J. BUCHHEIT.

WORK TABLE.

APPLICATION FILED MAR. 9, 1918.

1,278,584.

Patented Sept. 10, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

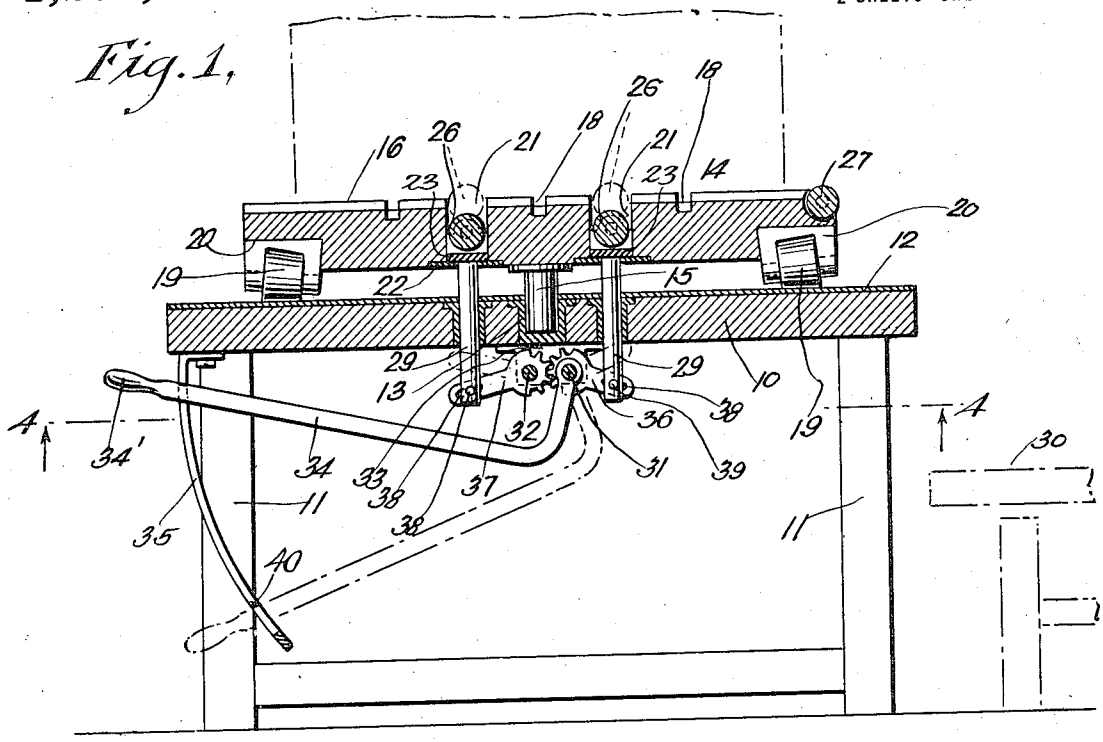
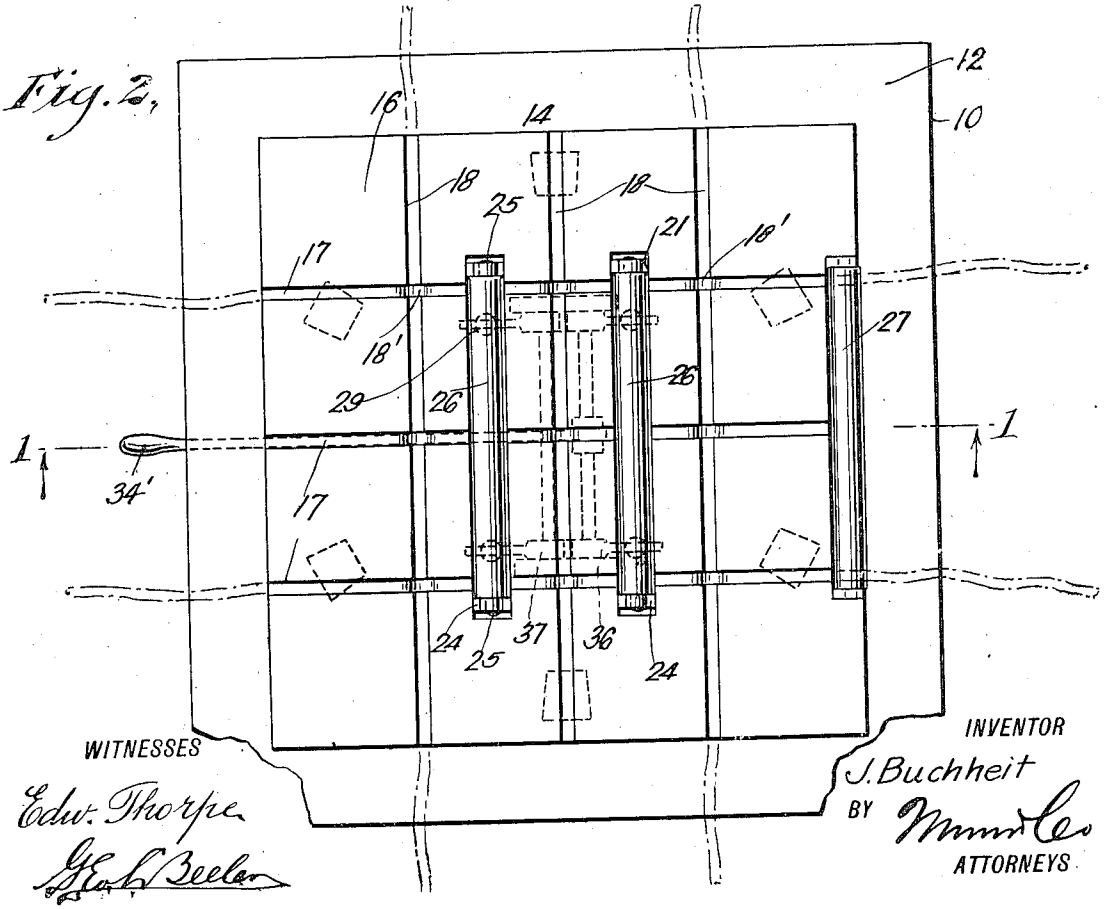


