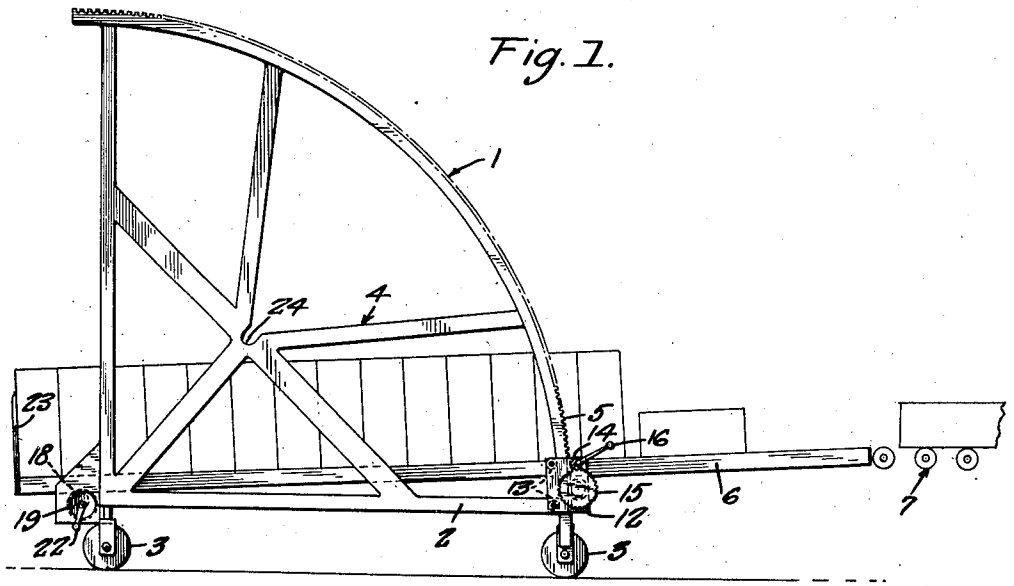
Oct. 16, 1934. J. M. SPRINGER 1,977,497

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Fig. 1.



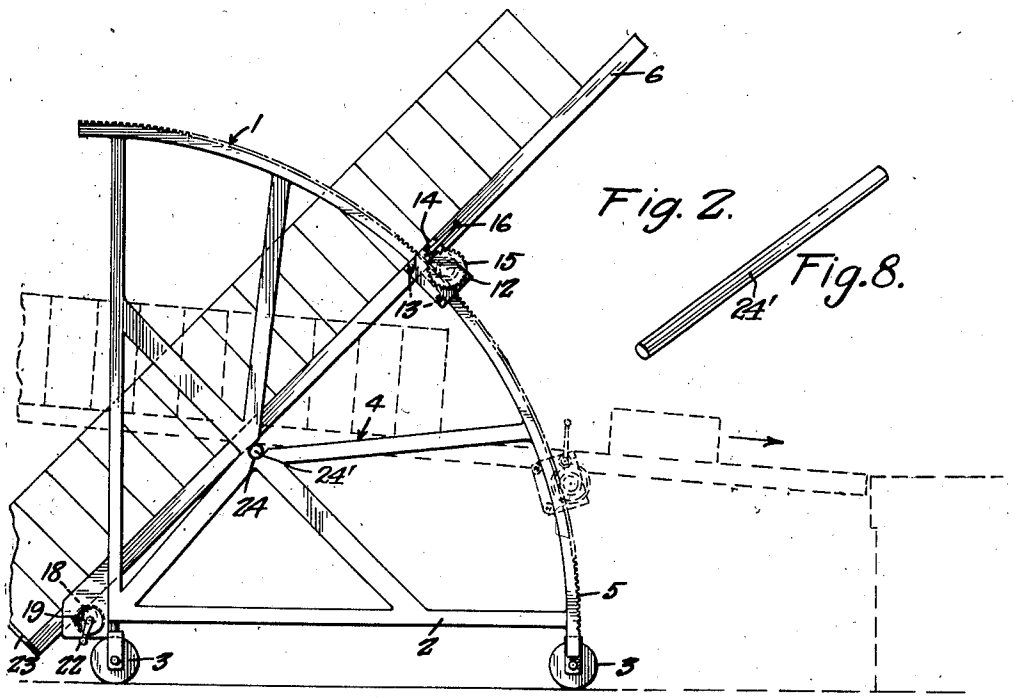


Fig. 2.

Fig. 8.

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Fig. 3.

