4 Sheets—Sheet 1.

A. WARTH.

Tailor's Table.

No. 207,575. Patented Aug. 27, 1878.

Fig. 1*.

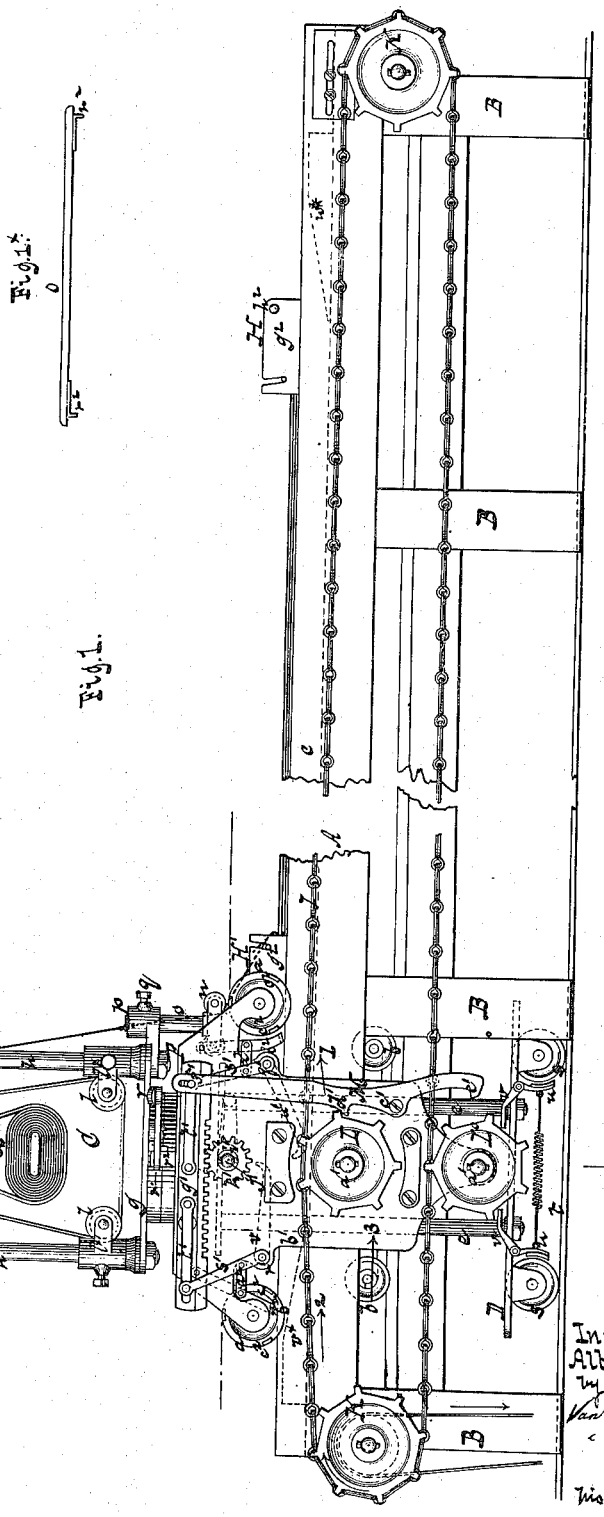


Fig. 1.

