No. 663,681. Patented Dec. 11, 1900.

J. J. NICHOLS.

LINEAL ASSORTING MACHINE.

(Application filed June 27, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

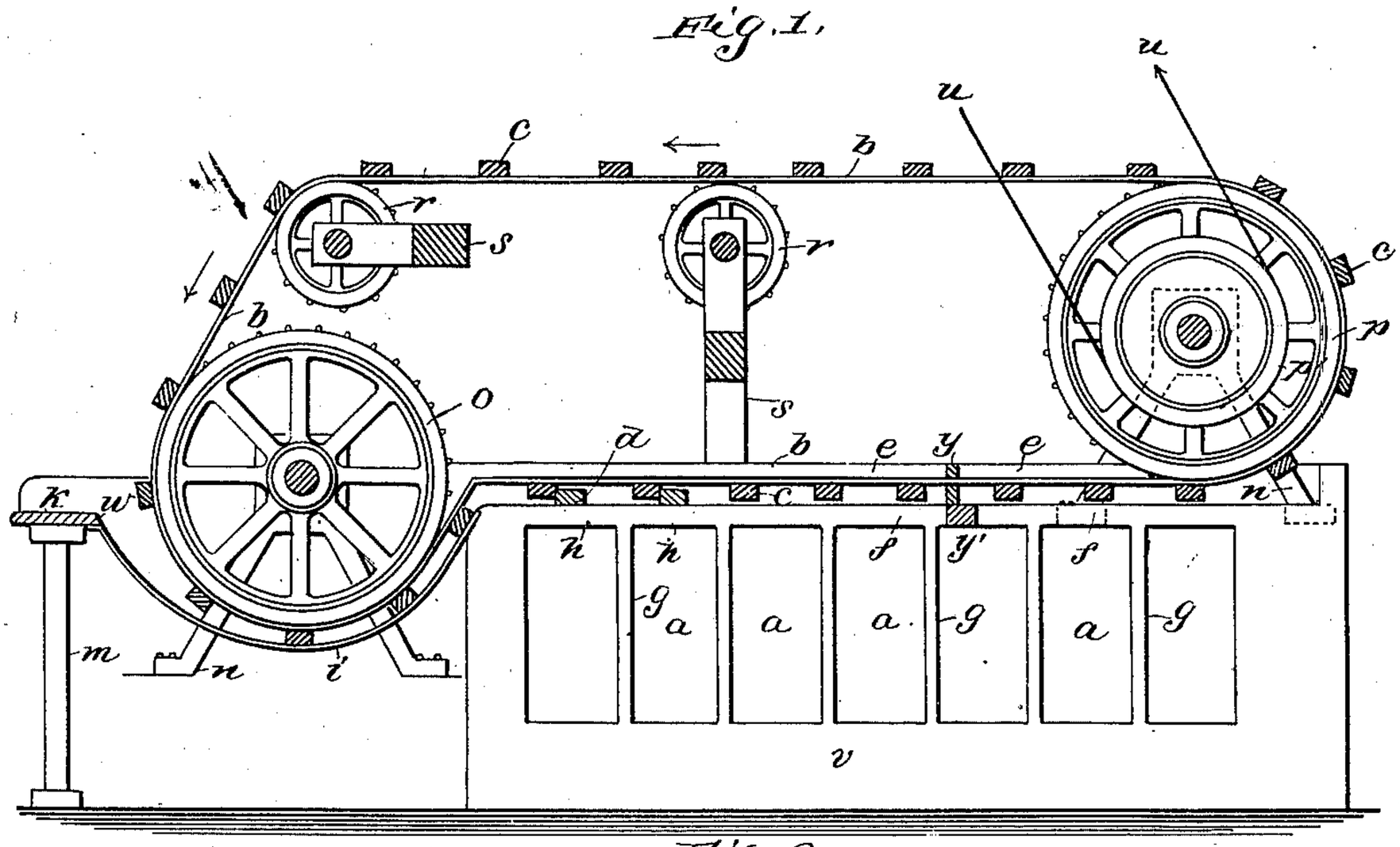
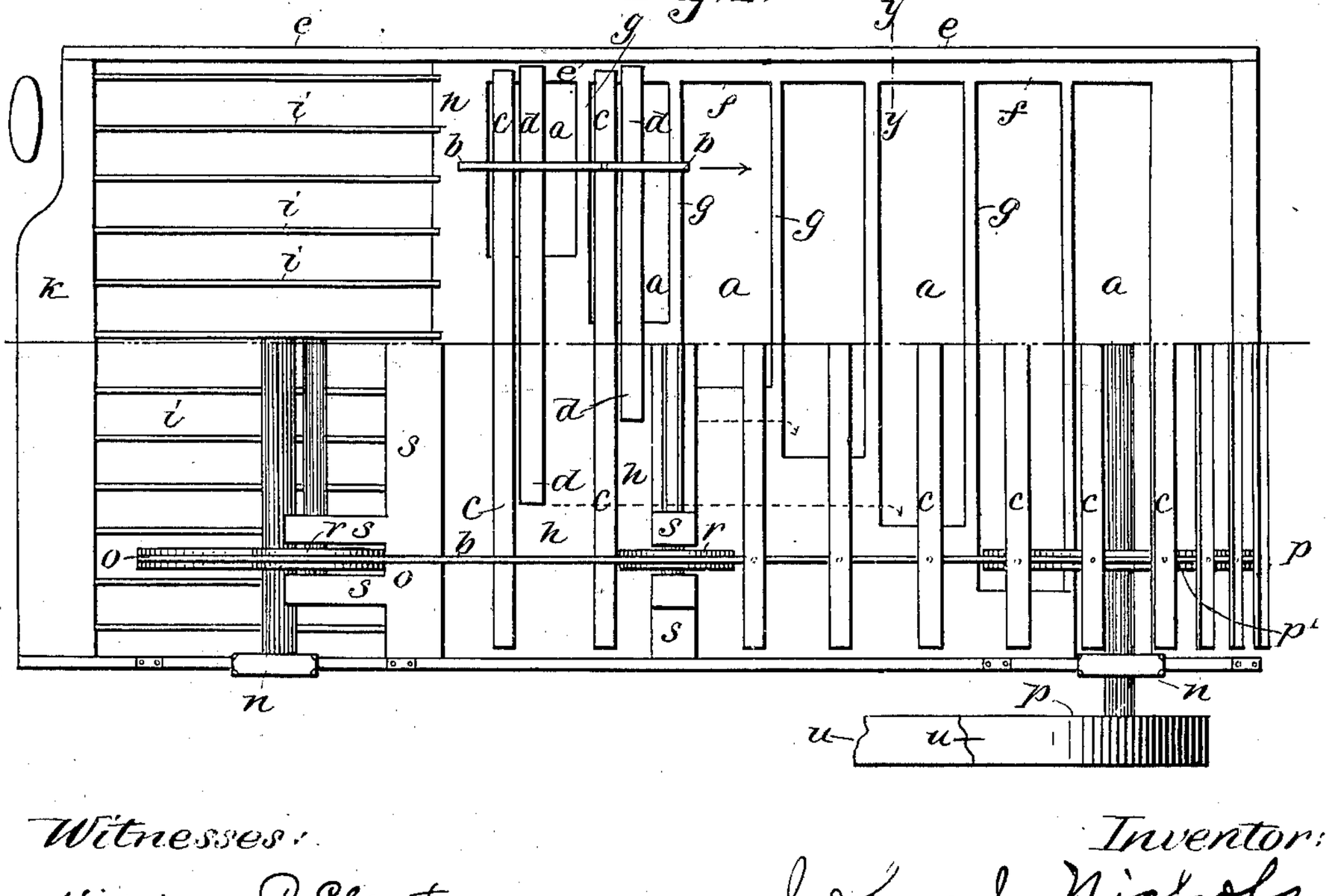