Fig. 2.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3,

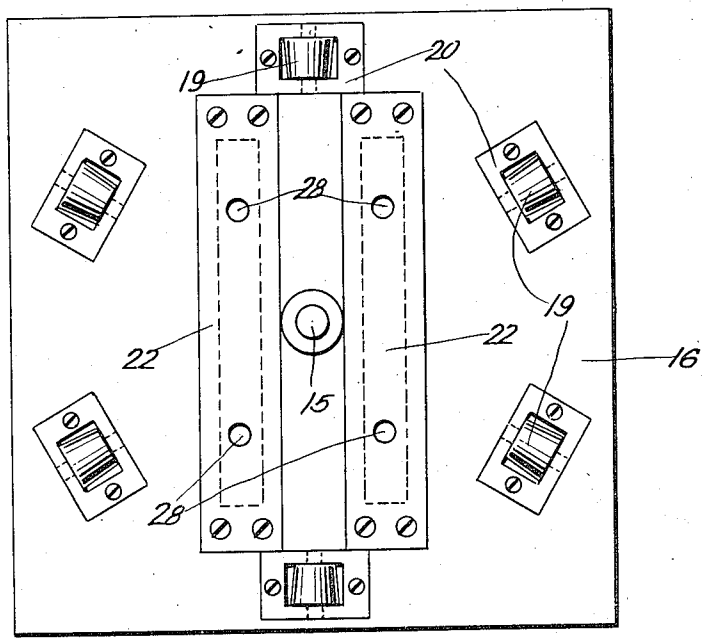


Fig. 4,

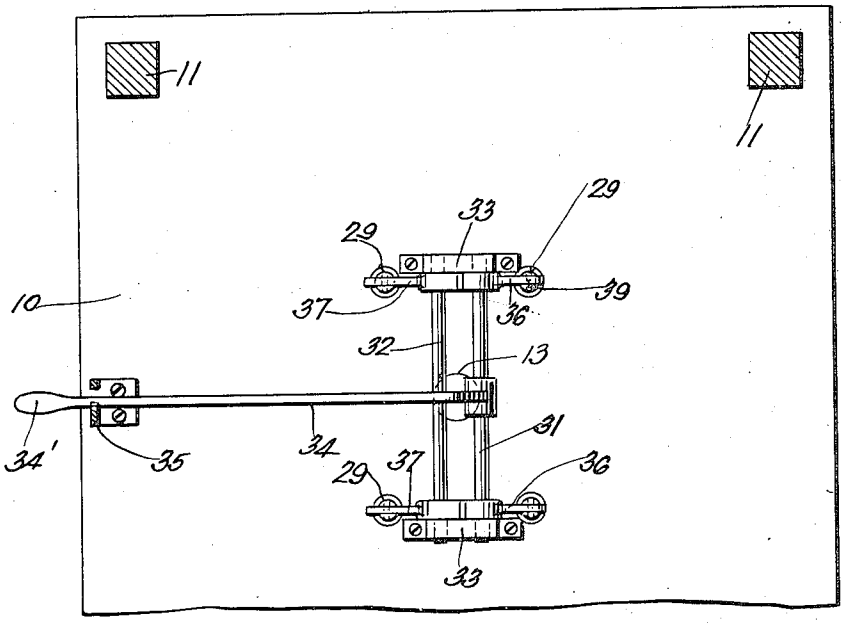
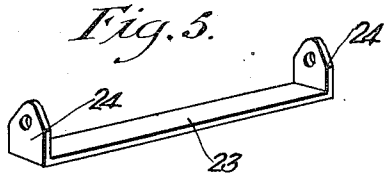


Fig. 5.



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UNITED STATES PATENT OFFICE.

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WORK-TABLE.

1,278,584. Specification of Letters Patent. Patented Sept. 10, 1918.

Application filed March 9, 1918. Serial No. 221,474.

To all whom it may concern:

Be it known that I, JOHN BUCHHEIT, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Work-Table, of which the following is a full, clear, and exact description.

This invention relates to work tables such for example as are adapted especially for the wrapping of heavy bundles, boxes, packages or the like, and delivering the same therefrom to a truck or other mechanical carrier.

More definitely stated among the objects of the invention is to provide a work table designed particularly for wrapping of large and heavy bundles of printed or unprinted sheets of paper, although the field of usefulness is not to be unnecessarily limited in this respect. In the ordinary wrapping of heavy bundles of paper in paper mills or warehouses it is usual for a number of wrapping cords or the like to be laid upon the surface of a table in any suitable arrangement and then for the pile of paper to be laid thereon; the wrapper is then obliged to pass the cords upward around the bundle and tie or otherwise fasten the ends thereof. To do this he is required either to move from one side of the table to another around the table or else turn the bundle upon the table which can be done only with expenditure of much power and time.

Another object of the invention is to provide a work table having means to initiate the removal therefrom of a heavy weight or package or other object for delivery to a suitably disposed carrier.

With the foregoing and other objects in view the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which—

Figure 1 is a vertical longitudinal section on the line 1—1 of Fig. 2.

Fig. 2 is a plan view of the same showing especially the construction of the turn table and the lifting rollers carried thereby.

Fig. 3 is a bottom plan view of the turn table.

Fig. 4 is a bottom plan view of the base and lifting means coöperating therewith; and

Fig. 5 is a detail of one of the roller supports or cradles.

Referring now more particularly to the drawings I show at 10 a base which may constitute any suitable fixed or stationary bench, table or other support, preferably of a nature similar to an ordinary table having legs 11. The base is preferably faced at its upper surface with a sheet metal plate 12, and the center of said plate and base is provided with a centering device indicated as a bearing cup 13.

Supported upon the base plate 12 and adapted to rotate around the vertical axis of the cup 13 is a turn table 14 provided with a centering feature, namely, a pin 15 projecting downward into the cup 13 whereby the turn table is held from lateral movement or displacement with respect to the base and its plate 12. If desired the coöperating features 13 and 15 may be interchanged without departing from the spirit of the invention or its operation.

