

(No Model.)

M. ERICKSEN.
COMPRESSOR.

No. 466,334.

Patented Jan. 5, 1892.

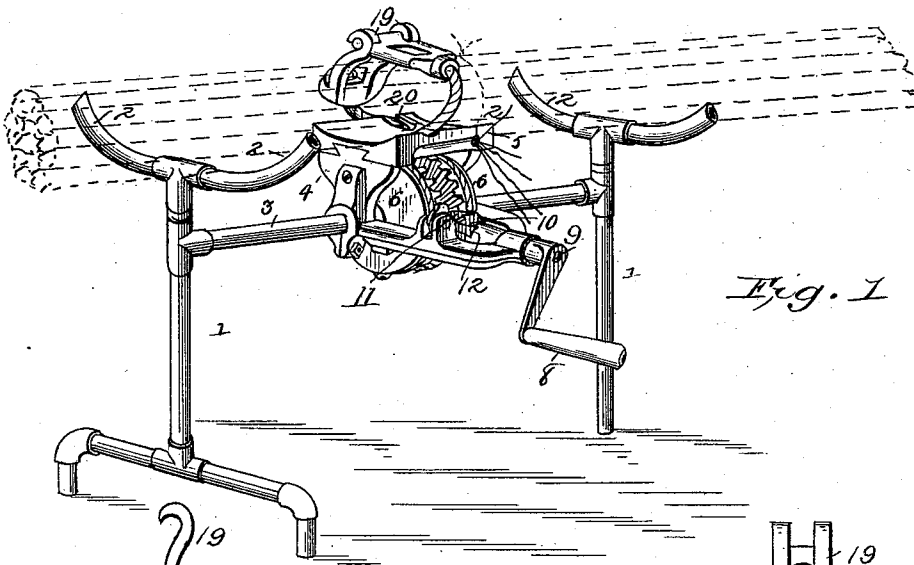


Fig. 1

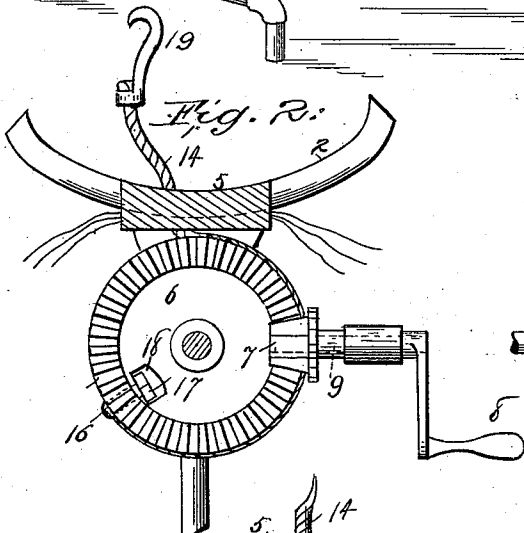


Fig. 2.

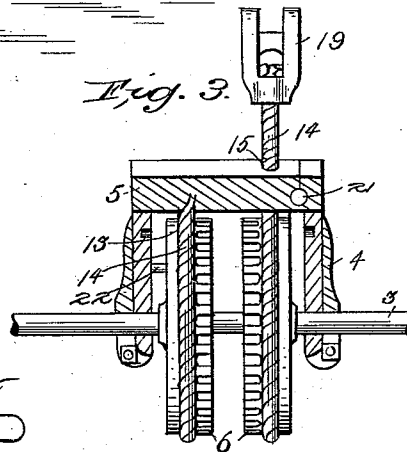


Fig. 3.

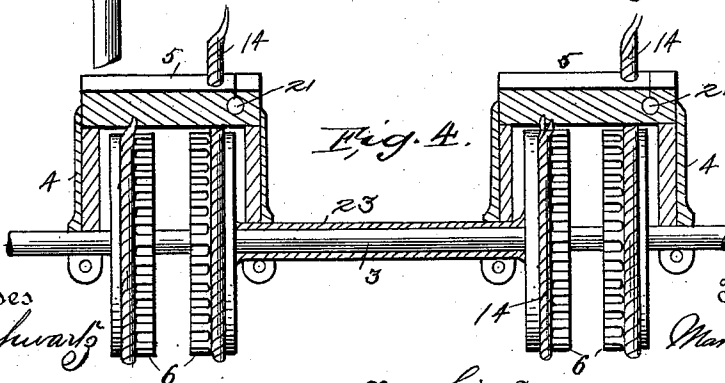


Fig. 4.