Fig. 2.



Witnesses:
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Fig. 4.

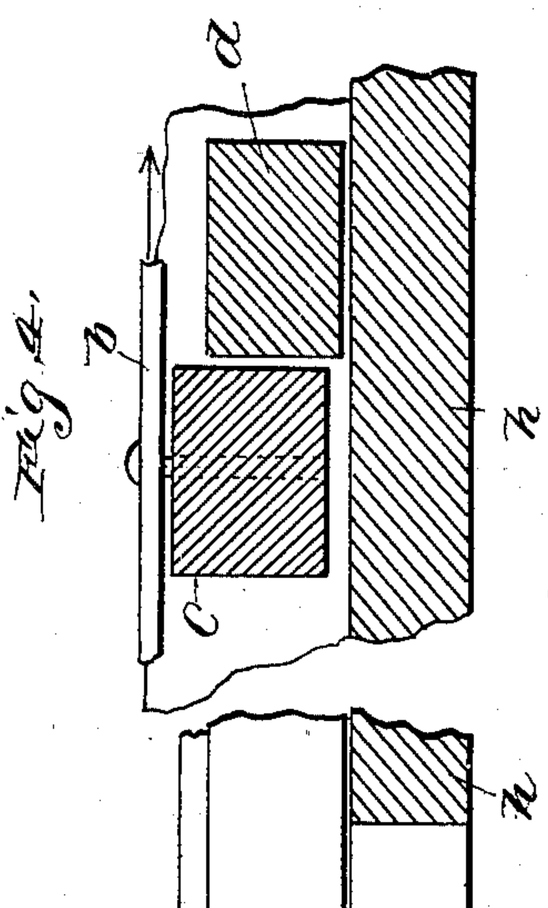


Fig. 6.

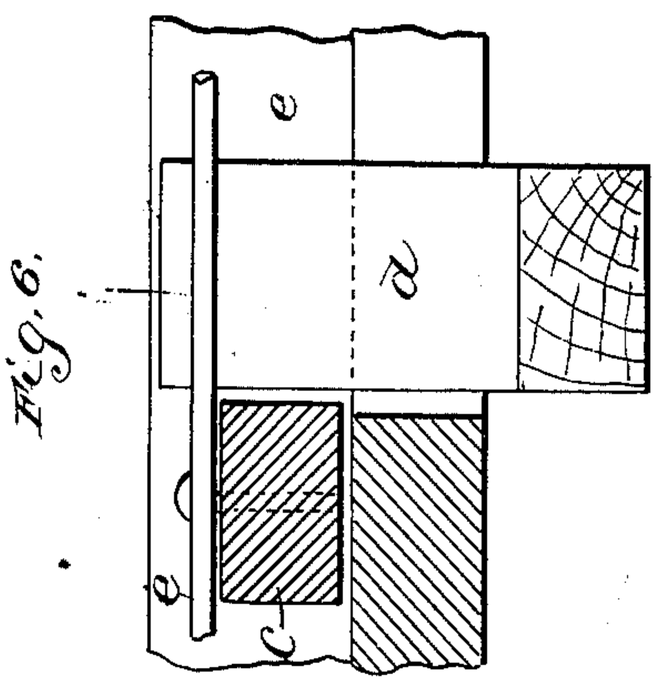


Fig. 3.

