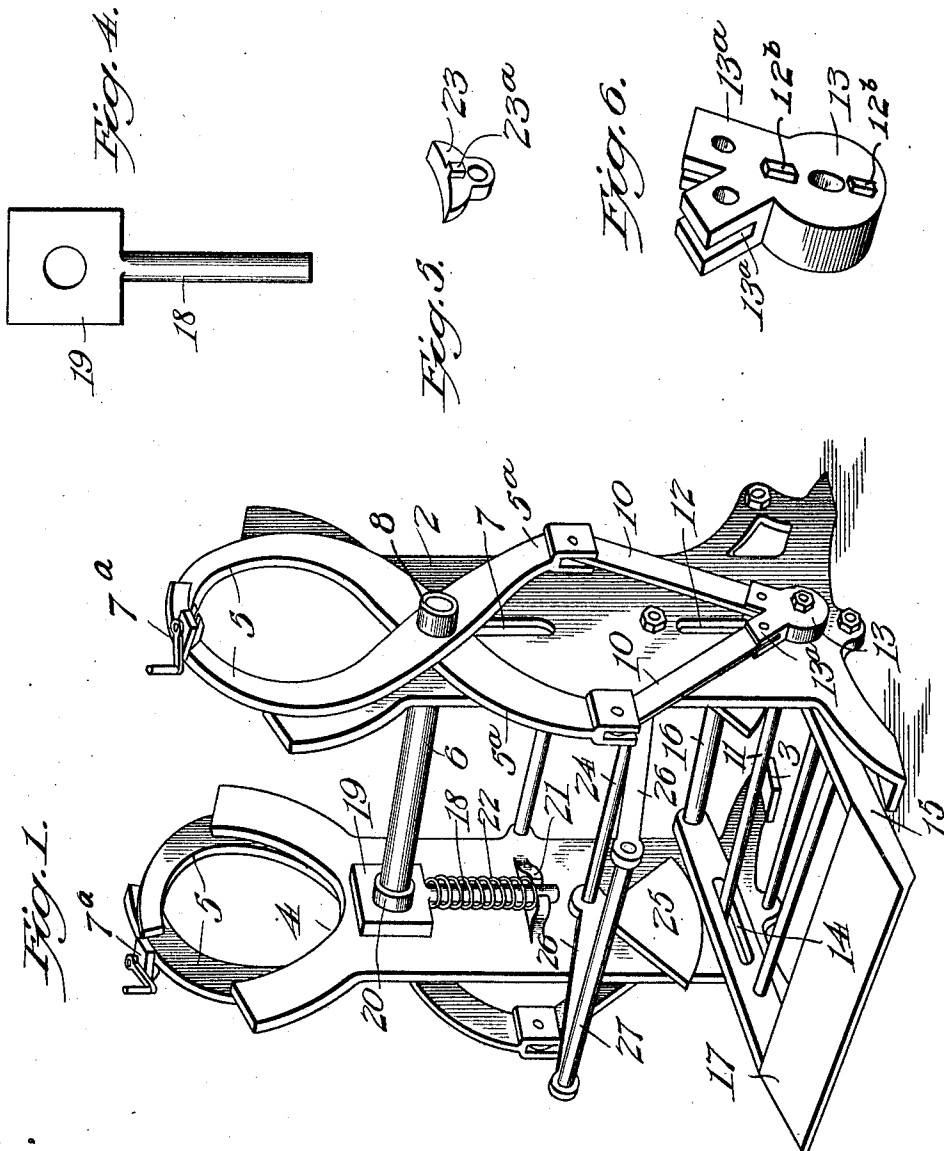


D. B. WILLIAMS.
BUNDLING MACHINE.
APPLICATION FILED NOV. 25, 1911.

1,031,156.

Patented July 2, 1912.

