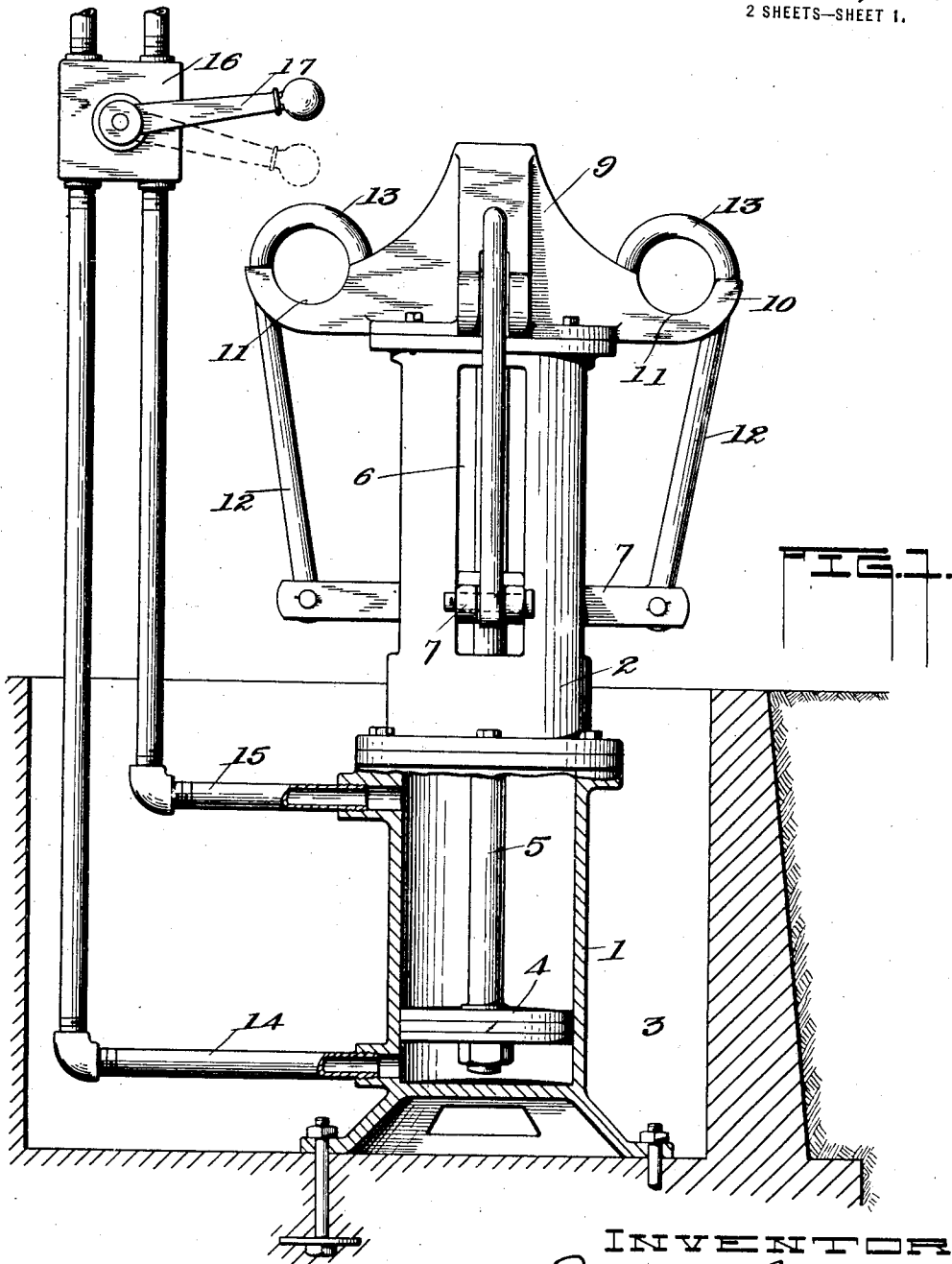


J. L. HERMAN.
BUNDLING PRESS.
APPLICATION FILED SEPT. 18, 1918.

1,358,952.

Patented Nov. 16, 1920.
2 SHEETS—SHEET 1.