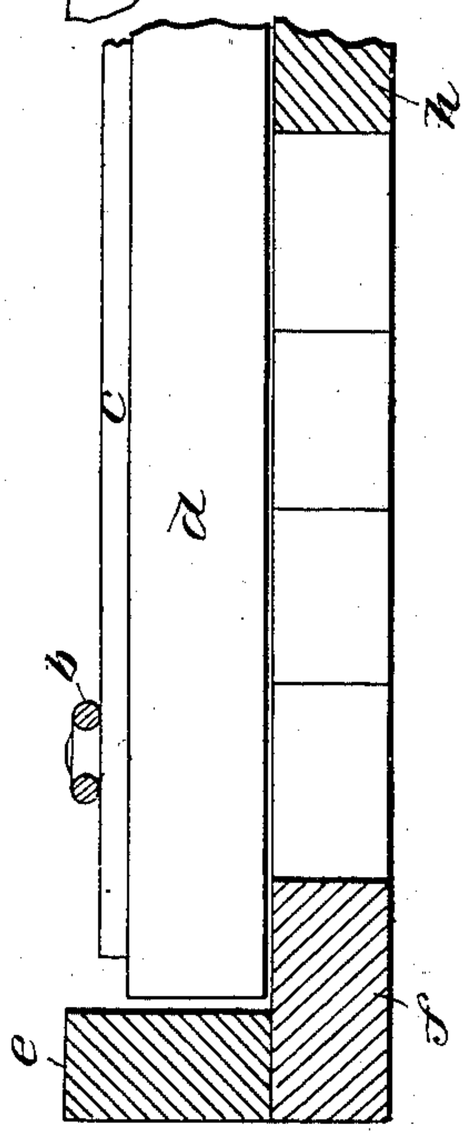
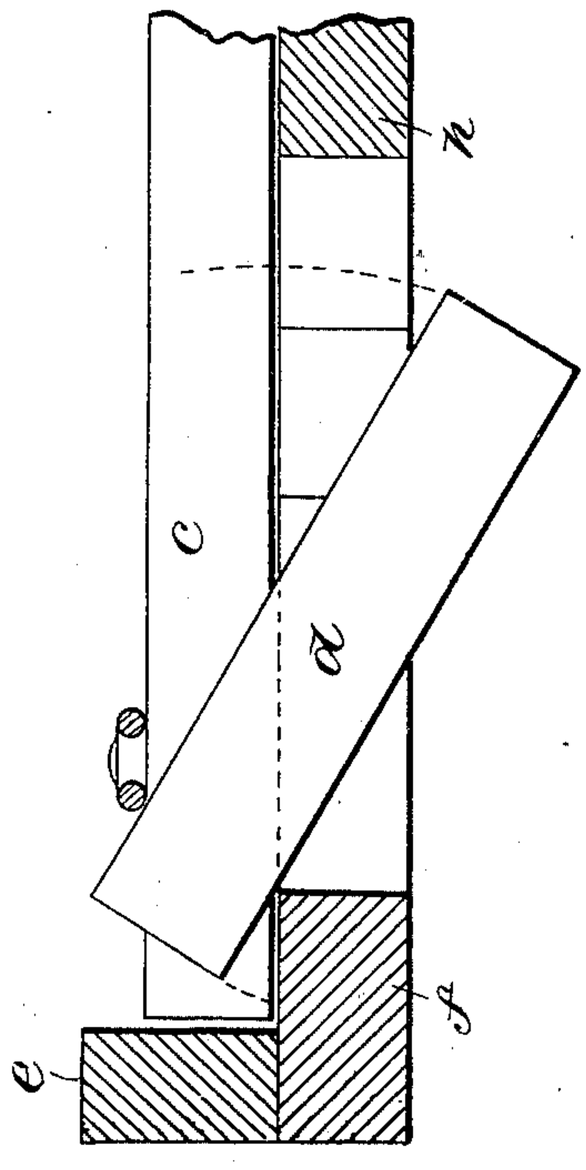


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN J. NICHOLS, OF CHICAGO, ILLINOIS.

LINEAL ASSORTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 663,681, dated December 11, 1900.

Application filed June 27, 1900. Serial No. 21,752. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. NICHOLS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Lineal Assorting-Machine, of which the following is a specification.

My invention relates to improvements in lineal assorting-machines in which there is a combination of one or more endless chains or belts supplied with blocks or spur attachments on the outside, each made to run around, and are supported by spurred or other wheels or pulleys vertically stationed at either end, with a stationary platform having horizontal pockets or openings over which the blocks or spurs of said chain are made to pass, and a fixed stop or abutment and continual support running the entire length of the machine, along the common side thereof, that all the pockets meet, and an adjustable feeder-platform and a gravity-chute with flexible bottom; and the objects of my invention are, first, to provide a means of assorting lumber and other material as to lengths; second, to afford facilities for the proper, accurate, and rapid feeding of the material to be assorted into the machine, and, third, to properly and rapidly regulate the size of the feed-chute in a lineal assorting-machine. I attain these objects by the mechanism illustrated in the accompanying drawings, consisting of two plates.

Figure 1, Plate I, is a vertical section of the entire machine and adjustable feeder table and chute with flexible bottom. Fig. 2, Plate II, represents the platform plan of the machine as it appears with the chain or belt and wheels removed from one side of sectional line. Figs. 3 and 4, Plate II, are vertical sections showing a piece of material to be assorted in the machine as it is carried along over the pocketed platform by the blocks or spurs attached to the moving endless chain or belt, with one end resting on the continual support *f* and the other end on the platform *h*. Figs. 5 and 6, Plate II, are vertical sections showing the gravity-drop in operation.

Similar letters refer to similar parts throughout the several views.