2 SHEETS-SHEET 1.



WITNESSES

T. L. Knoch
Emory L. Groff

INVENTOR

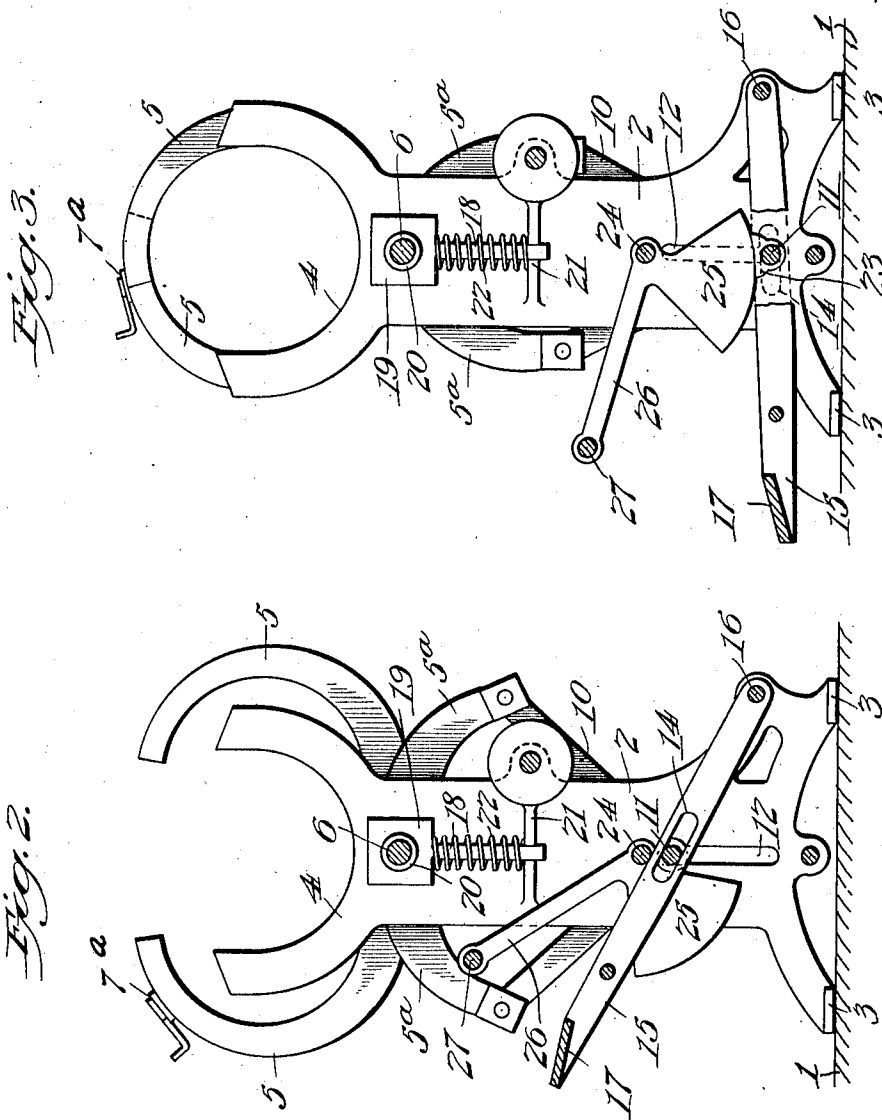
Dick B. Williams,
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UNITED STATES PATENT OFFICE.

DICK B. WILLIAMS, OF NEW ORLEANS, LOUISIANA.

BUNDLING-MACHINE.

1,031,156.

Specification of Letters Patent.

Patented July 2, 1912.

Application filed November 25, 1911. Serial No. 662,311.

To all whom it may concern:

Be it known that I, DICK B. WILLIAMS, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Bundling-Machines, of which the following is a specification.

The present invention relates to certain new and useful improvements in the construction of bundling presses such as are adapted to be employed for holding laths, and similar loose members, in a compact bundle while wrapping the same with some binding medium such as a wire or cord.

The object of the invention is to provide a bundling machine which may be easily operated, which comprises few and durable parts, and which will hold laths or similar members in a very tight and compact bundle.

A further object of the invention is to provide a bundling machine which embodies novel features of construction whereby the bundling arms may be easily and quickly locked in a closed position or released therefrom, as may be desired.

With these and other objects in view, as will more fully appear as the description proceeds, the invention consists in certain novel combinations and arrangements of the parts, the novel features thereof being pointed out in the appended claims.

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

Figure 1 is a perspective view of a lath bundling machine constructed in accordance with the invention. Fig. 2 is a vertical transverse sectional view through the same, the jaws being shown in an open position. Fig. 3 is a similar view with the jaws in a closed position. Fig. 4 is a detail view showing one of the spring actuated plungers which normally tend to close the jaws. Fig. 5 is a detail view of one of the cam shoes, and Fig. 6 is a detail view of one of the plates to which the lower ends of the links or toggle members are connected.

