Oct. 8, 1946. J. BRESLAV 2,408,730

STOCK SUPPORTING TABLE

Filed March 22, 1944 3 Sheets-Sheet 1

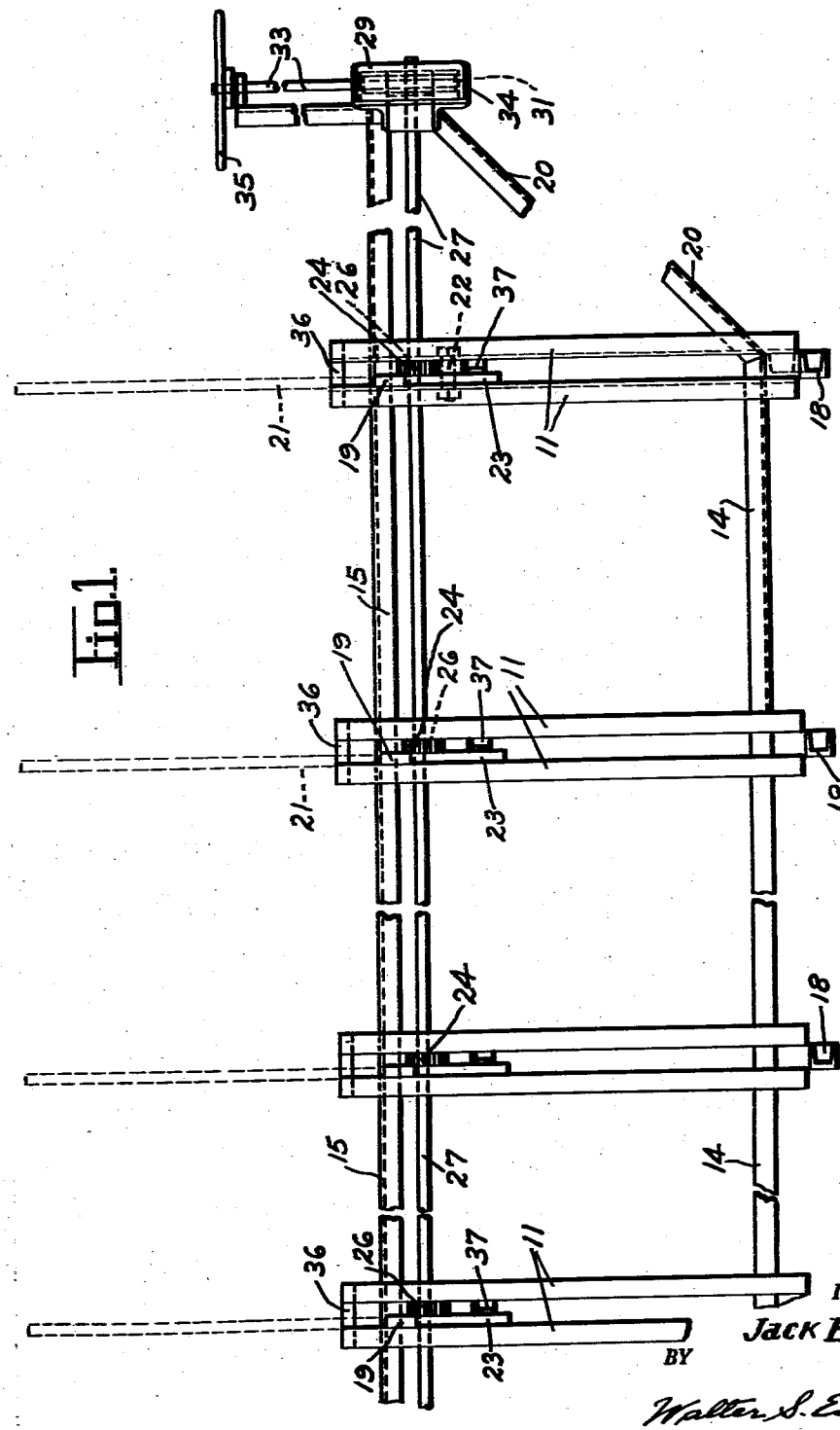


Fig. 1.

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Fig. 3.