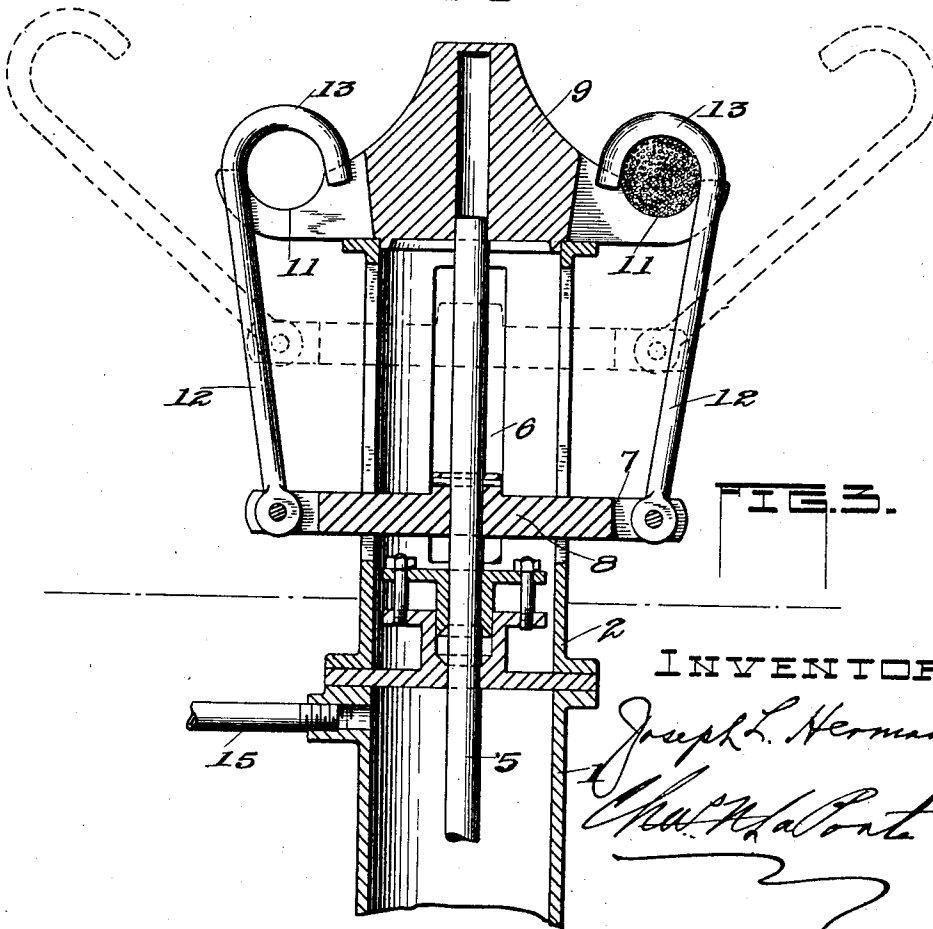
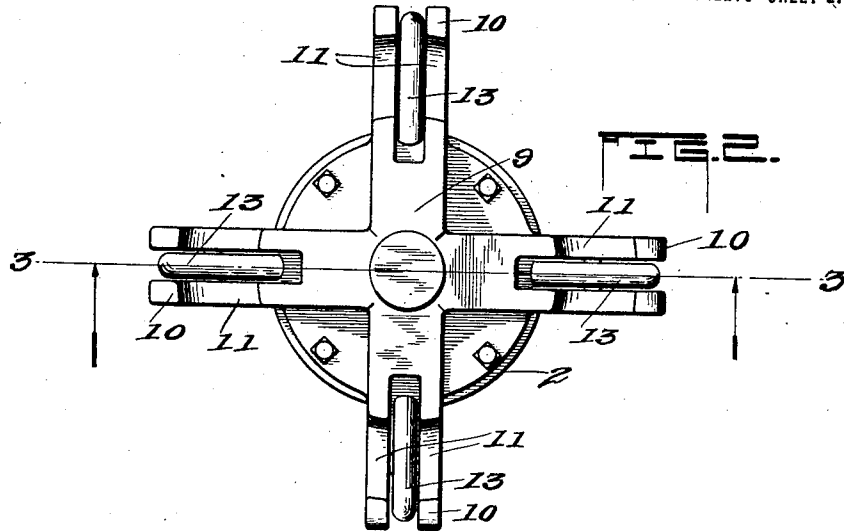
INVENTOR

Joseph L. Herman
Chas. W. Labate
ATTY

J. L. HERMAN.
BUNDLING PRESS.
APPLICATION FILED SEPT. 18, 1918.

1,358,952.