Witnesses.
Otto Schupland
J. H. Wahlers

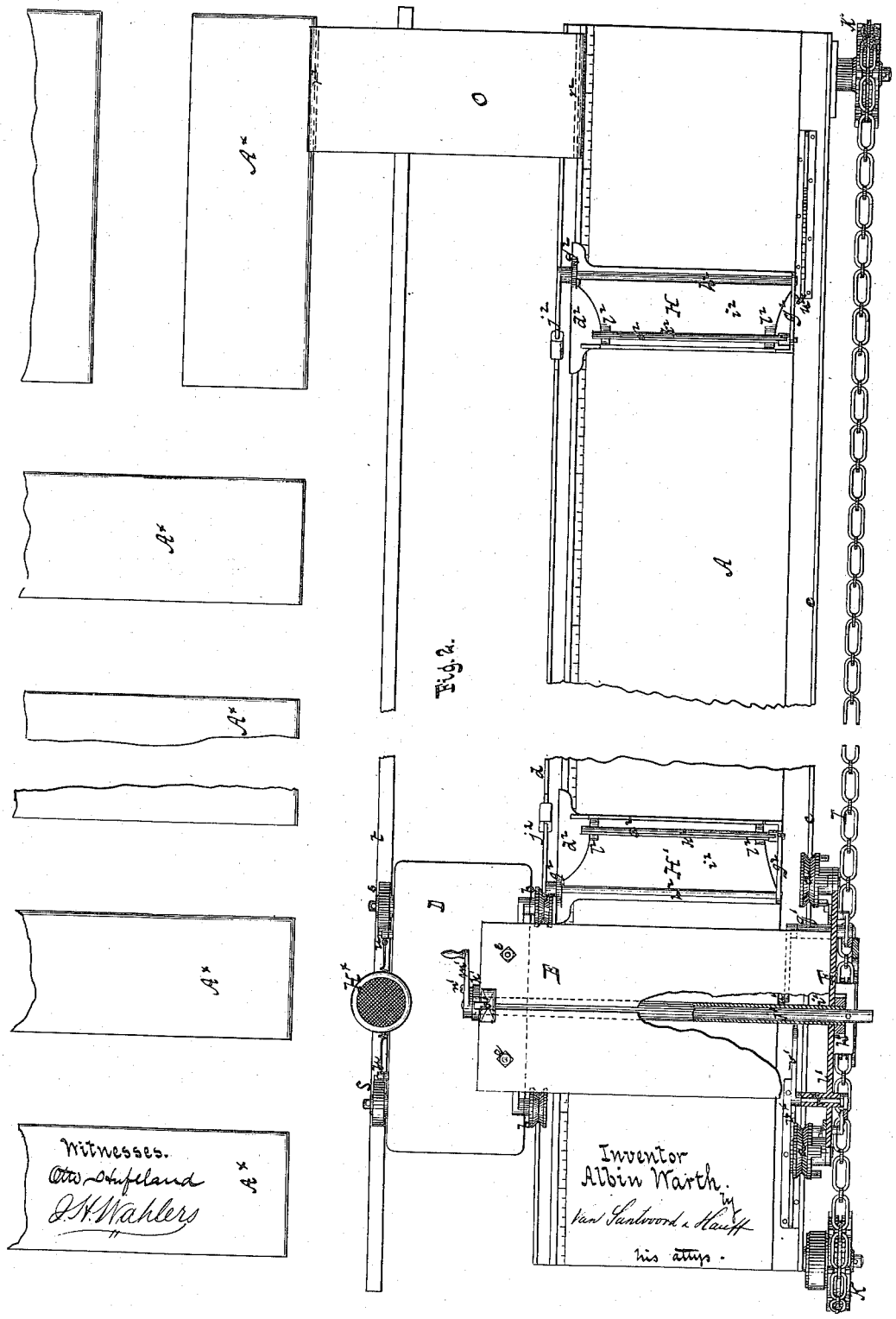
Inventor
Albin Warth
by
Van Santvoord & Hauff
his attys.

4 Sheets—Sheet 2.

A. WARTH.

Tailor's Table.

No. 207,575. Patented Aug. 27, 1878.



4 Sheets—Sheet 3.

A. WARTH.

Tailor's Table.

No. 207,575. Patented Aug. 27, 1878

Fig. 3.