The turn table has as one of its essential characteristics a substantially flat top 16 preferably of rectangular formation in plan view, but having its surface broken by means of a series of intersecting grooves 17 and 18 shown as arranged in two groups of three grooves each. The two kinds of grooves are in the main preferably of the same depth, but the grooves 18 are indicated as having depressions or pits 18′ at the points of intersection with the grooves 17. The purpose of these grooves is to accommodate heavy wrapping cords adapted to be laid across the table top in the manner indicated in dotted lines in Fig. 1, the cords being thus held in proper position with respect to one another without interference with the material to be wrapped or the likelihood of damaging any of such material or the covering material therefor. The pits 18′ are provided so that where the cords overlap each other there shall be no interference because of the bundle or material applied to the table top thereover.

The bottom of the turn table as indicated best in Fig. 3 includes a circular series of anti-friction rollers 19 each journaled in a

box or similar support 20 secured to or constituting a part of the turn table. In order to provide maximum freedom of rotation for the rollers 19 they are preferably made of frusto-conical form, all the curved surfaces of which converge toward a common point lying within the plane of the plate 12 and the vertical axis of the pin 15. By this arrangement I provide practically all rolling friction for the rotation of the turn table and am able to employ a simple flat plate 12 which is most desirable for original cost or installation and for most efficient service. The plate 12 facing the base 10 makes a strong protection therefor, and there is hence no question or trouble about providing a proper track upon which the rollers 19 operate.

An operator standing at the front of the work table as at the left of Fig. 1 may readily wrap and tie any ordinary package irrespective of its weight or size without changing his position, the package and turn table being easily rotated around the centering pin 15 so as to bring the various portions or sides of the package into easy reach. Any suitable means, however, may be provided to prevent rotation of the turn table if it is desired at any time to hold it stationary.

From the nature of the work table as applicable for the wrapping and tying of heavy bundles or boxes such work being adapted to be performed readily by boys or men having less strength than others it is desirable to provide means for easily removing the wrapped bundle or box from the turn table. To this end I provide lifting means whereby even a boy may initiate the removal of the package from the turn table even though the wrapping cords or ropes may project below the main surface of the bottom of such package.

Adjacent to the center of the turn table I provide a pair of parallel slots 21 each having a bottom reinforcement plate 22 constituting a closure. In each of the slots and supported normally upon said closure plate 22 is provided a cradle 23 having a flat elongated bottom and upright bearing lugs 24 at its ends in which are journaled the end trunnions 25 of a roller 26 lying normally wholly within the slot 21 in the bottom of which the cradle is located. The side and end walls of each slot 21 are preferably vertical providing for the vertical movement of the cradle and roller supported therein. 27 indicates an anti-friction roller journaled for rotation around a fixed axis at the upper rear edge of the turn table, the top of the roller projecting slightly above the top plane of the turn table.

Each of the closure plates 22 at the bottom of the turn table is provided with a plurality of holes 28 through or into which a like number of upright plungers 29 are adapted to operate. As shown in Fig. 1 the upper ends of the plungers 29 simply project into the holes 28 against the bottoms of the cradles in which position the plungers constitute means to lock the turn table from rotation. When, however, the plungers are projected upward by any suitable means they lift the cradles and rollers 26 projecting their upper faces above the surface of the table whereby any bundle, package, or other object on the table will be lifted so that it may be rolled freely over the table and the rear roller 27 upon a truck or other carrier 30. When the package is thus hoisted the wrapping rope or cord thereon will be made to clear the grooves 18 so that there shall be no obstruction to the rearward or lateral delivery of the bundle or package.