Patented Nov. 16, 1920.
2 SHEETS—SHEET 2.



INVENTOR

Joseph L. Herman
Chas. H. LaPorte

ATTY

UNITED STATES PATENT OFFICE.

JOSEPH L. HERMAN, OF BARTONVILLE, ILLINOIS, ASSIGNOR TO KEYSTONE STEEL & WIRE COMPANY, OF BARTONVILLE, ILLINOIS, A CORPORATION OF ILLINOIS.

BUNDLING-PRESS.

1,358,952.

Specification of Letters Patent. Patented Nov. 16, 1920.

Application filed September 18, 1918. Serial No. 254,640.

To all whom it may concern:

Be it known that I, JOSEPH L. HERMAN, a citizen of the United States, a resident of Bartonville, in the county of Peoria and State of Illinois, have invented new and useful Improvements in Bundling-Presses, of which the following is a specification.

This invention has reference to a bundling press, and relates more particularly to a machine for compressing coils of wire into comparatively small and easily handled packages for shipment.

The press, in its preferred embodiment, comprises a support for a coil of wire; means cooperating with the support for compressing the coil into a small and compact bundle, and means adapted to be actuated by steam, air or water for operating said cooperating means.

That the invention may be more fully understood, reference is had to the accompanying drawings, forming a part of the description, in which—

Figure 1 is an elevation, partly in section, showing a bundling press embodying my invention;

Fig. 2 is a plan view of the press, omitting the means for feeding the steam, air or water to the press, and

Fig. 3 is a detail sectional view of the press proper, as the same would appear if taken on the line 3—3, Fig. 2.

Like characters of reference denote corresponding parts throughout the figures.

It is the practice, in wire mills, to coil the galvanized or black wire into bundles, usually, with a corresponding number of feet in each coil and of a certain specified weight; having in mind, of course, that wire is drawn in different sizes. The coils of wire when taken from the reels, are usually rather loose and even though tied, are more or less bulky and inconvenient to handle, when shipped.

It is the object of the present invention to provide a bundling press, by means of which coils of wire of considerable weight may be compressed into a comparatively small space, thereby making a smaller and easily handled package for shipment.

In the drawings, 1 and 2 designate cylinders, arranged one above the other, in axial alinement. The cylinder 1 is preferably located within a well 3, below the floor line, so that the operative parts of the press may be within easy reach of an operator. Operating in the cylinder 1 is a piston head 4 and

connected with said piston head 4 is a piston rod 5, also operating through the cylinder 2. The cylinder 2 is provided with a series of diametrically opposed longitudinally arranged openings 6 through which project radially disposed arms 7 connected with a bracket 8 secured to the piston rod 5, so as to be moved up and down, with the movement of said piston rod.

Secured to the upper end of the cylinder 2 is a casting or head 9, which is provided with a plurality of radially disposed forms or rests 10 having the concave seats 11, adapted to receive the coils of wire. The forms or rests 10, are directly above and in the same plane with the arms 7 of the bracket 8.

Pivotally connected with the outer end of each arm 7 is a member 12, normally upstanding from said arm 7, and formed with a curved hook 13, adapted to engage and partially encircle the coil of wire, in a manner similar to the concave seat 11 in the form or rest 10.

The bracket 8 may be moved from the position shown in full lines in Fig. 3, to the dotted line position in said figure. In the former position, the coil of wire is compressed. In the latter position, the members 12 may be swung outwardly to permit the compressed coil to be removed from the press, and another coil placed for compressing.

The piston head 4 may be reciprocated by several different forces, steam, air or water and the same admitted to and taken from the cylinder 1 through the pipes 14 and 15 which are connected, preferably to a four way valve 16, controlled by a lever 17, and said pipes 14 and 15 then continued on to a suitable source of supply.

The operation of the machine, is as follows: Assuming the bracket 8 with the members 12 being in the position, as shown by the dotted lines in Fig. 3, the coil or bundle of wire is placed in the concave seats 11 of the forms or rests 10. The hooks 13 are then brought into a position directly over the bundle of wire; the lever 17 of the four way valve 16 is moved to admit the steam, air or water on top of the piston head 4, forcing the piston head downwardly and with it the piston rod 5, bracket 8 and members 12; the hooks 13 of said members 12 engaging and partially encircling said bundle of wire, as shown in full lines, in

Fig. 3. By gaging the pressure on the piston head 4, the correct amount of pressure can be obtained to compress the bundle of wire into the smallest possible coil or bundle.