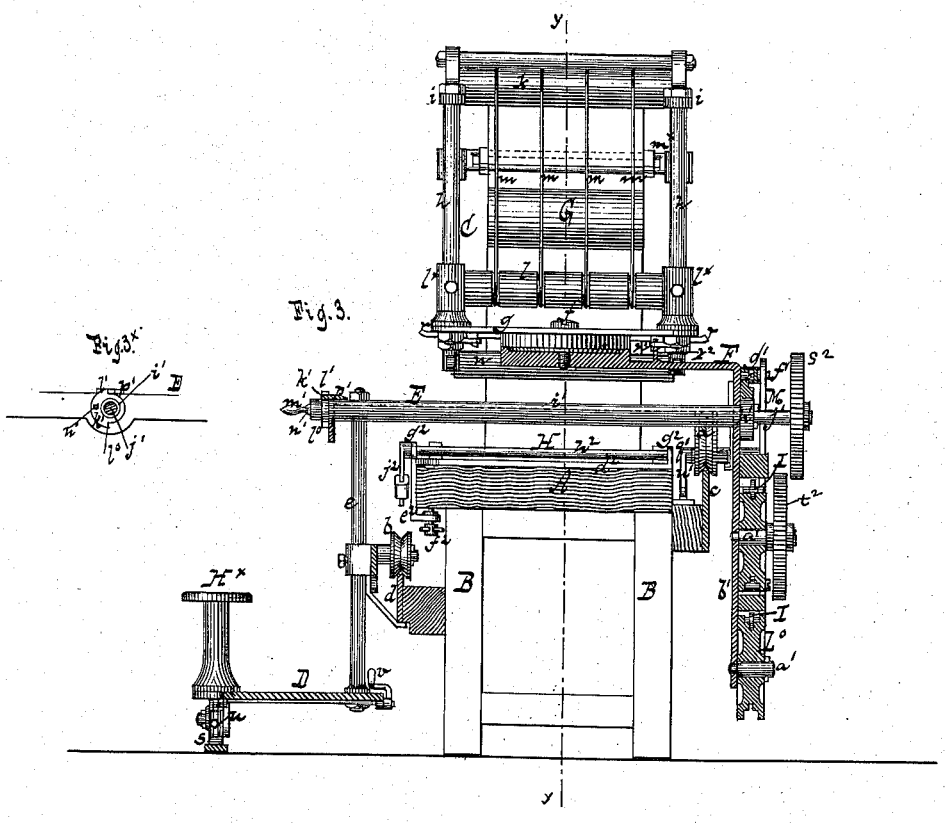


Fig. 3x.

Fig. 4.

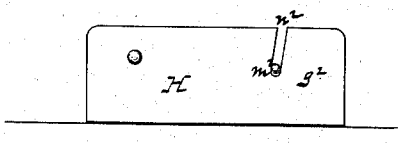


Fig. 5

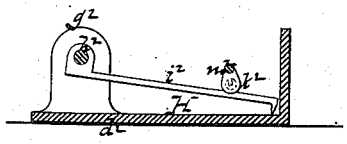


Fig. 6.

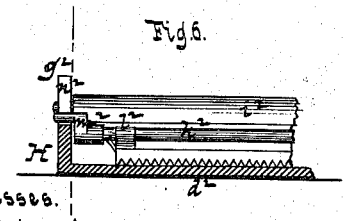
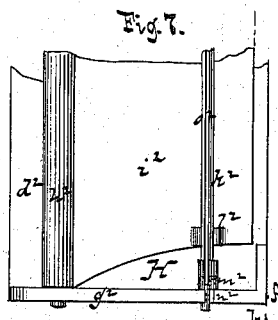


Fig. 7.



Witnesses.
Otto Hufeland
D. H. Wahlers

Inventor
Albin Warth
by Van Santvoord & Hauff
his attorneys

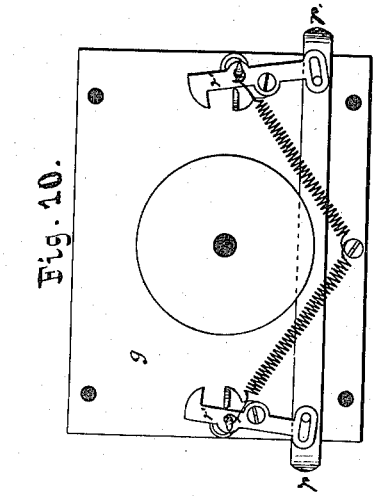
4 Sheets—Sheet 4.

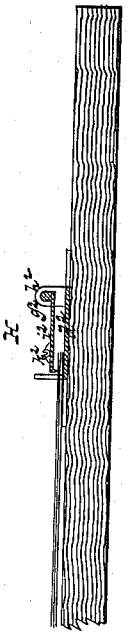
A. WARTH.

Tailor's Table.

No. 207,575. Patented Aug. 27, 1878.

Fig. 10.





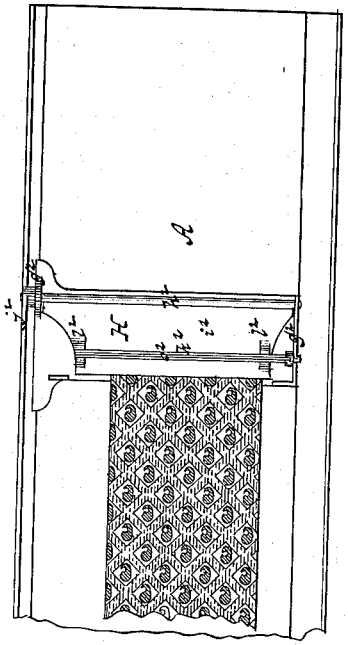


Fig. 8.

