

J. T. COWLEY & E. G. THOMAS.

SORTING TABLE.

APPLICATION FILED AUG. 9, 1906.

958,230.

Patented May 17, 1910.

2 SHEETS—SHEET 1.

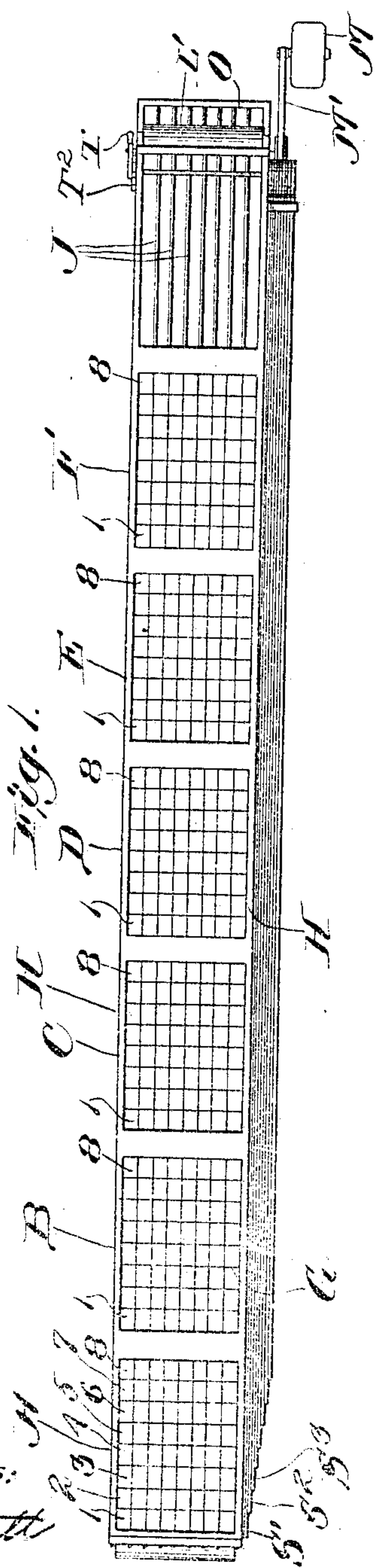
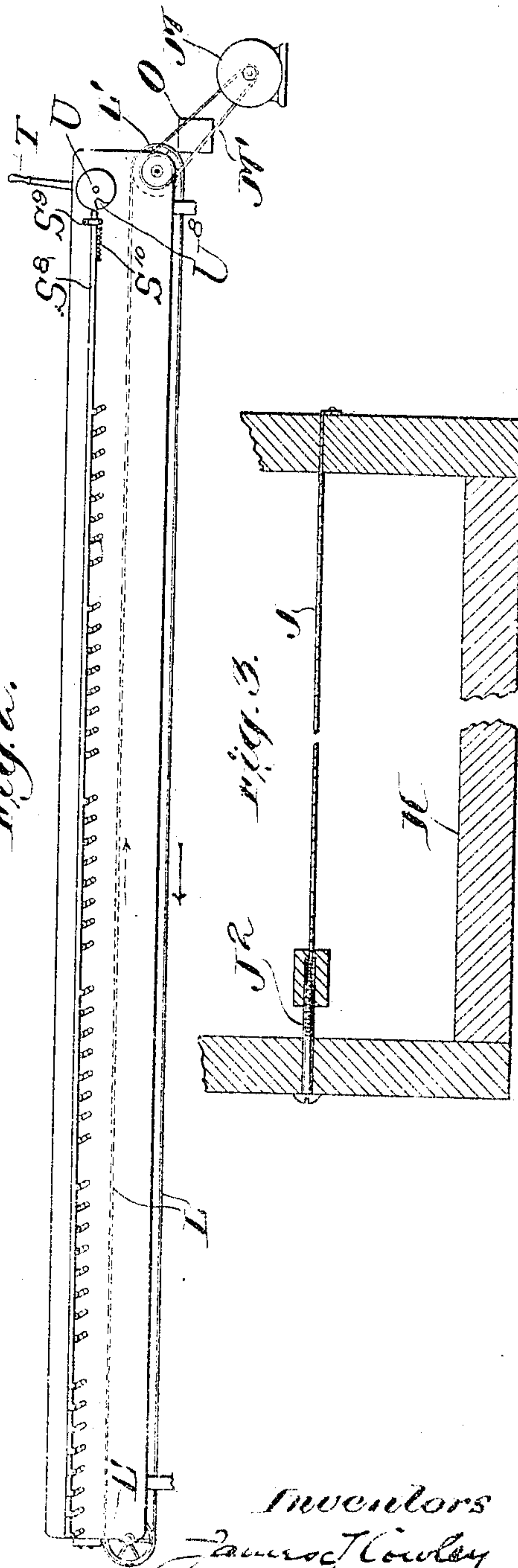


Fig. 2.