Witnesses

A. J. Schwartz

Andrew J. Schwartz

Inventor

Martin Erickson

By his Attorney

J. Fred Reilly

UNITED STATES PATENT OFFICE.

MARTIN ERICKSEN, OF LA CROSSE, WISCONSIN.

COMPRESSOR.

SPECIFICATION forming part of Letters Patent No. 466,334, dated January 5, 1892.

Application filed July 24, 1891. Serial No. 400,596. (No model.)

To all whom it may concern:

Be it known that I, MARTIN ERICKSEN, a citizen of the United States, residing at La Crosse, in the county of La Crosse and State of Wisconsin, have invented certain new and useful Improvements in Compressors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to compressors for making bundles of corn-stalks, sugar-cane, laths, and like articles; and it consists in the improved construction of parts, as will be hereinafter more fully set forth.

Referring to the accompanying drawings, in which the same reference-numerals indicate corresponding parts in each of the figures, Figure 1 is a perspective view of the device complete. Fig. 2 is a sectional view. Fig. 3 is a longitudinal sectional view, and Fig. 4 is a view of the device adapted for compressing the bundle in more than one place.

Referring more particularly to the drawings, 1 indicates the frame of the machine, which is preferably made out of gas-pipe, to make it light and portable. It is usually made about three feet long and provided with only three feet, so that it will rest solidly wherever placed. The upper portion is provided with diverging arms 2 2, within which the articles to be compressed are placed. About midway of the cross-piece 3 is rigidly secured a frame 4, the upper portion of which is formed or provided with a block 5, the upper face of which is preferably curved to correspond with the diverging arms at the ends, and is substantially on a line with them, so that anything which is placed within the arms will also be supported at the middle. Journalled upon the shaft within the frame are two sheaves 6 6, the inner or adjacent rims of which are formed into cogs or teeth. The sheaves are placed far enough apart for the introduction between them of a pinion 7, which can be rotated by means of a crank or handle 8, applied to the outer end of the shaft 9. The pinion is provided with a ratchet 10,

with which a pawl 11 engages and prevents the backward rotation of the pinion. If it is desired to reverse the movement of the sheaves for releasing the bundle quickly, the frame 4 may be extended outwardly from the cross-piece and the peripheries of the sheaves far enough to permit of a latch 12 being placed between the inner side of the frame and the outer surface of the ratchet. This latch is preferably hinged to the frame at the same point as the pawl, and, if desired, the two may be so connected together that the raising of the latch will also raise the pawl. The free end of the latch is provided with a channel or groove upon its under side, which will fit upon the shaft or spindle 9, and is of such a length that when down between the frame and the ratchet it will hold the pinion in engagement with the sheaves and cause them to be rotated by the turning of the crank. The pinion is preferably provided with about three teeth, as this will enable the sheaves to be placed as close together as possible and yet cause at least one tooth to be in engagement with each of the sheaves and cause its rotation. By making the pinion slightly tapering, it can be more readily inserted between the sheaves after it has been withdrawn, which is done by raising the latch and slipping the spindle through its bearing in the frame.

The periphery of each sheave is provided with a groove 13, within which is placed a rope or cord 14, the free end of which is passed up through a hole 15 in the block 5. The opposite end of the rope is secured to the sheave by means of an eyebolt 16, which may be tightened upon the rope by means of a nut 17 upon the inner end, the nut being placed within an opening 18 in the sheave, whereby it can be easily operated. When the rope stretches so much as to interfere with the efficiency of the device, the eyebolt is loosened and the rope drawn through it as far as desired and the bolt then tightened. The free ends of the ropes are provided with the buckles 19, which are hooked together when the device is to be operated and are separated when the bundle is to be removed. The holes 15 through the block 5, through which the ropes pass, are inclined substantially tangential to the peripheries of the sheaves, so that

the ropes will pass through them without too much wear, and I prefer to slightly notch the top of the block, as shown at 20, so that the ropes can be sunk even with the surface of the block and not interfere with the articles 5 that are placed thereon to be tied.