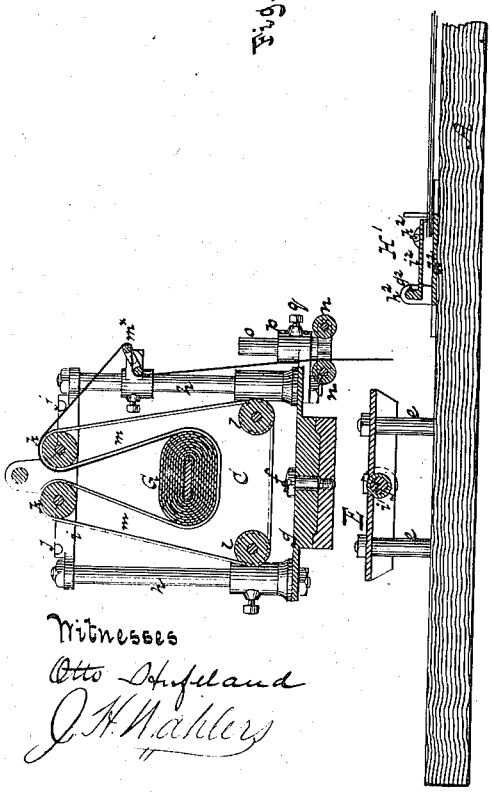
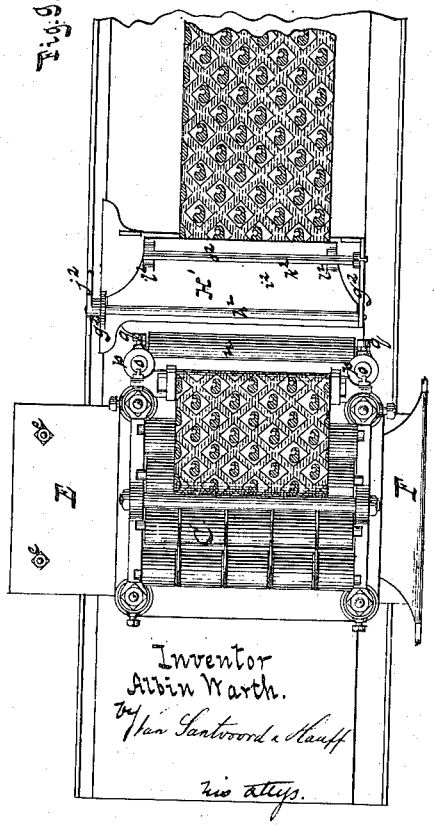


Fig. 9.



Witnesses
Otto Schulland
J. H. Wahlers

Inventor
Albin Warth.
by Van Santvoord & Mauff
his attys.

UNITED STATES PATENT OFFICE.

ALBIN WARTH, OF STAPLETON, NEW YORK.

IMPROVEMENT IN TAILORS' TABLES.

Specification forming part of Letters Patent No. **207,575**, dated August 27, 1878; application filed June 27, 1878.

To all whom it may concern:

Be it known that I, ALBIN WARTH, of Stapleton, in the county of Richmond and State of New York, have invented a new and useful Improvement in Tailors' Tables, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a side elevation of my invention. Fig. 1× is an edge view of the removable bridge. Fig. 2 is a plan or top view. Fig. 3 is a transverse section in the plane *x x*, Fig. 1. Fig. 3× is a detail view. Figs. 4 to 7, inclusive, are details, which will be referred to as the description progresses. Fig. 8 is a longitudinal vertical section in the plane *y y*, Fig. 3. Fig. 9 is a plan or top view, illustrating the operation in piling fabrics with naps or patterns. Fig. 10 is a bottom view of the package-carrier, showing the spring-latches by which it is held from turning.

Similar letters indicate corresponding parts.

This invention relates to certain improvements on that class of tailors' tables which I have described in my Patents No. 149,015, March 14, 1874, and No. 185,371, December 12, 1876.

My present improvements consist in the combination, with the table, the package-carrier, and the folding-gage, of two rails, both secured to the table, and one being situated below the table-top, so that the package-carrier is supported on both sides, and at the same time room is obtained for the folding-gage.

The car which supports the seat for the workman is connected with the package-carrier by a platform extending across the table-top, whereby the strain upon the table is equalized.

