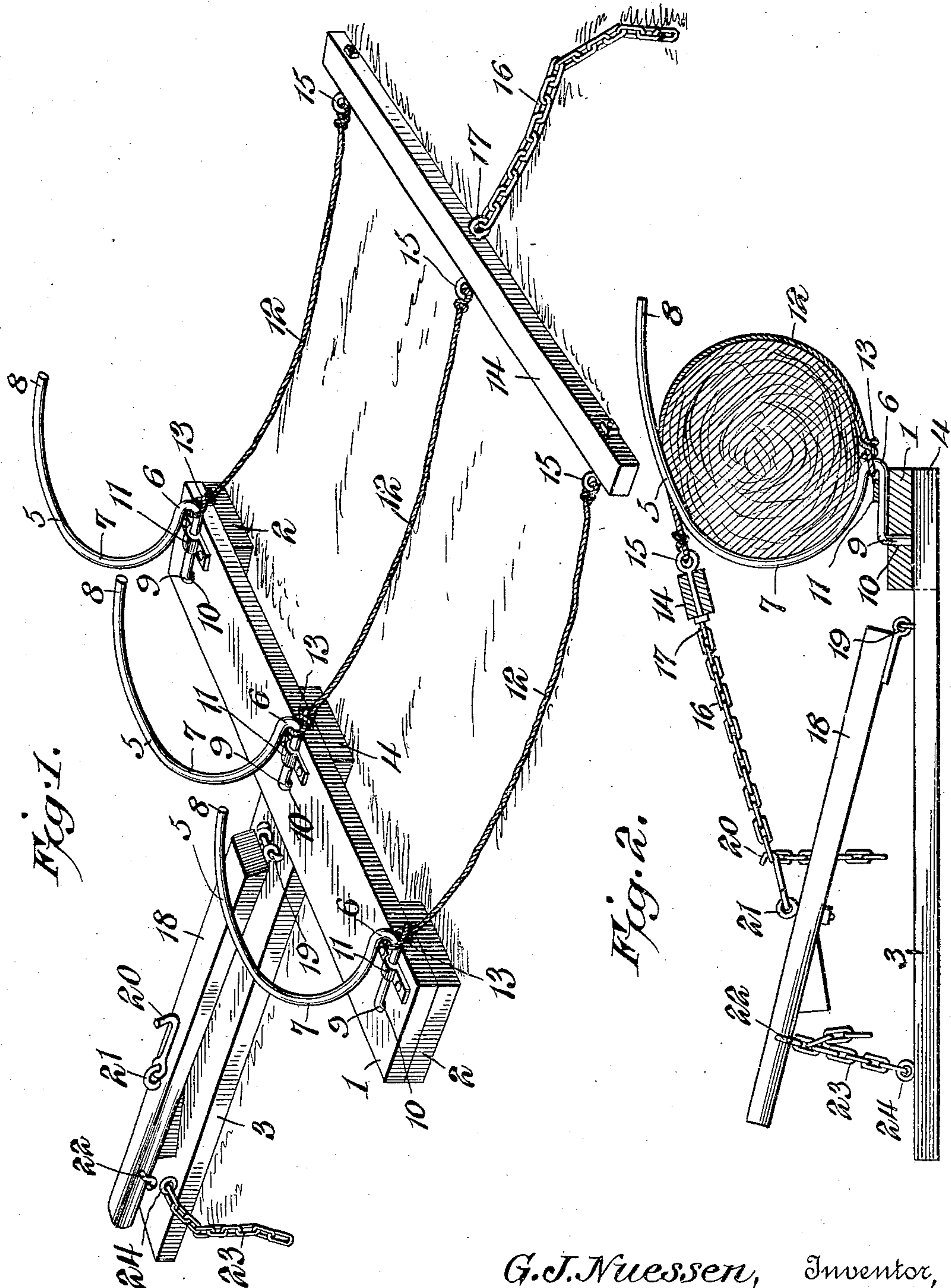


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 DEVICE FOR BUNDLING BAGS.
 APPLICATION FILED APR. 21, 1909.

931,468.

Patented Aug. 17, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

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DEVICE FOR BUNDLING BAGS.

No. 931,468.