Witnesses:  
L. G. Bartlett

R. L. Messer

by

Inventors  
J. T. Cowley  
E. G. Thomas  
Attorneys.

J. T. COWLEY & E. G. THOMAS.

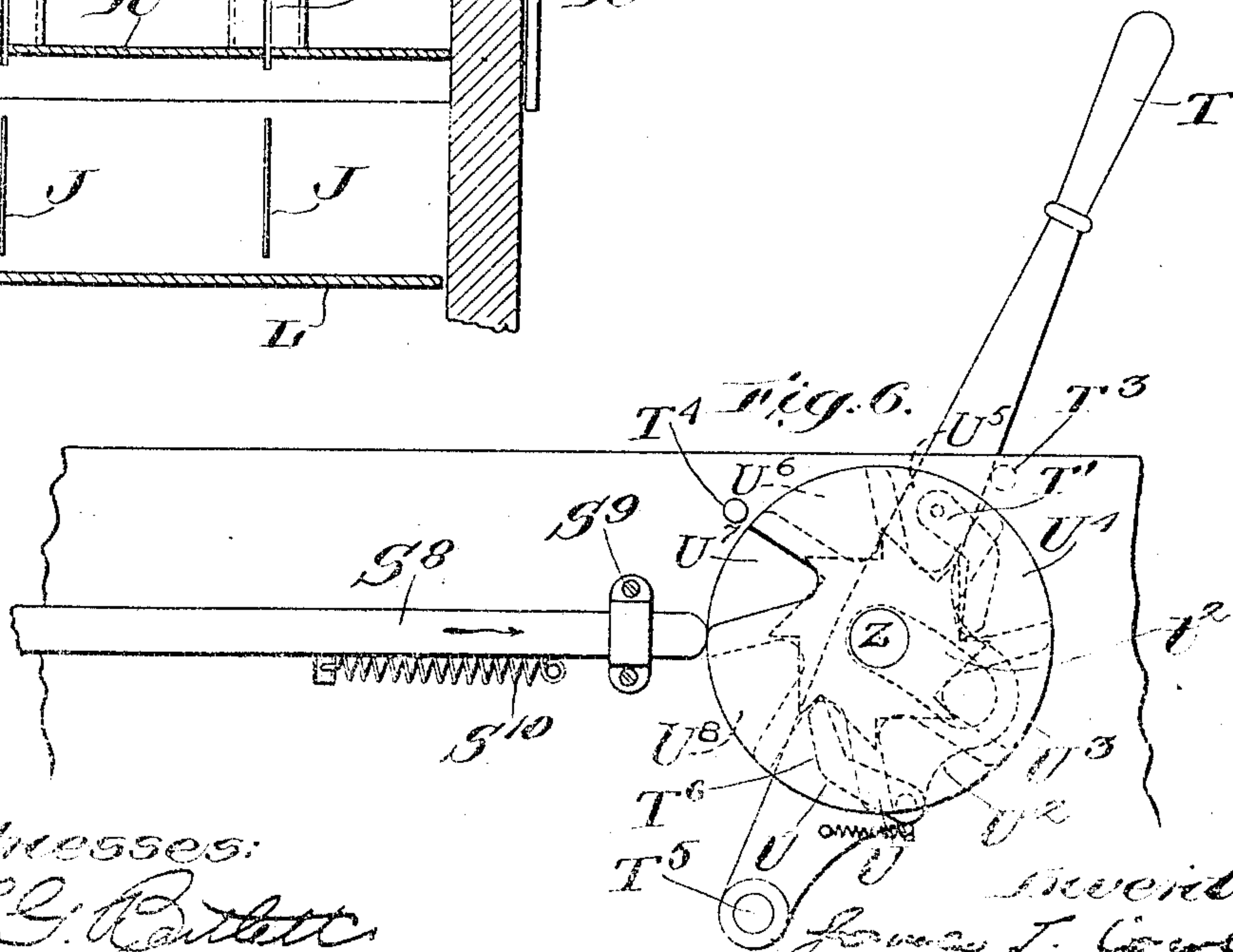