The package-carrier receives its motion by an endless chain or rope, and its motion can be controlled by the workman occupying the seat of the car. The folding-gage is provided with a grooved rod, which turns automatically as the thickness of the pile on the table increases. The guide-rollers of the package-carrier are adjustable, so as to carry the fabric either below or above the platform which connects the package-carrier and the car. The bands which support the package extend over rollers, which can be adjusted toward or from each other, according to the shape of the package. A flanged bridge serves to transmit the pile from the piling-table to the marking table or tables.

In the drawing, the letter A designates a table, which is supported by legs B, and which is forty or more feet long. On this table is placed the package-carrier C, which is provided with wheels *a a b b*, resting on rails *c d*. (Best seen in Fig. 3.) The rail *c* is secured to the table A on a level with its top; but the rail *d* is secured to the legs B below the top of the table, so as to get room for the folding-gages, as will be presently more fully explained, and, at the same time, by having a rail on each side of the table, the strain exerted by the package-carrier is equalized. The wheels *b b* are secured to vertical rods *e*, the lower ends of which support the platform of the car D, while their upper ends support one end of a platform, E, that extends across the table A, and the opposite end of which is secured to an L-shaped bracket, F, the vertical portion of which supports the axles of the wheels *a a*, while its horizontal portion supports the pivot *f*, on which turns the package-carrier C. This package-carrier consists of a platform, *g*, from which rise four standards, *h*, the upper ends of which are connected by traverses *i*. These traverses are provided with notches *j**, Fig. 1, which form the bearings for the gudgeons of rollers *k*, and on the standards *h* are secured brackets *l**, which form the bearings for the rollers *l*. The package G is supported by cords or bands *m*, which extend over and around the rollers *k l*. (See Figs. 1 and 8.) When the package is round the rollers *k* are placed in the outer notches *j*; but when the package is oblong, as shown in Fig. 1, the rollers *k* are placed in the notches *j**, so that in drawing off the fabric the package is prevented from falling over with a jerk. As the fabric is drawn off from the package it passes over one of the rollers *k*, down through a gage, *m**, which is adjusted according to the width of the fabric, and then between the guide-rollers *n* to the folding-gages H H′. The guide-rollers *n* have their bearings in hangers *o*, which are secured in lugs *p*, attached to the platform *g* of the package-carrier, and which can be raised or lowered in said lugs, and secured in the required position by set-screws *q*. When the fabric has no nap or no particular pattern or design,

so that the different layers can be placed one on top of the other without regard to such nap, pattern, or design, the guide-rollers *n* are lowered to such a position that the fabric, after having passed through between the same, will pass below the transverse platform E, as shown in Fig. 1; but when in placing the layers regard must be taken of the nap, patterns, or designs of the fabric, the guide-rollers *n* are raised (see Fig. 8) to allow the package-carrier to turn round over said transverse platform, as will be hereinafter more fully explained.

The package-carrier is prevented from turning on its pivot *f* by suitable spring-latches r^1, which can be operated by a slide, *r*, so placed that it can be conveniently reached by the workman occupying the car D. These latches engage with studs, r^2, rising from the bracket F. The platform of this car is supported on its inner side by the rods *e*, as already stated, and on its outside by wheels *s*, which run on a rail, *t*, secured to the floor. From the platform of the car rises the workman's seat H*. With the wheels *s* are combined brakes *u*, which are operated by foot-levers *v*, so that the motion of the car and of the package-carrier can be checked or arrested at any moment.

On the side of the table A is situated an endless chain, I, which is stretched over chain wheels or pulleys K, one of which receives a revolving motion from a steam-engine or other motor. The upper branch of this chain bears upon a chain-wheel, L, and its lower branch upon a chain-wheel, L^0, and the chain-wheels L L^0 turn loosely on studs a^1, secured in an extension, b^1, of the vertical branch of the bracket F, which supports the package-carrier C. In this extension is fastened a screw, c^1, Fig. 1, which forms the fulcrum for a clutch-lever, M, which is provided with two noses, d^1 e^1, so placed that by swinging said lever to the position shown in Fig. 1 the nose d^1 engages with the teeth of the chain-wheel L. By swinging said lever to its central position both the chain-wheels L and L^0 are free, and by swinging the lever from its central position outward in the direction of arrow 1 the nose e^1 is brought to engage with the teeth of the chain-wheel L^0.