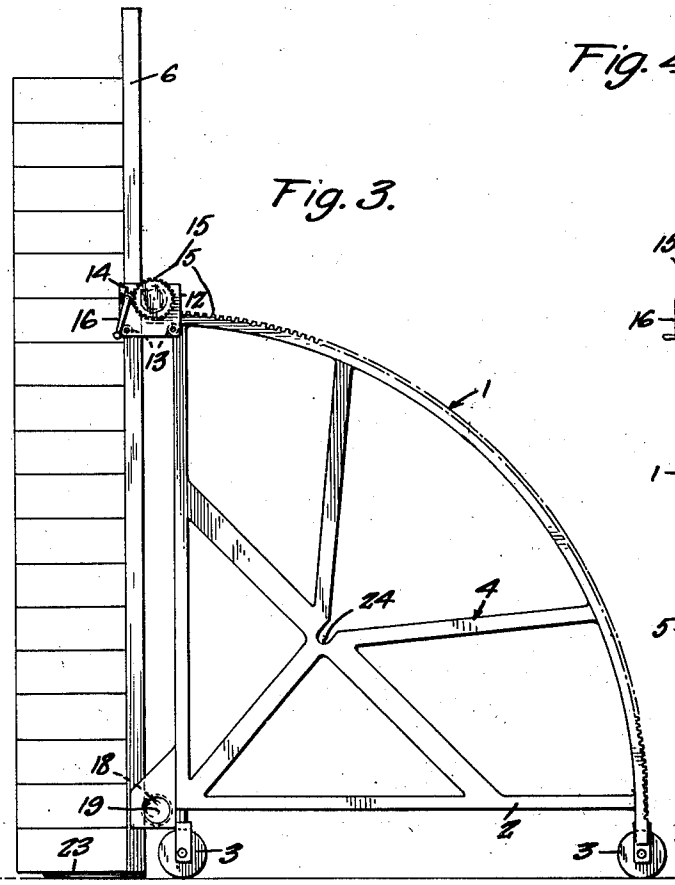


Fig. 4.

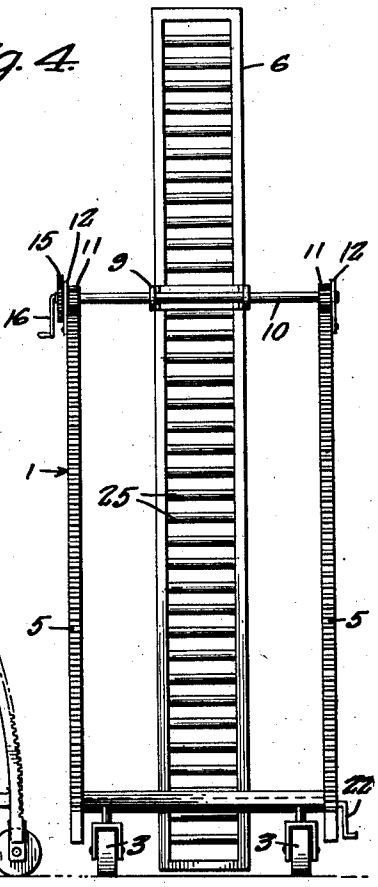


Fig. 5.

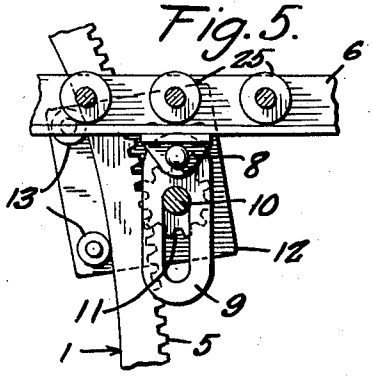


Fig. 6.

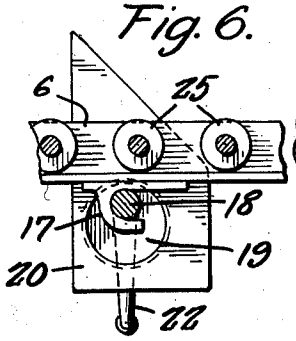
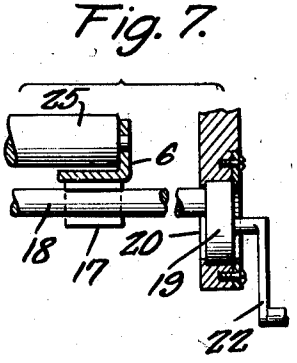


Fig. 7.



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UNITED STATES PATENT OFFICE

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James M. Springer, Shelton, Wash.

Application September 12, 1933, Serial No. 689,125

3 Claims. (Cl. 214—6)

This invention relates to a device especially adapted for handling and stacking bundles of shingles, boxes and the like and has for the primary object the provision of a device of the above stated character which is simple in construction and in operation and only requires a minimum amount of power for its operation and also may be conveniently employed for delivering already stacked bundles of shingles or boxes to a given place.