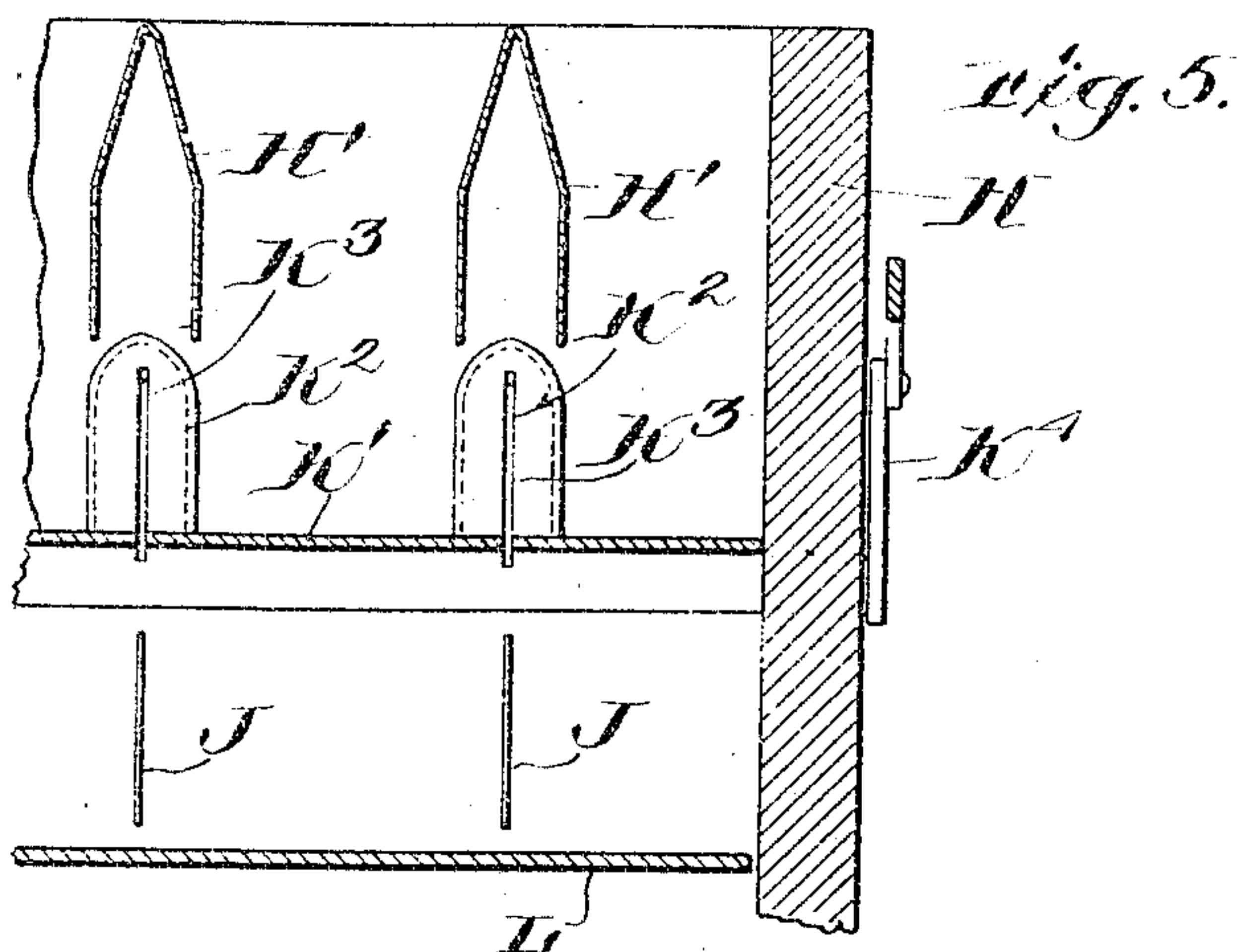