The means I deem most suitable for controlling the operation of the plungers for efficiency and convenience to the operator comprises a pair of rock shafts 31 and 32 parallel to each other and in the same horizontal plane in bearings 33 beneath the base 10 and between the vertical planes of the slots 21. A hand lever 34 of any suitable form is fixed at its rear end to the rock shaft 31 and at its front end is provided with a handle 34′ which is adapted to operate along an arc shaped guide 35 shown connected to the under surface of the base 10 within convenient reach of the operator at the front of the machine. 36 and 37 indicate a pair of toothed arms meshing with each other and fixed to the respective rock shafts 31 and 32, the free ends of the arms projecting in opposite directions from each other and from the rock shafts, and each of these arms is provided with a slot 38 for loose pivotal connection at 39 with the lower end of one of the plungers 29. There are provided preferably two pairs of these arms 36 and 37 adjacent to the opposite ends of the rock shafts so that when the operator grasping the handle 34′ depresses the lever 34 into or toward the dotted line position in Fig. 1 the rock shaft 31 is rotated in the same direction causing the arms 36 to lift the plungers 29 loosely pivoted thereto. At the same time by virtue of the teeth between the arms 36 and 37 the free ends of the arms 37 will be lifted, thereby lifting the plungers 29 pivoted to their outer ends. The upper ends of the plungers during this operation are guided upward through the holes 28 whereby the cradles 23 will be lifted bringing the rollers 26 approximately into the position shown in dotted lines in Fig. 1 or with their upper portions projected above the plane of the table 14. By reason of the leverage through the lever 34 a light operator may readily lift a very heavy load or bundle from the table. The lever 34 may be locked in this position if desired beneath the shoulder 40 near the lower end of the guide arc 35. The arms 36

and 37 may be variously related to each other as to length but by making the arms 37 the longer it will be noted that the plungers and roller nearer the operator will be lifted enough higher than the other plungers and roller 26 to place the bundle or package at a slight rearward inclination whereby the delivery of the package from the turn table will be automatically facilitated. With the parts as shown in Fig. 1 presumed to be in their normal position with the upper ends of the plungers interlocking with the plates 22 the turn table will be held from rotation making it easier under certain conditions for the wrapping of the bundle to be accomplished or for other purposes. When, however, the turn table is to be rotated the operator by lifting slightly on the handle 34' the ends of the plungers will be lowered out of contact with the plates 22 permitting thereby free rotation of the turn table. The lever 34 may thus be held in its highest position by any convenient means and when set free its weight may be relied upon to cause the upper ends of the plungers to bear against the plates 22 or the bottom surface of the turntable and so be in position at all times to automatically engage in the holes 28 when the operator rotates the turntable bringing the holes into registry with the ends of the plungers.

I claim:

1. In a work table, the combination of a base, a turn table mounted thereon for rotation around an axis in a plane parallel to the base, a plurality of anti-friction rollers carried in the turn table normally below the upper surface thereof, and means acting through the base serving to lock the turn table from rotation and to lift the rollers above the surface of the table.

2. The herein described turn table having a plurality of slots formed therein, anti-friction rollers carried in said slots with their upper surfaces normally below the surface of the table, a plurality of plungers for each roller, and means to force all of the plungers upward simultaneously to project the upper portions of the rollers above the surface of the table, said plungers serving normally to prevent the rotation of the turntable, substantially as set forth.

3. In a work table of the character set forth, the combination of a base, two pairs of vertical plungers operating through the base, a rock shaft mounted between the vertical planes of the two pairs of plungers, a pair of arms extending from the rock shaft into connection with the lower ends of one pair of plungers whereby when the shaft is rotated said pair of plungers will be lifted, means extending from the rock shaft to the other pair of plungers to cause simultaneous upward movement of the other pair of plungers with the upward movement of the first pair, a table supported upon the base and having formed therein a pair of slots into each of which slots a pair of plungers are adapted to project, and an anti-friction roller journaled in each slot in position to be lifted by the plungers.

4. In a turntable construction, the combination of a base, a turntable having formed therein a pair of parallel slots, a cradle mounted in each slot, an anti-friction roller journaled in each cradle, pairs of plungers fitted for vertical movement through the base, the bottom of the turntable being formed with holes adapted to register with the upper ends of the plungers permitting the ends of the plungers to bear upward against the bottoms of the cradles, and means to elevate all of the plungers simultaneously to raise both anti-friction rollers above the surface of the turntable, one of the rollers being elevated higher than the other.

JOHN BUCHHEIT.