The upper end of the lever M is connected by a pivot, f^1, with a toothed rack, g^1, which engages with a pinion, h^1, mounted on one end of a tubular shaft, i^1, (see Figs. 1, 2, and 3,) that embraces an arbor, j^1, and extends through beneath the platform E. On the opposite end of the tubular shaft i^1 is firmly secured a disk, k^1, (Figs. 3 and 3*,) which is provided with two shoulders, l^1 l^0, and close to this disk is situated a hand-crank, m^1, which is mounted on the arbor j^1, and fastened to the disk k^1 by a set-screw, n^1. From the platform E projects a tongue, *p'*, so situated that it allows the disk k^1 to be turned until either one or the other of the shoulders l^1 l^0 comes in contact with said tongue. When the hand-crank m^1 is turned to the horizontal position shown in Figs. 2 and 3 the shoulder l^1 abuts against the tongue *p'*, and by the action of the pinion h^1 and rack g^1 the clutch-lever M is moved so that its tooth d^1 engages with the chain-wheel L and prevents the same from turning on its stud. As the chain I travels in the direction of arrow 2, Fig. 1, it moves the package-carrier in the direction of arrow 3 until the tooth d^1 is thrown out of gear with the chain-wheel L. This operation can be effected by turning the hand-crank m^1 to a vertical position, or it is effected automatically, whenever the package-carrier is permitted to move close to the end of the table A, by the following means: In the vertical extension b^1 of the bracket F are mounted two horizontal rock-shafts, *q' r'*, Figs. 1 and 2, on the outer ends of which are mounted arms s^1, which connect by links t^1 with the rack g^1. On the inner ends of said rock-shafts are secured tappet-levers *u' v'*, at different distances from the inner surface of the rail *c*, which supports the wheels *a a* of the package-carrier, and these levers act, respectively, on inclined planes *u* v**, which are secured between the rail *c* and the edge of the table A, the inclined plane *u** being so situated that when the package-carrier has moved, in the direction of arrow 3, nearly to the end of the table the tappet-lever *u'* rides up on the inclined plane *u**, and when the package-carrier moves in the opposite direction the tappet-lever *v'* rides up on the inclined plane *v**.

By referring to Fig. 1, it will be seen that when the tappet-lever *u'* rides up on the inclined plane *u** the rack g^1 is caused to slide, so as to turn the clutch-lever M in the direction of arrow 1, the nose d^1 is thrown out of gear with the chain-wheel L, and the motion of the package-carrier is stopped. At the same time the hand-crank m^1 is turned, so as to throw the shoulder l^1 out of contact with the tongue *p'*, and by turning this hand-crank still farther, until the shoulder l^0 strikes the tongue *p'*, the nose e^1 of the clutch-lever M is thrown in gear with the chain-wheel L^0, and the motion of the package-carrier is reversed, as already described.

When the package-carrier reaches the opposite end of its stroke its motion is arrested by the action of the inclined plane *v** on the tappet-lever *v'*. It will also be noticed that the position of the tappet-levers *u' v'* is governed one by the other—that is to say, if one of the tappet-levers is raised by its inclined plane the other is depressed, and vice versa.

The inclined planes *u* v** will, in practice, be so arranged that they can be adjusted toward or from each other, according to the distance which the package-carrier is to travel.

The arms s^1 connect, by links a^2, with stop-levers b^2, Fig. 1, which act on teeth c^2, projecting from the face of the wheels *a*, whenever the rack g^1 is moved, so as to throw the clutch-lever M out of gear with the chain-wheels L L^0. The object of this arrangement is to counteract the momentum acquired by the package-

carrier, and to stop its motion immediately as soon as both the chain-wheels L L⁰ are free to revolve. The momentum acquired by the package-carrier may, however, also be counteracted by the brakes *u* of the car D, said brakes being under the control of the workman occupying the car, as previously described.

The folding-gages H H′ consist of bed-plates d^2, Fig. 3, which extend over the table A, and are provided at one end with downwardly-projecting flanges e^2, bent inward beneath the table, and furnished with set-screws f^2, which serve to fasten the same in the required position.

From each of the bed-plates d^2 rise lugs g^2, one at each end, which form the bearings for a rock-shaft, h^2, to which is secured a clamping-jaw, i^2, and a weighted arm, j^2, which latter serves to raise and to depress the clamping-jaw. (See Figs. 3, 4, 5, 6, and 7.) On the top of each clamping-jaw is placed a bar, k^2, which is adapted to rock in its bearings l^2, and on one end of which is secured a crank, m^2, the wrist-pin of which works in an oblique slot, n^2, in one of the lugs g^2. (See Fig. 4.)