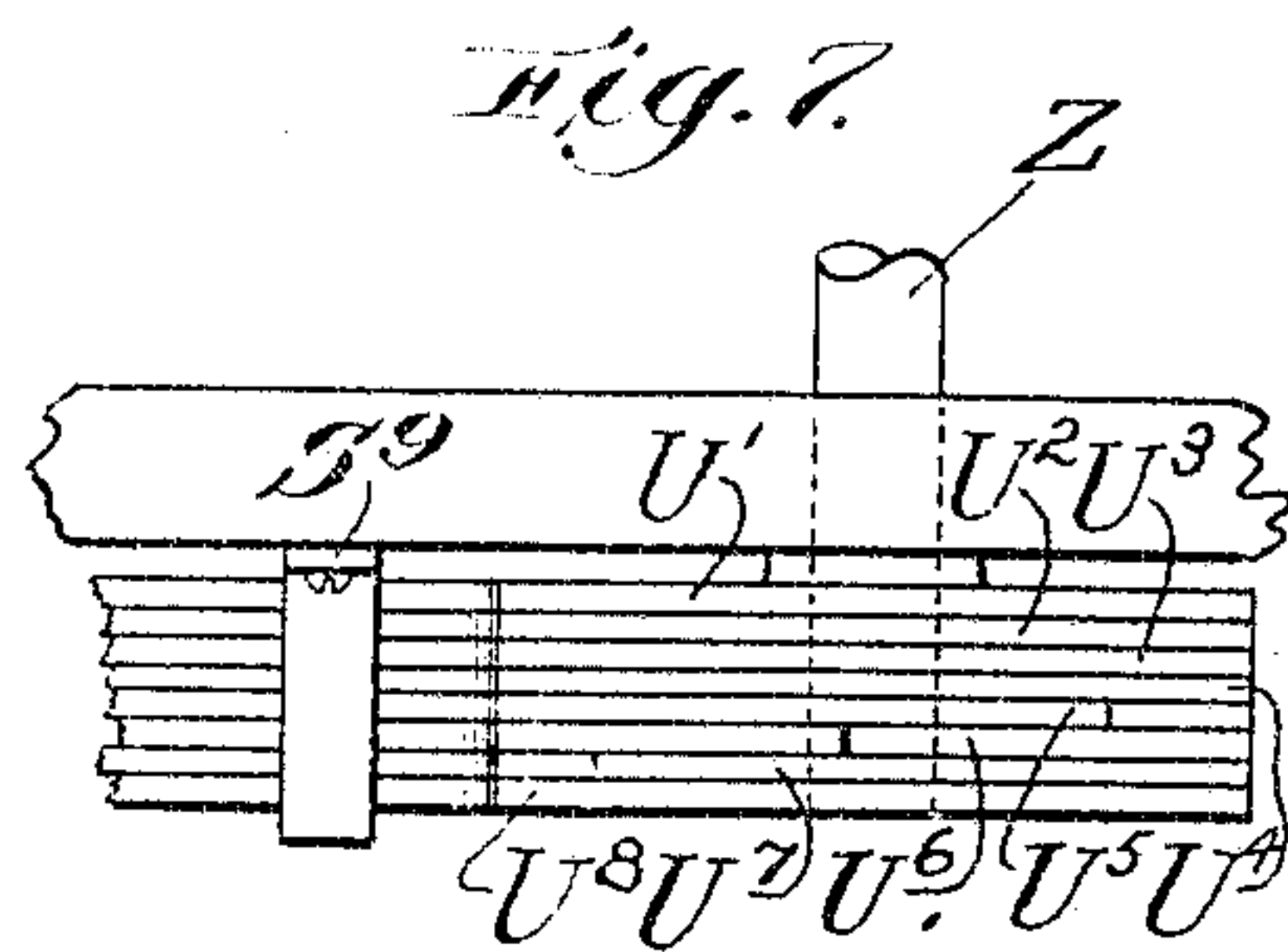
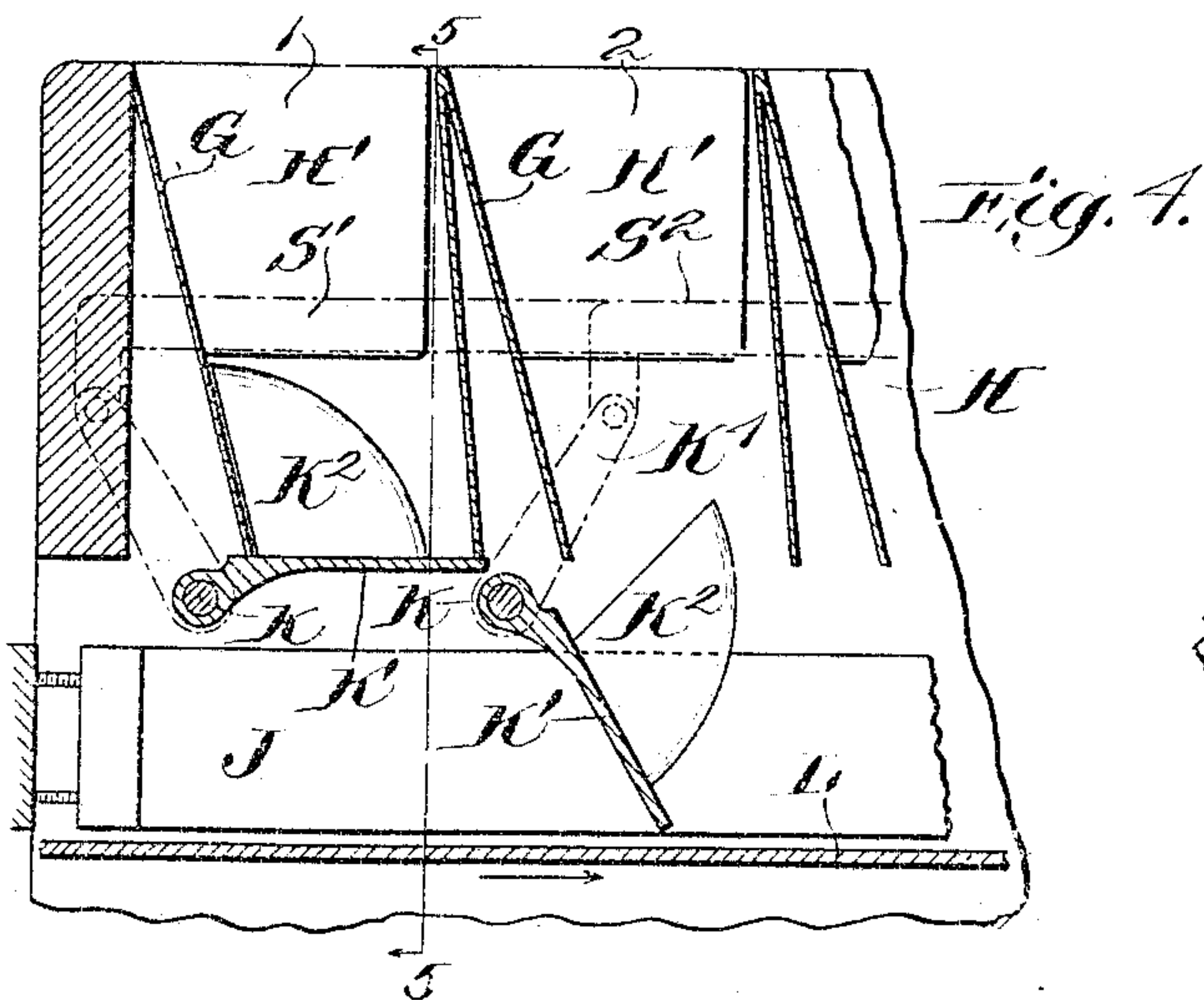
SORTING TABLE.