Specification of Letters Patent.

Patented Aug. 17, 1909.

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To all whom it may concern:

Be it known that I, GERHART J. NUESSEN, citizen of the United States, residing at Andale, in the county of Sedgwick and State of Kansas, have invented a new and useful Device for Bundling Bags, of which the following is a specification.

This invention relates to bundling devices, and while especially adapted for use in bundling empty cement and grain sacks, it can be used with equal success for analogous purposes such as bundling fodder, kindling wood, etc.

In the building trade, wherever cement is used, the empty sacks are always returned to the manufacturer to be refilled. The general custom employed in bundling the sacks is to force a number of the sacks inside one empty one, the operation thereof being slow and tedious, and the dust arising therefrom is injurious to the operator. Furthermore, after these sacks have been bundled in this manner, they are shipped by express to the manufacturer, and the charges thereon are considerable.

The device, as hereinafter described, has for one of its objects, to provide a device which will primarily obviate the necessity of bundling the sacks in the above described manner; and secondly, will bundle in one operation a large number of the sacks in such a compact form that the express charges in shipment will be considerably less than heretofore.

The invention has for another object to provide a device of the character described, which is simple in construction, easy of operation, inexpensive to manufacture, and one which can be easily moved from place to place, as desired.

A still further object of the invention is to provide a bundling device which can be operated by one person.

The invention preferably comprises a base-plate or support, a member centrally arranged and rearwardly extending from the base-plate or support, a plurality of upstanding and forwardly extending curved arms secured to the base-plate or support, a plurality of flexible binding members each having one of its ends rigidly secured to one of the arms, and its other end secured to a single bar, a lever pivoted on the rearwardly extending member at a point adjacent to the plate and adapted to engage the bar of the flexible

members for compressing the articles between the arms and the flexible binding members, and means for locking the lever after the articles have been compressed, the movement of the lever during the last-named operation, causing the compressed articles to be elevated sufficiently to permit of tying cords being passed thereunder.

In the drawings, Figure 1 is a perspective view of the device showing the flexible binding members extending longitudinally preparatory to receiving the articles to be bundled. Fig. 2 is a side elevation partly in section, and showing the positions of the parts while the articles are in a state of compression.

Like reference numerals designate corresponding parts in all figures of the drawings.

Referring to the drawings:—1 designates a base-plate or support which is preferably formed of wood, although any other suitable material may be employed, and may be supported at its ends by blocks 2—2, which are secured to the base-plate by any other suitable means.

The invention further comprises a rearwardly extending bar or member 3 having one end 4 thereof arranged under and secured to the center of the base-plate 1. This member, which is preferably formed of wood, is of the same thickness as the supporting blocks 2—2, and therefore the end 4 of the member 3 forms a central support for the base plate. The base-plate is provided with a plurality of spaced upstanding and forwardly extending curved arms 5 which are employed for the purpose hereinafter described. While three arms are shown in the drawings, I do not limit myself to this number, as more or less arms can be employed equally as well. Each of these arms 5 is preferably formed of metal and comprises a looped portion 6, one end of which extends upwardly to form a semi-circular bag-receiving portion 7, said portion extending outwardly at its end to form a guide 8 for guiding the bags in the bag-receiving portion 7. The loop portion 6 is further provided with a depending end 9 which is arranged substantially at right angles to the adjacent arm of the loop 6, but in the same plane as the arm. A plurality of vertical openings 10 are formed in the base-plate, and are spaced at suitable distances apart so as to receive the ends 9 of the arms 5. Clamping plates or

staples of ordinary construction are respectively arranged to secure each of the lower arms of the loops 6 to the base-plate 1, thereby preventing any possible movement of the arms 5.

The invention further comprises a plurality of flexible cords or binding members 12, each member having one end 13 rigidly secured to the loop 6. While I have shown and described the end as being connected to the loop 6, I can secure the said end to the base-plate as desired without affecting the result. The cords 12 are of uniform length, and each have their other ends connected to a transverse bar 14, by means of eye-bolts 15 or other suitable means. These eye-bolts 15 are spaced apart in conformity with the arms 5. The chain 16 is connected by an eye-bolt 17 or other suitable means at a central point to the bar 14.