Corresponding and like parts are referred to in all of the figures of the drawings and designated throughout the following description by the same reference characters.

Specifically describing the present em-

bodiment of the invention, the numeral 1 designates a base upon which the bundling machine is mounted. A pair of similar standards 2 which have a spaced and parallel relation to each other project upwardly from the base, the lower end of each of the standards being formed with the feet 3 which are secured to the base in some suitable manner, while the upper end of the standard is formed with a notch or seat 4 adapted to receive a bundle of loose laths or similar members. A pair of bundling arms or jaws 5 is provided for each of the standards 2, the said jaws being pivoted upon the ends of a cross bar 6 which is slidably mounted within vertical slots 7 formed in the upper ends of the standards 2 just below the lath receiving seats 4. Each pair of bundling jaws 5 is shown as arranged upon the outside of the standard and as held between the standard and a set collar 8 applied to the cross bar. The bundling jaws 5 of each pair are reversely curved and project upwardly above the respective seat 4 so as to grip a number of laths or like parts upon the seat and force them into a tight and compact bundle. One of the bundling jaws 5 of each pair is provided with a wire tying and cutting device 7 for securing and severing the ends of the binding medium which is employed for holding the laths together, said device being preferably the device covered by my Patent No. 1,004,514, dated Sept. 26, 1911.

The lower ends of the bundling jaws 5 cross each other and are provided with the downwardly projecting and diverging extensions 5^a, the ends of the said extensions being connected by means of links or toggles 10 to a cross bar 11 which is slidably mounted in vertical slots 12 formed in the lower ends of the standards 2. In the present instance spider plates 13 are secured to the ends of the cross bar 11, the said plates being formed with the arms 13^a to which the links 10 are pivoted, and also with the projections 12^b which are received within the slots 12 to retain the plates in an upright position.

The cross bar 11 is received loosely within slots 14 formed in the sides of a treadle member 15 at an intermediate point in the length thereof, one end of the treadle being pivoted upon a shaft 16 connecting the standards 2, while the opposite end of the

treadle is formed with a foot plate 17. It will thus be obvious that when the treadle is raised, the links or toggle 10 will operate to separate the bundling jaws to admit of a number of laths or like parts being placed

upon the seat 4 at the upper end of the standards, while when the treadle is lowered, the links 10 will operate to force the bundling jaws 5 together so as to compress the laths or like members into a compact bundle. The upper cross bar 6 is normally held at the top of the slots 7 by means of spring actuated plungers 18. These plungers 18 are pendent from plates 19 which are fitted loosely upon the cross bar 6 and held against the inner faces of the respective standards 2 by means of set collars 20. The lower ends of the plungers 18 pass through forked lugs 21 projecting inwardly from the standards, coil springs 22 being interposed between the plates and the lugs. These plungers impart a yielding action to the jaws and enable them to readily accommodate themselves to slight variations in the sizes of the bundles.

The invention also contemplates the provision of means for locking the bundling jaws in a closed position. For this purpose, the lower cross bar 11 is provided upon each side of the treadle 15 with a cam shoe 23, the said cam shoes being provided with projections 23^a which are loosely received within the slots 12 to hold the shoes in an upright position. A cam shaft 24 connects the standards 2 at a point above the slots 12 and has a pair of cam members 25 pendent therefrom, the said cam members dropping by the action of gravity into engagement with the cam shoes 23. Levers 26 project forwardly from the cams 25 and are connected by a cross bar 27, the said cross bar constituting a convenient handle for raising the cams into an inoperative position. When the treadle 15 and cross bar 11 are raised so as to open the bundling jaws, the cam shoes are caused to engage the inner sides of the cam members so as to hold the cams in a raised position. However, as soon as the treadle and cross bar 11 have been lowered to close the bundling jaws, the cam members 25 swing over the cam shoes 23 by the action of gravity and cooperate with the said cam shoes to hold the bundling jaws in a closed position. The operator is thus entirely free to bind the laths or other members without the necessity of maintaining a strong pressure upon the treadle. After the laths have been suitably bound, it is merely necessary to grasp the cross bar 27 and swing the cam members upwardly into an inoperative position, in order to release the bundling jaws and remove the laths from the machine. It will thus be obvious that the bundling jaws are automatically locked in a closed position, thereby minimizing

the labor required for bundling the laths and greatly increasing the capacity of an operator.