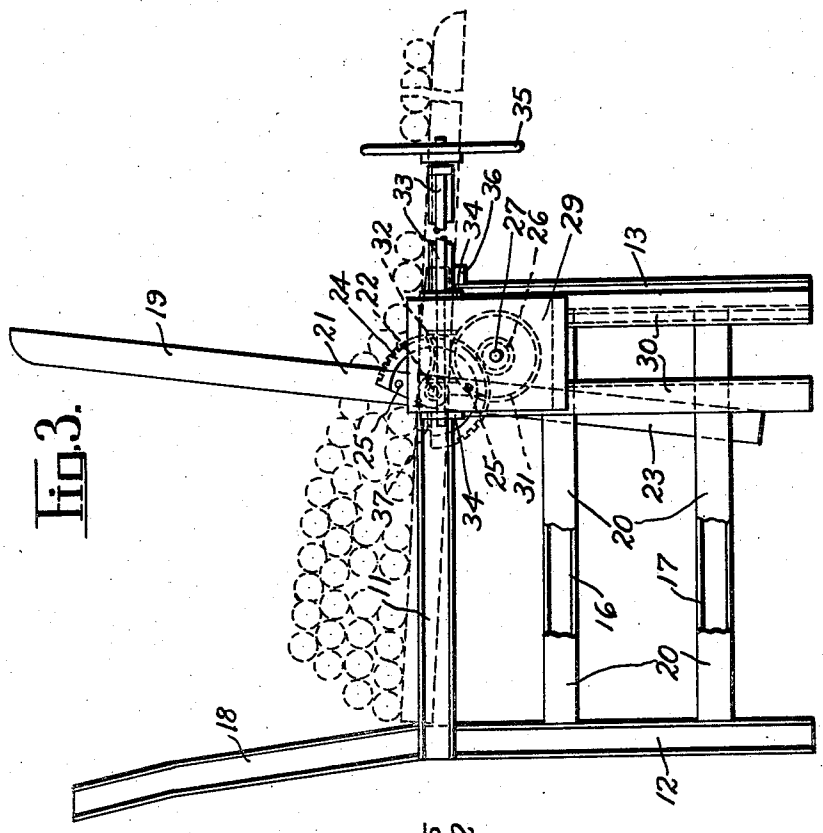
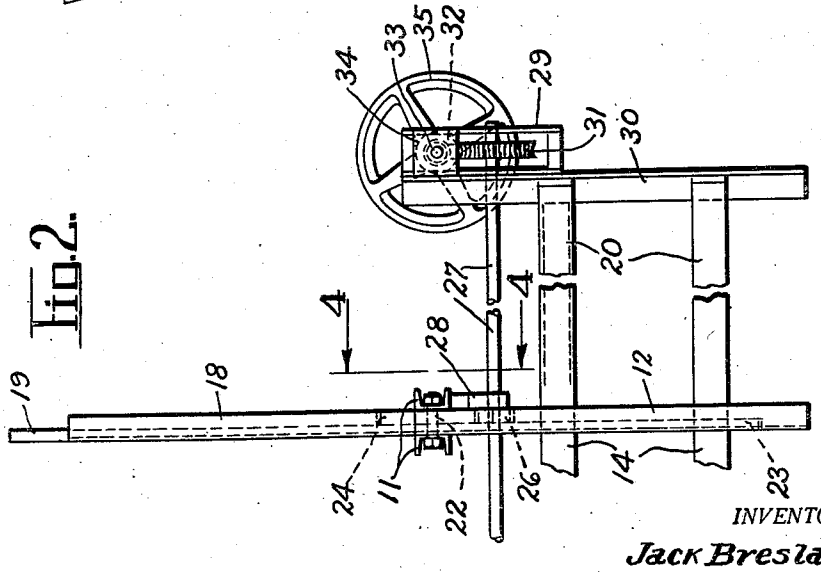


Fig. 2.