APPLICATION FILED AUG. 9, 1906.

958,230.

Patented May 17, 1910.

2 SHEETS—SHEET 2.



Witnesses:  
L. G. Bartlett  
A. D. Messer

Inventors:  
James T. Cowley  
Edward J. Thomas  
By E. J. Thomas  
Attorneys



# UNITED STATES PATENT OFFICE.

JAMES T. COWLEY AND EDWARD G. THOMAS, OF BOSTON, MASSACHUSETTS, ASSIGNORS TO LAMSON CONSOLIDATED STORE SERVICE COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## SORTING-TABLE.

958,230.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed August 9, 1906. Serial No. 329,825.

*To all whom it may concern:*

Be it known that we, JAMES T. COWLEY and EDWARD G. THOMAS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Sorting-Tables, of which the following is a specification.

Our invention is an improvement in sorting tables by the aid of which tickets or other objects may be separated into classes.

The object of our invention is to provide a sorting table, at which several operators may work at once with accuracy and to provide for the collection of the classes separated by the several operators as they leave the table. By the use of our invention this may be accomplished in much less time than has been possible heretofore.

Referring to the drawings Figure 1 is a plan view of the sorting table; Fig. 2 is a side elevation; Fig. 3 is a detail of the separating strips over the traveling belt to be hereinafter described; Fig. 4 is a partial longitudinal section through Fig. 2; Fig. 5 is a section on line 5—5 of Fig. 4; Fig. 6 is an enlarged view of the controlling mechanism; and Fig. 7 is a plan view of the controlling mechanism.

The top of the table is divided into groups of compartments represented by A, B, C, D, E, F, etc., each group in charge of an operator. We have shown six groups but the number may be limited to the number of operators desired to work at one table. Each group consists of a number of compartments. In this case there are sixty-four. This, however, is immaterial. The number of compartments may be sufficient to provide for the several classes into which the tickets are to be separated.

The divisions of the compartments are preferably made of sheet metal, V-shaped or somewhat pointed at the top, as shown in Figs. 4 and 5. The transverse walls G are secured to the sides H of the table. Projecting from the walls G and fixed to them are the longitudinal dividing walls H<sup>1</sup>. The walls H<sup>1</sup> are level on the top with the walls G, but do not extend much more than half way to the bottom of said walls G. Beneath the walls G are the shafts K having bearings in the sides of the table. Fixed to these shafts are the shelves K<sup>1</sup> forming in

their normal or closed position the bottoms of the compartments. Along the shelves K<sup>1</sup> at points directly under the walls H<sup>1</sup> are fixed the lower dividing walls K<sup>2</sup>. Through a greater portion of the center of the walls K<sup>2</sup> and through the shelves K<sup>1</sup>, and directly beneath them are the slots K<sup>3</sup> for the purposes hereinafter set forth. At a suitable distance below the shelves is the continually moving endless belt L. This belt runs the entire length of the table supported by the pulleys L<sup>1</sup>, and is driven in the direction of the arrow by a motor M, which is connected with one of the pulleys L<sup>1</sup> by belt M<sup>1</sup>. Above the belt L and in line with the center of walls H<sup>1</sup> and K<sup>2</sup> are the separating strips J. These strips J are secured at the ends of the table, at one end permanently fastened, and at the other end adjustable by means of screws J<sup>2</sup> which may be set up to take any stretch in the strips (see Fig. 3).

At the delivering end of the table under the pulley L<sup>1</sup> is the receiving box O. It has divisions to correspond with the longitudinal divisions of the table. We will describe one row of the compartments in our table, taking for example row 2 of group A, as these compartments are all exactly alike. One end of the shaft K projects from the side of the table and carries fixed to the end an arm K<sup>4</sup>. The outer end of this arm is pivoted to the rod S<sup>2</sup>. Equally spaced along this rod are hinged the corresponding arms K<sup>4</sup> connecting the shafts K of row 2 in each of the groups of compartments so that when the rod is allowed to move in the direction of the delivering end of the table, the shelf K<sup>2</sup> in row 2 of every group will be brought into the position shown in Fig. 4, row 2. This view shows the connecting rods in the dotted lines, the rod S<sup>2</sup> at this time being in the act of discharging the tickets from the compartments, and the rod S<sup>1</sup> holding the shelf in its closed or normal position. The slot K<sup>3</sup> is provided in the shelf the wall K<sup>2</sup> to allow the shelf to turn down lower than the top of the dividing strip J. The dividing strip is shown in Fig. 4, row 2, passing through the slot in the shelf and wall.

The connecting rods S<sup>1</sup>, S<sup>2</sup> etc. are operated by the following means: The rods extend through the bearing S<sup>0</sup> and are held