In the top of the rock-bar k^2 is a groove, o^2, to receive the point of the knife which serves to cut the fabric.

The object of the rock-bar k^2 is to compensate for the upward motion of the clamping-jaw as the pile placed beneath said jaw increases in thickness. When the clamping-jaw is raised the rock-bar moves in a circle, and if said bar is firmly secured to the clamping-jaw the pieces cut off from the fabric differ in length so much that if a pile of one or more inches in thickness is formed the length of the top layers is greater by one-quarter inch or more than that of the bottom layers. By my rocking bar k^2 this defect is obviated, since, as the clamping-bar rises, the rocking bar is slightly turned forward by the action of the oblique slot *n* on the crank m^2.

After the folding-gages have been adjusted at the required distance apart on the table, the end of the fabric is drawn out from the package in the package-carrier and fastened in the clamping-jaw of one of the folding-gages, H. The package-carrier is then thrown in gear with the chain I and moved beyond the other folding-gage, H′, when its motion is stopped; the fabric is placed over the grooved bar in this second folding-gage; it is then cut and both the cut ends are secured beneath the clamping-jaw of this second folding-gage; then the package-carrier is moved back beyond the first folding-gage, H, and so on, until the pile has reached the desired thickness.

In this operation the fabric is piled without regard to either design, nap, or pattern, and the guide-rollers *n* are so placed that the fabric is drawn through beneath the transverse platform E.

If the fabric has a nap, pattern, or design it must be laid as illustrated in Figs. 8 and 9, and in the following manner: After the end of the fabric has been secured in the folding-gage H, the package-carrier is moved beyond the folding-gage H′ to the position shown in Figs. 8 and 9, and the fabric is cut in the grooved bar and secured in the clamping-jaw of this folding-gage, as already described. The nap, pattern, or design of the fabric turns toward the folding-gage H, (see Fig. 9;) and if the loose end of the fabric depending from the package-carrier would be fastened in folding-gage H′, and the package-carrier be caused to move back over or beyond the folding-gage H, the second layer of the fabric would lie face to face to the first layer; but the nap, design, or pattern of this second layer would run contrary to that of the first layer. In order to bring each pair of layers face to face with the nap, pattern, or design running in one and the same direction, the guide-rollers *n* of the package-carrier must be raised, and when the package-carrier has reached the position shown in Fig. 8 it must be turned half round on its pivot *f*, and then moved back beyond the folding-gage H before the loose end of the fabric depending from the package-carrier can be secured in this last-named folding-gage. The package-carrier is then moved beyond the folding-gage H′, the fabric is cut, and the second layer is secured in the clamping-jaw of this folding-gage, the face of this second layer being turned toward the face of the first layer, and the naps, patterns, or designs of both layers running in one and the same direction. The package-carrier is then again turned half round on its pivot *f*, and the second pair of layers are formed the same as the first pair, always starting from the clamping-gage H, so that the naps, patterns, or designs of all the layers will run in one and the same direction, while the layers of each pair are face to face.

During this operation it is requisite that the guide-rollers *n* can be raised, so as to allow the package-carrier to turn over the transverse platform E, while in forming a pile of layers without regard to nap, pattern, or design the guide-rollers *n* must be lowered so that the fabric will always pass beneath the transverse platform E, and will not be liable to pass between this platform and the bottom plate of the package-carrier. It is therefore essential to have said guide-rollers so arranged that they can be raised or lowered.

By means of the transverse platform E the wheels *a a b b*, which support the package-carrier on both sides of the table, and the car D are firmly connected, the table is relieved from all side strain, and the motion of the package-carrier and car can be effected with comparatively little power, and it can be controlled with the greatest ease and accuracy; and if it is considered that a table for piling fabrics must be from forty to sixty feet long, and that the weight of the package varies from forty to one hundred pounds, the advantages above stated will be readily appreciated.

When a pile has reached the desired thick-

ness it may be taken from the table A to one of the tables A*, Fig. 2, for the purpose of marking. This operation is facilitated by means of a removable bridge, O, a longitudinal section of which is shown in Fig. 1×. It consists of a flat plate of metal or other suitable material, and is provided at its bottom surface with lips r^2, which fit between the edges of the tables A A* and retain the bridge in position. If the table A is long enough the marking may be done on the table.