- 5 The coil or bundle is then tied, and by reversing the valve 16, the steam, air or water may be admitted beneath the piston head 4, forcing said head, the bracket 8 and members 12, up into the dotted line position shown in Fig. 3. The coil or bundle of wire is then lifted off the forms or rests 10, and the operation is repeated.

What I claim is—

1. In a machine of the character described, in combination, an immovable rest arranged for supporting a bundle of wire, compressing means, and means for moving said compressing means into compressing engagement with said bundle of wire.

2. In a machine of the character described, in combination, an immovable rest arranged for supporting a bundle of wire and comprising a plurality of arms each having a concave seat to receive the bundle, compressing means, and means for moving said compressing means into compressing engagement with said bundle of wire.

3. In a machine of the character described, in combination, an immovable rest arranged for supporting a bundle of wire, compressing means, and means to move the same into compressing engagement with said bundle of wire for operating said compressing means, said operating means being actuated by a power which is flexible, whereby the operator may gage the pressure of said compressing means.

4. In a machine of the character described, in combination, a rest for a bundle of wire comprising a plurality of arms, each having a concave seat, a bracket movable relatively to said arms, a plurality of members having a pivotal connection with said bracket, each member having a hooked end, and means for moving said bracket.

5. In a machine of the character described, in combination, an immovable rest for supporting a bundle of wire, means movable relatively to said rest, means on said movable means adapted to engage the bundle of wire and in coöperation with said supporting rest compress said bundle of wire, and means for actuating said movable means.

6. In a machine of the character described, in combination, a support for a bundle of wire, a member movable toward and from said support, hooks having a pivotal connection with said member, a piston and piston head for moving said member, and a source of power to move said piston head.

7. In a machine of the character described, in combination, a pair of cylinders, one above the other in axial alinement, a

head for the top cylinder having a plurality of radially disposed arms forming rests for a bundle of wire, a piston rod operating through said cylinders, a piston head operating in the lower cylinder and connected to said piston rod, a bracket in said top cylinder and secured to said piston rod, radially disposed arms connected with said bracket, hooks having a pivotal connection with said arms, and a source of power for moving said piston head, alternately in opposite directions.

8. In a machine of the character described, in combination, an upstanding support, sustaining means extending radially from said support, and compressing means movable longitudinally of said support and also arranged to be moved laterally from and toward said sustaining means.

9. In a machine of the character described, in combination, an upstanding cylindrical member, a support at the head end of said cylinder having a plurality of radially disposed arms formed with seats to receive a bundle of wire, compressing means including members formed with bundle engaging portions, said members manually movable into engaging position with the bundle of wire, and means operable within said cylindrical member for actuating said compressing means.

10. In a machine of the character described, in combination, an upstanding cylindrical member provided with a plurality of vertically disposed slots, a support at the head end of said cylinder having a plurality of radially disposed arms formed with seats to receive a bundle of wire, a member movable in said cylinder and provided with radially disposed arms movable in the slots of said cylinder and lying in the same vertical plane with the radial arms of the support, means reciprocally arranged within the cylinder for moving said member, means for operating said reciprocal means, and compressing means connected with the arms of said member and arranged to co-act with the arms of said support for compressing a bundle of wire thereon.

11. In a machine of the character described, in combination, an upstanding cylindrical member provided with a plurality of vertically disposed slots, a support at the head end of said cylinder having a plurality of radially disposed arms formed with seats to receive a bundle of wire, a member movable in said cylinder and provided with radially disposed arms movable in the slots of said cylinder and lying in the same vertical plane with the radial arms of the support, means reciprocally arranged within the cylinder for moving said member, means for operating said reciprocal means, and a compressing member pivotally connected with each arm of said member and arranged to

be swung outwardly and subsequently inwardly to be drawn downwardly to co-act with the arms of the support to compress a bundle of wire supported thereon.

5 12. In a machine of the character described, in combination, a support arranged with a bundle of wire sustaining means including concave seats in which to receive the bundle of wire, means movable toward

and from said sustaining means and including a plurality of members having concave portions to co-act with the corresponding seats in the sustaining means for compressing a bundle of wire in the latter. 10

In witness whereof I have hereunto affixed my hand this 16th day of September, 1918. 15

JOSEPH L. HERMAN.