against the cam disks of the cam U by the spring S<sup>10</sup>. The cam U is mounted on the shaft Z having bearings in both sides of the table (see Figs. 6 and 7). A hand lever T is suitably pivoted and supported at T<sup>5</sup> and carries two pawls T<sup>4</sup> T<sup>6</sup> which engage opposite sides of the ratchet T<sup>2</sup>. The motion of the lever T is limited by stops T<sup>3</sup> and T<sup>4</sup> and the arrangement of the pawls is such that motion from stops T<sup>3</sup> to T<sup>4</sup> of the lever T and the reverse motion from stops T<sup>4</sup> to T<sup>3</sup> will each move the ratchet T<sup>2</sup> in the same direction, the sum of the two motions being equal to that part of a complete rotation corresponding to the number of rows of hoppers in a group, in this case one-eighth. The cam U has slots U<sup>1</sup>, U<sup>2</sup>, etc. adapted to cooperate respectively with rods S<sup>1</sup> S<sup>2</sup> etc. This cam may be composed of eight disks, each disk having a slot corresponding to the slot U<sup>1</sup>, each slot being set one-eighth of a revolution ahead of the one before it, as shown in dotted lines Fig. 6. By this arrangement when the lever T is thrown against the stop T<sup>4</sup>, it will allow one of the rods as S<sup>8</sup> to drop into the slot U<sup>8</sup> and remain until the lever T is returned against the stop T<sup>3</sup> when the rod S<sup>8</sup> will be returned to its original position.

It is evident that at every double movement of the lever T one of the rods will be actuated and through this action one row of compartments will deposit the tickets contained therein on to the belt L which will deposit them in a box O. This will enable the operator in charge of the delivering end of the table to successively collect the tickets in the corresponding rows of the different groups. After one complete revolution of the cam T this operation may be repeated whenever the operator desires to receive the tickets which have been collected during the interim.

Having thus described the nature of our invention and set forth a construction embodying the same, what we claim as new and desire to secure by Letters Patent of the United States is:

1. In an apparatus of the character described, a substation or hopper adapted to receive articles, a central station adapted to receive articles deposited in said sub station, means under the control of said central station for releasing or discharging articles from said sub station or hopper, and conveying means adapted to receive and convey said articles to said central station.

2. In an apparatus of the character described, a series of compartments or hoppers adapted to receive articles, a central station or receptacle adapted to receive articles from said compartments, means located at and under the control of said central station for releasing the articles from said compartments or hoppers, and means

for receiving and conveying said articles from said compartments to said central station.

3. In an apparatus of the character described, a despatching station adapted to receive articles, a receiving station, means under the control of said receiving station for releasing the articles from said despatching station, and conveying means adapted to receive and convey articles from said despatching station to said receiving station.

4. In an apparatus of the character described, a central or receiving station, a series of groups of sub stations, corresponding hoppers or compartments located at each of said sub stations and adapted to receive articles, means located at and under the control of said central or receiving station and adapted to simultaneously discharge or release the contents of the corresponding hoppers or compartments at the several sub stations, and conveying means adapted to receive and convey said discharged articles to said receiving station.

5. In an apparatus of the character described, a central or receiving station divided into compartments, a series of sub-stations each consisting of transverse and longitudinally corresponding hoppers or compartments adapted to receive articles, manually operated means at said central or receiving station for discharging or releasing said articles from corresponding hoppers or compartments at all of said sub-stations, and conveying means adapted to receive, convey and discharge said articles into a corresponding compartment at said central or receiving station.

6. In an apparatus of the character described, a central or receiving station divided into compartments, a series of sub-stations each consisting of transverse and longitudinally corresponding hoppers or compartments adapted to receive articles, manually operated means at said central or receiving station for discharging or releasing said articles from corresponding hoppers or compartments at all of said sub-stations, conveying means adapted to receive and convey said articles to said central or receiving station, and means for guiding said articles from said conveying means into a corresponding compartment in said receiving station.

7. In a sorting or separating table, a main or receiving station consisting of transverse compartments, a series of groups of sub-compartments or hoppers adapted to receive articles, the compartments in each of said groups being transverse and longitudinally corresponding, mechanism under the control of said main or receiving station and adapted to discharge or release the articles from corresponding compartments or hop-



pers of each of said groups, an endless belt adapted to receive and convey said articles, means for driving said belt, and means for guiding said articles from said belt into a corresponding compartment at said receiving station.

8. In an apparatus of the character described, a central or receiving station consisting of transverse compartments, a series of substations each station consisting of a group of hoppers or compartments adapted to receive articles, the compartments in each of said groups being transversely and longitudinally corresponding, means under the control of said central or receiving station for discharging or releasing the articles

from any of the corresponding groups of hoppers or compartments of said substations, conveying means adapted to receive and convey said articles, and means for longitudinally guiding said articles from said conveying means into a corresponding compartment in said receiving station.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses, this thirty first day of July A. D. 1906.

JAMES T. COWLEY.  
EDWARD G. THOMAS.

Witnesses:

WM. A. EVANS,  
EDGAR S. MAIN.