A lever 18 is secured to the rearwardly extending bar or member 3 by means of a suitable hinge 19, which is located adjacent to the base-plate 1 and is so arranged as to permit the said lever to swing rearwardly. The lever is provided on its upper side with a hook 20 which is held in place by a staple or other suitable means 21, and is preferably arranged midway of the same near the outward end of the lever. Extending from one side of the lever is a hook 22, which is adapted to engage in any one of the links of the chain 23, that is secured to the end of the rearwardly extending member 3 by an eye-bolt 24 or other suitable means.

In operation, the cement sacks, or other articles to be bundled, are positioned lengthwise across the flexible members 12 which extend forward on the ground, as shown by Fig. 1 of the drawings. The bar 14 is then lifted over the bags and arms 5, and the chain 16 is secured to the hook 20. The lever 18 is then depressed, and it will be observed that the bags will be compressed between the arms 5 and the flexible members 12 and at the same time, the bags will be elevated above the base-plate. When sufficient compression has been given the bags, the lever is secured in this position by the chain 23, thereby holding the sacks in a tightly compressed bulk. A plurality of cords are then tied around the sacks to hold them in their compressed state. The chain 16 is disengaged from the hook 20, and the bar then passed over the arms 5 to the position as shown in Fig. 1 of the drawings. The bundle of sacks is now released and is ready for shipment.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description and it will be understood that various changes in the size, shape, proportion and minor details of construction,

may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

I claim:—

1. In a bundling device, the combination with the support, of a series of curved arms extending upwardly therefrom and projecting at their upper ends forwardly beyond the support and forming a substantially semi-circular article-receiving portion, a series of cords connected to the base and co-operating with the said arms, a single transverse bar connecting the outer ends of the cords, a lever arranged in rear of the arms, a hook and chain connection between the bar and the lever, and means for holding the lever in a locked position.

2. In a bundling device, the combination with a support, of a series of upwardly extending curved arms mounted on the support, a series of cords connected at the base of the arms and coöperating therewith, a transverse bar connecting the outer ends of the cords, a chain connected to the bar, an operating lever carrying a hook to be connected to said chain, another hook carried by the lever, and a second chain connected to the said hook to lock the lever.

3. In a bundling device, the combination with a base-plate or support having a plurality of upstanding and forwardly extending curved article-receiving arms secured thereon, of an operating lever arranged adjacent to the base-plate, a plurality of flexible article compressing members, each having one of its ends secured to one of the said arms and its other end connected to a bar, means for connecting the bar to the lever, and means for locking the lever after the articles have been compressed between the flexible members and the article-receiving arms.

4. In a bundling device, the combination with a base-plate having a member rearwardly extending therefrom, of a plurality of upstanding and forwardly extending curved arms secured to the base-plate, a plurality of flexible members, each having one of its ends secured to one of the arms and its other end secured to a bar, a lever pivoted on the rearwardly extending member at a point adjacent to the base-plate and adapted to engage the bar of the flexible members for compressing the articles between the arms and the said flexible members, and means for locking the lever after the articles have been compressed, the movement of the lever during the last-named operation causing the compressed articles to be elevated sufficiently to permit of tying cords for the bundle to be passed thereunder.

5. In a bundling device, the combination with a base-plate having a plurality of spaced openings, of a plurality of article-receiving arms, each of said arms comprising a

looped portion, one end of which extends upwardly to form a semi-circular article-receiving portion, said last-named portion extending outwardly at its end to form a guide for the articles to be compressed, the other end of the looped portion terminating in a depending end which is arranged in the same plane as the arm and is adapted to be seated in one of the openings of the base plate, clamping means engaging the looped portion for securing the arm to the base-plate, a centrally arranged and rearwardly extending member secured to the base-plate, a lever having its pivot at a point adjacent the base-plate, a plurality of flexible article-compress-

ing members, each having one of its ends secured to one of the said arms and its other end connected to a single bar, means for connecting the bar to the lever, and means for locking the lever after the articles have been compressed between the flexible members and the article-receiving arms.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GERHART J. NUESSEN.

Witnesses:

E. O. LAMON,

L. A. TOWNSEND.