If desired, my apparatus can be used for forming a pile of folded layers instead of forming the same of layers detached from each other by cutting; in this case the clamping-jaws of the folding-gages are thrown back, and suitable folding-sticks are placed in the bights between the successive layers.

In order to be able to run the package-carrier C by hand-power, I mount on the shaft j^1 a cog-wheel, s^2, and on the stud a^1, Fig. 3, a cog-wheel, t^2, which is firmly connected to the chain-wheel L. The cog-wheel s^2 is made movable, so that it can be thrown in or out of gear with the cog-wheel t^2, and if it is in gear the set-screw n^1 of the hand-crank m^1 is taken out, the wheels K of the chain I are stopped, and by turning the crank m^1 the package-carrier can be moved in either direction.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the table A and package-carrier C, of two rails, *c d*, secured to the table A on opposite sides thereof, one being on a level with the surface of the table and the other beneath said level, a bracket, F, supporting the package-carrier, wheels *a a*, connected to said bracket and running on the rail *c*, a transverse platform, E, supported at one end by the bracket F and at the opposite end by rods *e* and wheels *b b*, running on a rail, *d*, and supporting the rods *e*, all combined and adapted to operate substantially in the manner herein shown and described.

2. The combination, with the table A, package-carrier C, its wheels *a a b b*, rails *c d* on opposite sides of the table, bracket F, supporting the package-carrier, and transverse platform E, supported by the wheels *b b*, of a car, D, running on a rail, *t*, the transverse platform forming the connection between the car and the package-carrier, substantially as set forth.

3. The combination, with the table A, package-carrier C, car D, and mechanism for imparting motion to said car and package-carrier, of a brake mechanism adapted to be operated from the workman's seat H* and acting on the wheels of the car, substantially as and for the purpose described.

4. The combination, with the table A, package-carrier C, car D, and mechanism for imparting motion to said car and package-carrier, of movable stops, adapted to be operated from the workman's seat, and the wheels *a a* of the package-carrier, adapted to be brought into gear with said stops, substantially as and for the purpose set forth.

5. The combination, with the table A, package-carrier C, and car D, of an endless chain, I, loose chain-wheels L L^0, running in gear with the chain I, and mechanism for stopping and releasing said chain-wheels, substantially as and for the purpose described.

6. The combination, with the table A, package-carrier C, car D, endless chain I, and loose chain-wheels L L^0, of a clutch-lever, M, and mechanism for adjusting the position of said clutch-lever from the workman's seat, substantially as set forth.

7. The combination, with the table A, package-carrier C, car D, endless chain I, loose chain-wheels L L^0, and clutch-lever M, of mechanism for throwing the clutch-lever automatically out of gear when the package-carrier reaches either end of its stroke, substantially as described.

8. The combination, with the table A, package-carrier C, car D, endless chain I, and loose chain-wheels L L^0, of a hand-crank, m^1, and cog-wheels s^2 t^2 for moving the package-carrier by hand, substantially as set forth.

9. The combination, with the table A, package-carrier C, transverse platform E, and car D, of a tubular shaft, i^1, extending beneath the transverse platform, a pinion, h^1, mounted on one, and a disk, k^1, mounted on the opposite, end of this tubular shaft, a hand-crank, m^1, connected to the disk k^1, a tongue, p', for stopping the motion of the disk, a rack, g^1, geared together with the pinion h^1, and a lever, M, for throwing the package-carrier in or out of gear with the driving mechanism, substantially as described.

10. The combination, with the table A, package-carrier C, rack g^1, pinion h^1, and lever M, for throwing the package-carrier in or out of gear with the driving mechanism, of stops connected to the rack *g*, and adapted to act on the wheels *a a* of the package-carrier, substantially as set forth.

11. The combination, with the package-carrier C, its supporting-bracket F, pivot *f*, and transverse platform E, of guide-rollers *n*, adapted to be raised above or dropped below the transverse platform, substantially as and for the purpose described.

12. The combination, with the clamping-jaw i^2 of the folding-gages and with their grooved rocking bars k^2, of a crank, m^2, and lugs g^2, provided with oblique slots n^2, substantially as and for the purpose shown and described.

13. The combination, with the piling-table A and with the marking-tables A*, of a bridge, O, provided with lips a^2, to fit between the edges of the tables, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 24th day of June, 1878.

ALBIN WARTH. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.