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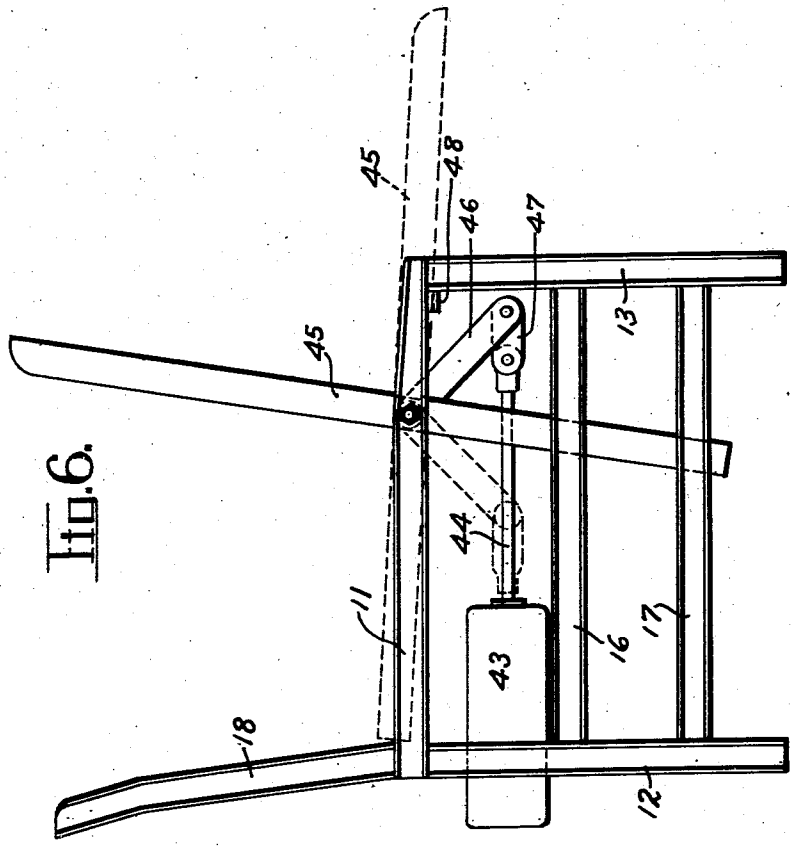


Fig. 6.

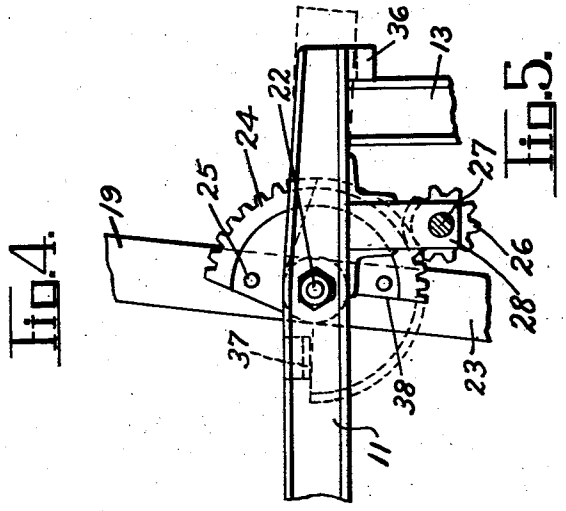


Fig. 4.

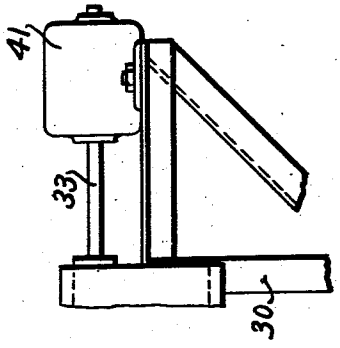


Fig. 5.

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Patented Oct. 8, 1946 2,408,730

UNITED STATES PATENT OFFICE

2,408,730

STOCK SUPPORTING TABLE

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Application March 22, 1944, Serial No. 527,591

7 Claims. (Cl. 214—16)

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This invention relates to improvements in stock supporting tables and more particularly to a table for supporting a piled-up plurality of tubes, or bars, and having means to tilt the pile of tubes and to provide a support for the tubes as they separate and roll off from the table.

The table of this invention is particularly useful in the handling and storing of piled-up tubes, bars, or rods during the manufacture thereof in that it is provided with a supporting base and upwardly extending sides, one of said sides being swingable outwardly to dispose, a part thereof in position to form an inclined extension of the base, and another part thereof in position to tilt the pile of tubes, bars, or rods and cause them to separate and roll off the base and along the inclined base extension.

One object of this invention is to provide a table adapted to support a plurality of piled-up tubes, bars, or rods having a supporting base composed of cross-bars, and sides composed of upwardly extending arms, the arms at one side of said table being swingable into position to form inclined extensions of the supporting cross-bars.

Another object is to provide in a table of the above nature and structure the upwardly extending arms which are swingable to form inclined extensions and to engage in under the pile of stock to tilt it and cause it to separate into its individual units and roll off the supporting cross-bars and along the inclined extensions.