A feature of practical importance, in carrying out this invention, resides in associating with one arm of each pair of the bundling arms, the wire tying and severing device inasmuch as means are thus provided for embodying in a bundling machine a device constituting one of the working elements thereof whereby the tying wire may be tightly twisted and secured about the bundle while under tension, and also severed, it being, of course, understood in this connection that the wire or bundling medium is taken directly from a conveniently accessible reel.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A bundling machine including a support, cooperating bundling jaws upon the support, means for operating the bundling jaws, a gravity operated cam member, and means cooperating with the gravity operated cam member for locking bundling jaws in a closed position.

2. A bundling machine including a support, cooperating bundling jaws upon the support, a treadle, an operative connection with the treadle and the bundling jaws, a shoe movable with the treadle, and a member pivoted upon the support and adapted to swing over the shoe by the action of gravity to automatically lock the bundling jaws in a closed position.

3. A bundling machine including a support, cooperating bundling jaws upon the support, a treadle, an operative connection between the treadle and the bundling jaws, a shoe movable with the treadle, and a swinging cam member pivoted upon the support, the said cam member swinging over the shoe by the action of gravity to lock the jaws in a closed position.

4. A bundling machine including a pair of slotted standards, a pair of cooperating bundling jaws upon each of the standards, a cross bar slidably mounted within the slotted portions of the standards, an operative connection between the cross bar and the bundling jaws, a treadle having an operative connection with the cross bar for actuating the bundling jaws, a shoe upon the cross bar and a cam pivoted upon one of the standards so as to swing over the shoe and lock the jaws in a closed position.

5. A bundling machine including a support, a pivot member movably mounted upon the support, a spring actuated plunger engaging the pivot member, cooperating bundling jaws pivoted upon the pivot member, and means for operating the bundling jaws.

6. A bundling machine including a sup-

port formed with a seat, a pivot member yieldingly mounted upon the support, bundling jaws pivoted upon the pivot member in coöperative relation to the seat, and means for operating the bundling jaws.

7. A bundling machine including slotted standards provided with seats, a cross bar mounted within the slotted portions of the standards, spring actuated plungers engaging the cross bars, bundling jaws pivoted upon the cross bar in coöperative relation to the seats of the standards, and means for operating the bundling jaws.

8. A bundling machine including a support, an upper cross bar upon the support, bundling jaws pivoted upon the upper cross bar and formed with downwardly projecting extensions, a lower cross bar mounted upon the support so as to have an up and down movement, links between the lower cross bar and the extensions of the bundling jaws, a treadle engaging the lower cross bar, and a gravity actuated cam member pivoted upon the support and adapted to swing across the path of the lower cross bar so as to lock the same in a lowered position.

9. A bundling machine including a support having a seat at the upper end thereof, an upper cross bar movably mounted upon the support, spring plungers normally tending to hold the upper cross bar at the upper limit of its movement, bundling jaws pivoted upon the upper cross bar in coöperative relation to the seat, the said bundling jaws being formed with downwardly projecting extensions, a lower cross bar movably mount-

ed upon the support so as to have an up and down movement, link members between the lower cross bar and the extensions of the jaws, a treadle mounted upon the support and engaging the lower cross bar, and a cam member pivoted upon the support so as to swing across the pivot of the lower cross bar and lock the said lower cross bar in a lowered position.

10. A bundling machine including standards provided at the upper ends thereof with seats and formed with upper slots and lower slots, an upper cross bar loosely received within the upper slots, bundling jaws pivoted upon the upper cross bar in coöperative relation to the seats of the standards, the said bundling jaws being formed with downwardly projecting extensions, spring actuated plungers engaging the upper cross bars and holding the same yieldingly at the upper limit of its movement, a lower cross bar loosely received within the lower slots, links between the lower cross bar and the extensions of the jaw, a treadle pivoted upon the support and engaging the lower cross bar, shoes upon the lower cross bar, and cam members pivoted upon the standards so as to swing over the said shoes to lock the lower cross bar in a lowered position.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

DICK B. WILLIAMS.

Witnesses:

C. H. C. BROWN,
GEO. OLIVER.