With these and other objects in view this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a side elevation illustrating a device adapted for stacking shingles, boxes and the like and constructed in accordance with my invention.

Figure 2 is a similar view showing several positions the rack of the device may assume during the use thereof.

Figure 3 is a similar view showing the device positioned after arranging the bundles or boxes in stacked position.

Figure 4 is an end elevation illustrating the device.

Figure 5 is a fragmentary sectional view showing means of adjusting the rack into its many positions.

Figure 6 is a detail sectional view illustrating the pivotal mounting for the rack.

Figure 7 is a detail sectional view showing the means for releasing the pivotal mounting from the rack.

Figure 8 is a perspective view showing a removable pivot bar or journal.

Referring in detail to the drawings, the numeral 1 indicates a portable structure consisting of a base 2 supported by ground wheels 3 and skeleton side frames 4. The frames 4 are substantially segmental shaped and provide arcuate shaped rack bars 5 extending from one end of the base 2 and terminating in a plane above the other end of the base. Operating between the side frames 4 above the base 2 is a rack or table 6 of considerable length on which may be arranged in close relation a plurality of bundles of shingles or boxes received from a conveyor or similar device 7. The rack or table 6 is detachably and pivotally connected adjacent one end to one end of the base 2. Brackets 8 are secured to the rack or table 6 and have pivoted thereto link shaped members 9 which rotatably and slidably receive a shaft 10 extending transversely of the table or rack. Pinions 11 are secured to the shaft 10 and mesh with the rack bars 5 and journaled upon the shaft 10 are guide plates 12 carrying rollers 13 engaging the rack bars at an opposite side from the pinions 11. One of the guide plates 12 has journaled thereto a pinion 14 meshing with a gear 15 secured to one end of the shaft 10. A crank handle 16 is secured to the pinion 14 whereby the shaft 10 may be rotated with minimum effort on the part of the operator for the purpose of raising and lowering the rack or table 6.

The pivot between the table and the base consists of brackets 17 of hook shape to engage a shaft 18 carrying at its ends eccentrics 19 rotatably mounted in bearing openings 20 formed in brackets 21 carried by the portable structure 1. A crank handle 22 is secured to one of the eccentrics 19 for the purpose of rotating the eccentrics in their journals for the purpose of engaging and disengaging the shaft 18 with the brackets 17. Thus it will be seen that the table or rack at one end may be readily connected and disconnected to the portable structure 1.

To load the table or rack with bundles of shingles, boxes or the like it is moved into a substantially horizontal position, as shown in Figure 1, so that the bundles of shingles or boxes may be readily placed thereon. One end of the table or rack carries a stop plate 23 against which is placed the first bundle of shingles or boxes when the assembling of the bundles of shingles or boxes is being made upon the table or rack. After the desired number of bundles or boxes have been arranged on the rack or table, the latter is swung into a vertical position, as shown in Figure 3. The portable structure is then pulled away from the stacked bundles or boxes, leaving them arranged in a vertically stacked position. Thus it will be seen that a large number of bundles or boxes may be readily stacked with minimum effort. Instead of employing the crank handle 16 for rotating the shaft 10, a suitable power means may be connected to the pinion.

To employ the device for handling or loading already stacked bundles or boxes, the table or rack is arranged under the stack of bundles or boxes, as shown in Figure 3, and a pivot bar 24' may be placed between the skeleton frames by occupying the notches 24 and the handle 22 is rotated to release the shaft 18 from the brackets 17, allowing the table or rack to fulcrum on said pivot bar during its movement from a vertical position to a substantially horizontal position, as

shown in dotted lines in Figure 2. The stacked bundles or boxes may then be conveniently removed to a given place with minimum effort on the part of the operator.

To facilitate the movement of the bundles or boxes on the table or rack 6 the latter is provided with rollers 25.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of my invention as claimed.

Having described the invention, I claim:

1. A device of the character set forth comprising a portable structure, a bundle assembling table associated with said structure, a journal between the table and said structure, rack bars carried by the structure, gears meshing with the rack bars, a shaft connecting said gears, means for rotating the shaft, and slotted plates receiving said shaft and pivotally connected to the table.

2. A device of the character set forth comprising a portable base including side members, a bundle table, a journal rotatably and detachably connecting the table to the base for swinging movement between said side members and outwardly of the latter, means between said side members and the table to impart movement to the latter, and a journal removable from the side members and to be engaged by the table when detached from the base.

3. A device of the character set forth comprising a portable base including side members, a bundle table, a shaft eccentrically mounted to the base, hooks carried by the bundle table to engage the shaft, means for imparting movement to the shaft for engaging and disengaging the latter with the hooks, means between said side members and the table to impart movement to the latter. and a journal removable from the side members and to be engaged by the table when detached from the base.

JAMES M. SPRINGER.