A further object is to provide in a table of the above nature and structure means to limit the swinging movement of the pivoted side arms and means to operate the same in unison.

A still further object of this invention is to provide an improved stock supporting table which will be relatively inexpensive to manufacture, simple in construction, compact, and very efficient and durable in use.

With the above and other objects in view, which will appear as the description proceeds, there has been illustrated in the accompanying drawings a form in which the invention may be conveniently embodied in practice.

In the drawings:

Figure 1 is a top plan view of a table embodying the features and principles of this invention;

Figure 2 is a broken side view of the table;

Figure 3 is an end view of the table;

Figure 4 is a broken and enlarged sectional view taken on the line 4—4 of Figure 2;

Figure 5 illustrates the use of a motor operating means; and

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Figure 6 illustrates the use of a compressed-air or hydraulic cylinder operating means.

Referring now to the drawings wherein like reference numerals designate like parts throughout the several views, the numeral 11 denotes spaced apart pairs of cross-bars, which form the stock supporting base, or top, of the table of this invention and the numerals 12 and 13 denote the legs which support said cross-bars 11 on a support, such as a floor. Suitable beams 14 and 15 tie the legs 12 and 13 respectively together lengthwise of the table and suitable beams 16 and 17 tie the legs 12 and 13 of each pair together crosswise of the table.

Each of the legs 12 is extended upwardly above the table top to form a side bar 18, all of which side bars 18 compose one side member of the table. The other side member of the table is composed of the end portions 19 of the bars 21 which are pivoted on suitable short shafts 22 extending between and having a bearing in each of the cross-bars of the spaced apart pairs 11, the shafts 22 being herein shown in the form of bolts. The bars 21 are extended beyond the pivot point thereof to provide end portions 23. In the arrangement illustrated, and in accordance with the features of this invention, the bars 21 when swung on their respective pivots, or shafts, 22, will assume the inclined position shown in dotted lines in Figure 3, the end portions 19 forming an inclined extension of the base, or cross-bars 11, and the portions 23 supplementing the cross-bars 11 as the table top and engaging and tilting the pile of tubes, bars, or rods to urge them to separate and roll from the table onto a bench, or the line (not shown).

The mechanism to swing the bars 21, as illustrated in Figures 1–4 inclusive, comprises gear segments 24, one of which is suitably secured, as by rivets 25, to each of the bars 21 and rotates on the respective shaft 22. Each gear segment 24 is drivingly engaged by a pinion 26 suitably secured to a shaft 27 which extends from one end of the table to the other and is journaled in bearing blocks 28, one of which is secured to one of each pair of the cross-bars 11. The shaft 27 extends beyond one end of the table and enters a gear box 29 supported on legs 30 and braced by bars 20 from the table leg 12 and within which a worm wheel 31, secured to the shaft 27, is disposed. A worm 32, also disposed in the gear box 29 drivingly engages the worm wheel 31, and is secured on a cross-shaft 33 which is journaled in bearing blocks 34 secured, as by welding, to the box 29. The shaft 33 extends out of the box 29

and has a hand wheel 35 secured upon its outer end. Rotation of the hand wheel 35 will, through the shaft 33, the worm 32, the worm wheel 31, the shaft 27, and the gear segment 24 swing the bar 21 from its upwardly disposed position to the inclined position shown by dotted lines in Figures 1, 3, and 4.

A short bar 36 extends between the cross-bars 11 of each pair and forms a stop, and a support, for the bar end 19, limiting its swinging movement and assisting in the support of the load as the stock rolls off of the table. A short angle piece 37 secured as by welding to one of each pair of cross-bars 11 is positioned to be engaged by an edge 38 of the gear segment 24 to assist in the stop action of the short bar 36.

Figure 5 illustrates the use of an electric motor 41 for driving the cross-shaft 33 whereby the device may be operated by the usual motor control positioned remote from the table.

Figure 6 illustrates the use of an air or hydraulic pressure cylinder 43, the piston (not shown) of which is connected to a rod 44. Operation of the cylinder 43 in the usual manner will swing the bar 45, corresponding to the bar 21 of Figures 1–4 inclusive, into and out of its inclined position as shown in dotted lines, through the instrumentality of an arm 46 secured to the bar 45 and a link 47, pivotally connected to the arm 46 and to the piston rod 44. Movement of the piston rod 44 in one direction will cause the bar 45 to swing into the inclined position against the stop 48 as shown in dotted lines in Figure 6.