After a bundle has been compressed as tightly as desired, it is necessary to tie it with a cord, which should be placed as close to the 10 compressor-cord as possible. To do this a hole 21 is preferably made transversely through the block, in which short pieces of twine can be placed, the ends of which twine will hang down out of the way, but which can be brought 15 up around the bundle when the bundle is to be tied. The hole is preferably made with a narrow saw-kerf, leading into it from the top of the block, which will prevent any of the pieces of twine from coming out of the 20 hole, except the one that is being used, the kerf being sufficiently narrow to prevent this.

In operation the latch is raised and the pinion is drawn back out of engagement with the sheaves. The ropes 14 are then drawn 25 out as far as possible, each sheave being provided with a pin or stop 22, which engages with the frame 4 and prevents the further rotation of the sheave in that direction. Pieces of twine are placed within the receptacle or 30 hole 21, and the articles to be compressed are placed within the arms 2 of the frame. The buckles of the ropes are then united and the pinion 7 inserted between the sheaves and rotated, which will draw the ropes tightly around 35 the bundle. The ends of a piece of twine are then brought together around the bundle and tied, after which the pressure upon the bundle may be removed by raising the latch and withdrawing the pinion. The buckles are 40 then unhooked and the ropes 14 are drawn out, as before, until the stops on the sheaves strike the frame. In this manner the articles can be made into very compact bundles and tied with but little trouble. The size of the 45 bundle can be varied to suit the wishes, or from about two feet to a few inches in diameter, the circumference of the sheaves limiting the larger size.

As above described, the machine is adapted 50 for tying corns-talks, sugar-cane, and such like articles; but for lath and some other things the bundle must be tied in two places or at each end. To do this the cross-bar 3 is made long enough to receive two sets of 55 sheaves at the distance apart that it is desired to locate the binding-cord. A sleeve 23 is inserted between the two sets of sheaves, and, if desired, firmly connected to the adjacent sheaves of each set, so that turning one 60 set by a crank will also turn the other set in unison therewith, although the sleeve may be dispensed with or not be connected with the

sheaves of the two sets, in which case each set would have to be provided with a crank and other attachments. 65

It is evident that the above construction might be varied without departing from the spirit of my invention, the main requisite being that the sheaves be turned in opposite directions, so as to draw the ropes tightly 70 around the bundles.

Having thus described my invention, I claim—

1. In a compressor, the combination, with a frame having a cross-piece, two oppositely-moving sheaves journaled thereon, a pinion 75 engaging with said sheaves, a frame for supporting said pinion, and a cord upon each sheave, said cords being adapted to be connected together and drawn tightly around a 80 bundle placed upon the frame, substantially as described.

2. In a compressor, the combination, with a frame having a cross-piece, of two sheaves journaled thereon, a frame secured to said 85 cross-piece, a pinion engaging with said sheaves, the shaft or spindle of which is movable longitudinally through its bearing in said frame, a latch for holding the pinion in engagement with the sheaves, and a rope upon 90 each sheave, said ropes being adapted to be connected together and drawn tightly around a bundle placed upon the frame, substantially as described.

3. In a compressor, the combination, with a 95 frame having a cross-piece, of sheaves journaled thereon, a frame secured to the cross-piece, provided with a block having a binder-twine receptacle, a cord around each sheave, the free end of which passes up through 100 said block, and means for rotating the sheaves, substantially as described.

4. In a compressor, the combination, with a frame having a cross-piece, of sheaves journaled thereon and rotating in opposite directions, an eyebolt in each sheave, a rope secured to each sheave by means of the eyebolt, and means for securing the ropes together and rotating the sheaves, substantially 105 as described.

5. In a compressor, the combination, with a frame, of two sheaves journaled thereon and rotating in opposite directions, a block secured to the frame, a rope secured to each sheave passing through said blocks, and means 115 for rotating the sheaves, substantially as described.

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

MARTIN ERICKSEN.

Witnesses:

BEN PETERSON,
JOHN STEPHENSON.