The stationary inclosed foundation *v*, and the standards or supporters *n* of the wheels *o* and *p* and the supporters *s* of the wheels *r*, and the partitions *g* between the horizontal openings or pockets *a*, and the adjustable feeder platform or table *k*, with its post or supporter *m*, constitute the framework of the machine.

Power is applied by the belt *u* to the power-wheel *p'*. Wheels *o* and *p* and supporting-wheels *r* support and carry the endless chain or belt *b*, which is provided with blocks or spurs *c*. The wheel *o* is stationed so that its lower edge is sufficiently below the platform *h* and the adjustable feeder platform or table *k* to convey the endless chain or belt *b*, so that the attached spurs or blocks *c* come in contact with the flexible bottom *i* of the gravity feeder-chute *w*, which flexible bottom *i* is so placed and arranged that the material to be assorted being placed into the chute *w* at the intersection with the feeder table or platform *k* will be drawn down by gravity and deposited in the proper position on the flexible bottom *i*, where it is caught by the spurs or blocks *c* of the moving chain or belt *b* and conveyed by said spurs or blocks *c* over and along the platform *h* until dropped into pockets *a* of its respective lengths. The platform *h* is provided with horizontal openings or pockets *a*, of any desirable lengths and of sufficient widths, depending upon the speed of the machine, and placed parallel and with one end against a common side of the machine, which is supplied with a fixed stop or abutment *e*, extending the entire length of the platform *h*, and just above the end of the pockets *a* and just below the stop or abutment *e* and adjoining it on the inner bottom edge and on a level with the top of the platform *h* and extending the entire length of the machine with a continual support *f*, all of which are so relatively arranged that the material to be assorted on being placed into the chute *w*, with one end against the side of the machine containing the fixed stop or abutment *e* and conveyed along and over the platform *h* by the spurs or blocks *c*, attached to the moving endless chain or belt *b*, is thereby evenly held and maintained until deposited in the pockets *a* of its respective lengths, all substantially as shown in the several drawings.

The chute *w* is formed of the flexible bot-

tom *i*, so arranged in relative position to the wheel *o* as to admit of material of various thicknesses without stopping or straining or delaying the running and operation of the machine and at the same time continually holds the same in place in front of the spurs or blocks *c*, attached to the chain or belt *b* and close to and under the chain or belt *b*. In the several drawings, *d* represents different views of a piece of material as it appears in the machine, and in Fig. 2, Plate I, the dotted line extending from one end of the piece of material *d* to the arrow in the pocket *a* shows the direction it will take and the pocket into which it will drop.

A section is taken in Fig. 2, Plate I, through *y* and *y'*, and shows in Fig. 1, Plate I, at *y* and *y'*, the relative position and arrangement of the fixed stop or abutment *e* and the continual support *f*.

I am aware that prior to my invention machines have been made to convey material from place to place by means of a combination chain or chains or belts with attached blocks or cups or buckets and wheels or pulleys. I therefore do not claim such combination broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination in a lineal assorting-machine of a stationary platform or table provided with horizontal pockets or openings of any desired lengths, meeting on one common side with a fixed stop or abutment and a continual support, with two or more wheels carrying one or more endless chains or belts of any desired lengths and so arranged in relative position with said platform, as that the chain or belt, when in motion will pass over said platform and sufficiently near it so that the spurs or blocks will come into slight contact therewith, the degree of proximity depending upon the thickness of the material being assorted, which will be moved along and over said platform by and in front of said spurs or blocks under said chain and at the same time be supported at one end by the continual support, and the other end on the platform until deposited in the pockets of its respective lengths, the end opposite the end of its continual support dropping first and the force of gravity thus established drawing the other end from its continual support and the entire piece into the pocket.

2. In a lineal assorting-machine the combination of a gravity-chute having a flexible bottom with two or more wheels carrying one or more endless chains or belts, having spurs or blocks of any desired lengths so arranged in relative position to said flexible bottom that the spurs or blocks when the chain or belt is in motion shall come in slight contact with it at about its lowest point.

3. In a lineal assorting-machine the combination of an adjustable feeder-platform with the flexible bottom of the chute so arranged as to make the mouth or opening of said chute narrower or broader by the adjustment of said table, or feeder-platform.

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