *n* to strike against one of the extensions on its corresponding collar and the movement of this extension caused by the arm *n*, striking against the beveled portion of the extension causes the shaft to partially revolve and thus bring the wide portion of the flange into position to have the catches *l*, to catch over the top of this flange and thus prevent any of the votes which might be cast for individual candidates in addition to the straight ticket from being registered. Those plates J, which represent the straight tickets are provided with the arms *n*, but have no catches *l*, but all of the plates which represent the individual candidates are provided with the catches *l*, and these catches by catching over the upper edge of the flange upon the shaft are prevented from descending sufficiently far to be forced downward by the plate Y, which is used for that purpose. Should a voter vote more than one straight ticket his vote will be prevented from being registered by the stops which act in connection with the plates which represent the straight tickets.

Pivoted in the vertically moving frame I, just under the grooved guiding rod *e*, is the depressing plate Y, which is provided with pins or projections at its lower corners, and which pins or projections *n*, shown in dotted lines in Fig. 1 extend through cam shaped slots Z, made through opposite ends in the stationary frame D. As the frame I, descends the pins upon opposite ends of the depressing plate Y, cause the lower edge of the plate to move inward and thus catch over the shoulders *s*, of all of the plates J, which have had their lower ends to drop through the corresponding perforations in the ballot. All of those plates J, for which no perforations have been made in the ballot simply descend with the frame I, until they rest upon the top of the ballot, but all of those plates J, which have the rods *t*, on their lower ends to pass through the perforations in the ballot, descend far enough to bring the shoulders *s*, down where the inward movement of the plate Y, will catch over them and thus force the plates down as far as they can move, and thus cause the dogs A′ pivoted to the plates to operate their corresponding registering mechanisms B′. Where the plates J, do not descend, the shoulders *s*, remaining elevated sufficiently high to prevent the inward movement of the lower edge of the plate Y, from catching over their shoulders *s*, and hence the plates which do not descend are not caused to operate their corresponding registering mechanisms.

Pivoted upon each plate J, is a dog A′ which is grooved or bifurcated so as to straddle over the edge of the plate, and which dogs are always in position to operate their corresponding registering mechanisms when the plates are depressed. Upon the upper end of each of these dogs there is formed a shoulder *w*, which catches against the edge of the plate to which the dog is pivoted, and this shoulder prevents the lower weighted ends of the dog from moving the dog backward beyond a certain point, and thus it is always held in readiness to engage with its registering mechanism. These dogs turn freely upon their pivots so that as the plates J, are returned to position the dogs freely pass the wheels of their registering mechanism. In order to leave room for the dogs to turn freely upon their respective plates, a portion of each of the adjoining plates is cut away as shown in Fig. 5, and thus sufficient room is given to each of the dogs to operate. This construction also enables the dogs to be placed at different heights upon the plates, and to thus bring the different registering mechanisms inside of the frame D. Each registering mechanism consists of any desired number of wheels which have the figures from 0 to 9 stamped upon their faces, or they may be of any construction preferred.

Having thus described my invention, I claim:—

1. The combination of the vertically moving registering plates, with the dogs upon the plates, corresponding registering mechanisms, depressing mechanism for the plates, and an automatic lock for each plate, to prevent them from dropping to be depressed to register, substantially as specified.

2. The combination of a series of register-

ing plates J having portions of their edges cut away, the dogs pivoted upon the plates opposite the cut away portions of the adjoining plates, the registering mechanisms, and depressing plates for forcing the plates J, downward, substantially as described.

3. The combination of the registering plates provided with catches *l*, and arms *n*, with the partially turning shaft provided with a flange, the collars placed upon the shaft and provided with hangers or extensions, substantially as set forth.

4. The combination of the partially revolving shaft provided with a flange which is cut away at one end, a series of collars placed upon the shaft at a point where the flange is cut away, the plates J, provided with catches to catch over the top of the flange, and arms to strike against the extensions on the collars, substantially as specified.

5. The combination of the vertically moving frame provided with grooved guiding rods, the registering plates provided with shoulders, the stop plates, and the stops, which are adapted to be connected to one another, substantially as shown.

6. The combination of a series of weighted stops, each one of which is provided with a locking device for connecting it to the next adjoining stop, the registering plates J, provided with shoulders, and corresponding stop-plates, substantially as described.

7. The combination of a stationary frame, a vertically moving frame, and a mechanism for raising and lowering the vertically moving frame, with the registering plates J, having their dogs pivoted upon them for operating their corresponding registering mechanisms, the stop plates, the stops, and the depressing mechanism, the plates J, being provided with shoulders to engage with both the stops and the depressing mechanism, substantially as set forth.

8. The combination of the stationary frame, the vertically moving frame, and a mechanism for raising and lowering the vertically moving frame, with the plates J, provided with shoulders, the corresponding stop plates, the weighted stops provided with locking devices for connecting them, the depressing mechanism, the dogs connected to the plates, and the corresponding registering mechanisms, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

KENNEDY DOUGAN.

Witnesses:
E. P. ELLIS,
B. BROCKETT.