The provision of the swingable side member 19, or 45, for the stock supporting table of this invention whereby the side member in one position maintains the piled-up tubes, rods, or bars on the table top and, when in another position, tilts the stock and provides an inclined table top extension over which the stock rolls onto a bench, or the like, insures the rapid and efficient handling of stock with a minimum of distortion or damage thereto.

While there has been disclosed herein one form in which the invention may be embodied in practice, it will be understood that the novel features and principles of this invention may be embodied in other specific forms without departing from the spirit and essential attributes thereof, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the claims rather than to the foregoing description to indicate the scope of the invention.

Having thus fully disclosed the invention, what is claimed as new and for which it is desired to secure Letters Patent is:

1. In a stock supporting table, a stock supporting base, a first upright side member at one side of said base, a second straight and upright side member at the other side of said base; said second member being pivoted intermediate its ends to position its end portions, when swung on its pivot, inclined in respect to said base, with one end portion extending beyond said other side of said base and with the other end portion between the sides of the base and forming an inclined supplemental base to tilt the load and facilitate its removal from said base.

2. In a stock supporting table, a substantially horizontal stock supporting base, upstanding arms spaced apart along one side of said base, and straight and upstanding arms spaced apart along the other side of said base, said last mentioned arms being pivoted intermediate their ends at said other side of said base, and means to swing said pivoted arms from an upstanding position to a position with one of their ends inclined downwardly out the plane of said base and extending outwardly from the side of said base, and with their other ends inclined upwardly out of the plane of said base and extending inwardly from the side of said base to which they are pivoted.

3. In a stock supporting table, a substantially horizontal stock supporting base, upstanding arms spaced apart along one side of said base, and straight arms spaced apart along the other side of said base, said last mentioned arms being pivoted intermediate their ends at said other sides of said base and adapted to swing from an upstanding position to a position with both of their ends inclined out of the plane of said base to form an inclined member extending from a side of the base and an inclined member extending across the base, means to connect said pivoted arms for swinging movement in unison, and means to swing said pivoted arms.

4. In a stock supporting table, a substantially horizontal stock supporting base, upstanding arms spaced apart along one side of said base, forming a side for the base, and straight arms spaced apart along the other side of said base, said last mentioned arms being pivoted intermediate their ends and adapted to swing from an upstanding position, forming a side for the base, to a position with one of their ends inclined downwardly out of the plane of said base and extending outwardly from the side of said base, and with their other ends extending across and disposed between the sides of said base and inclined upwardly out of the plane of said base to facilitate discharge of the stock, means to connect said pivoted arms for swinging movement in unison, and means to swing said pivoted arms.

5. In a stock supporting table, a substantially horizontal stock supporting base, upstanding arms spaced apart along one side of said base to form a side therefor, and straight arms spaced apart along the other side of said base with a portion upstanding above said base to form a side therefor, a shaft upon which said straight arms are secured intermediate their ends, and means to rotate said shaft to swing the upstanding portion of said straight arms into a downwardly inclined position extending outwardly from the side of said base and the remaining portion of the arms into an upwardly inclined position extending across the base to facilitate unloading stock from the base.

6. In a stock supporting table, a substantially horizontal stock supporting base, upstanding arms spaced apart along one side of said base to form a side therefor, and straight arms spaced apart along the other side of said base with a portion upstanding above said base to form a side therefor, a shaft for supporting each straight arm to said base, gear segments on said shafts adjacent each of said straight arms and secured thereto, a second shaft extending along said base, gear pinions on said second shaft in mesh with said segments, and means to rotate said second shaft to swing the upstanding portion of said straight arms into a downwardly inclined position extending outwardly from the side of said base and the remaining portion of the arms into an upwardly inclined position extending across the base to facilitate unloading stock from the base.

7. A stock supporting table comprising a plu-

rality of spaced apart cross-bars forming a base to support stock spaced apart upstanding arms along one side of said table to form a side for the base, spaced apart straight arms along the other side of said table and having a first portion adapted to extend above the cross-bars to form another side for the base, and a second portion extending below the cross-bars, means

to pivotally connect the straight arms one to each of the cross-bars, and means to swing the straight arms to dispose the first portions thereof beyond and inclined downwardly from the base and the second portions thereof alongside the cross-bars and inclined upwardly to facilitate removal of stock from the table.

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