

B. C. GALLAREAD.
COTTON COMPRESSOR.
APPLICATION FILED AUG. 10, 1908.

942,443.

Patented Dec. 7, 1909.

2 SHEETS—SHEET 1.

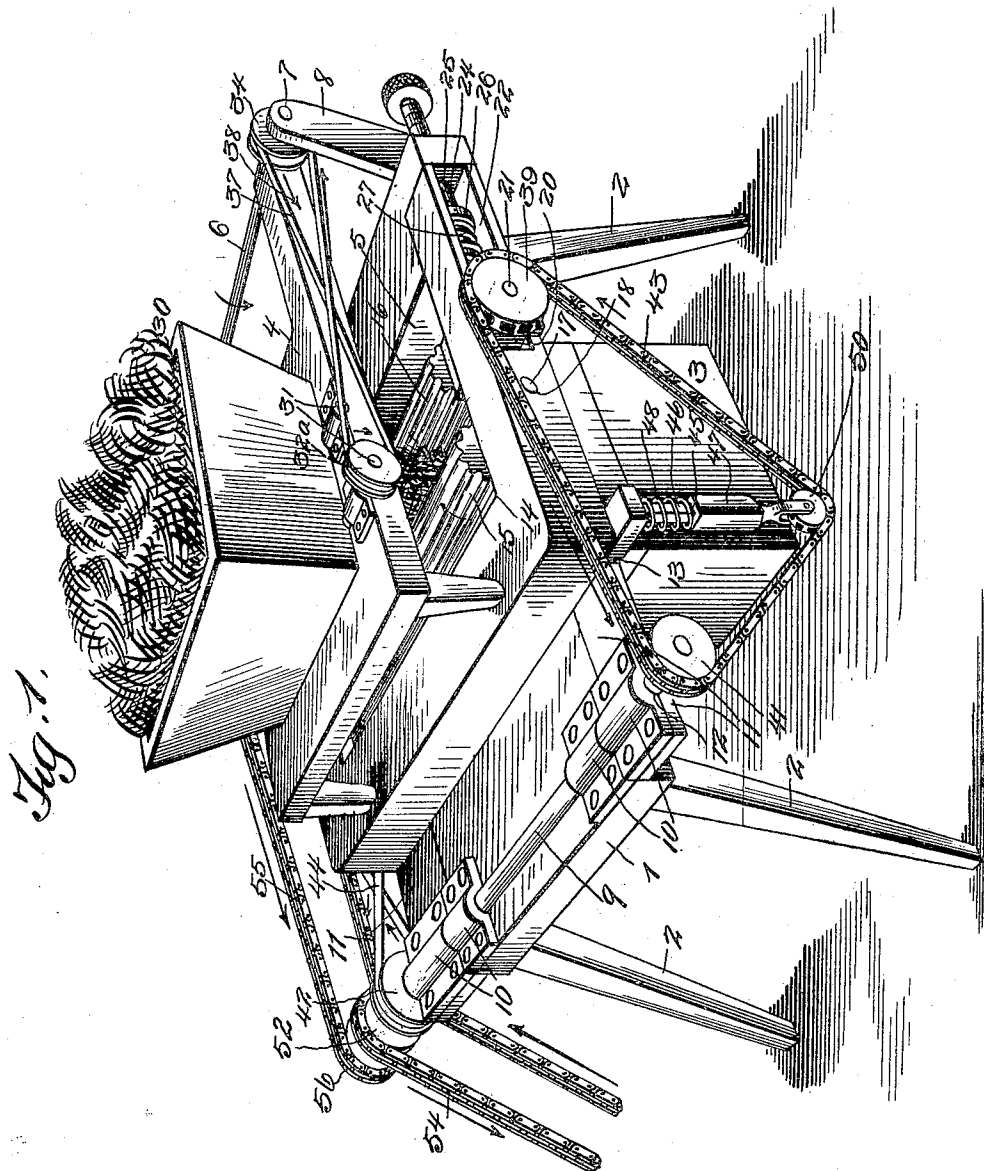


Fig. 1.

Witnesses

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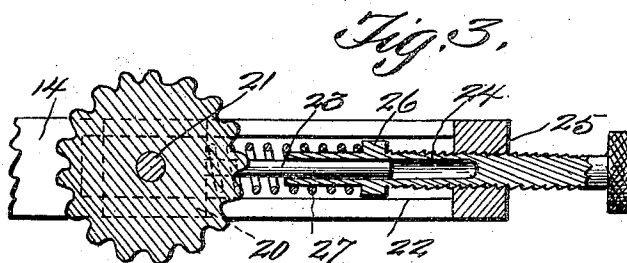
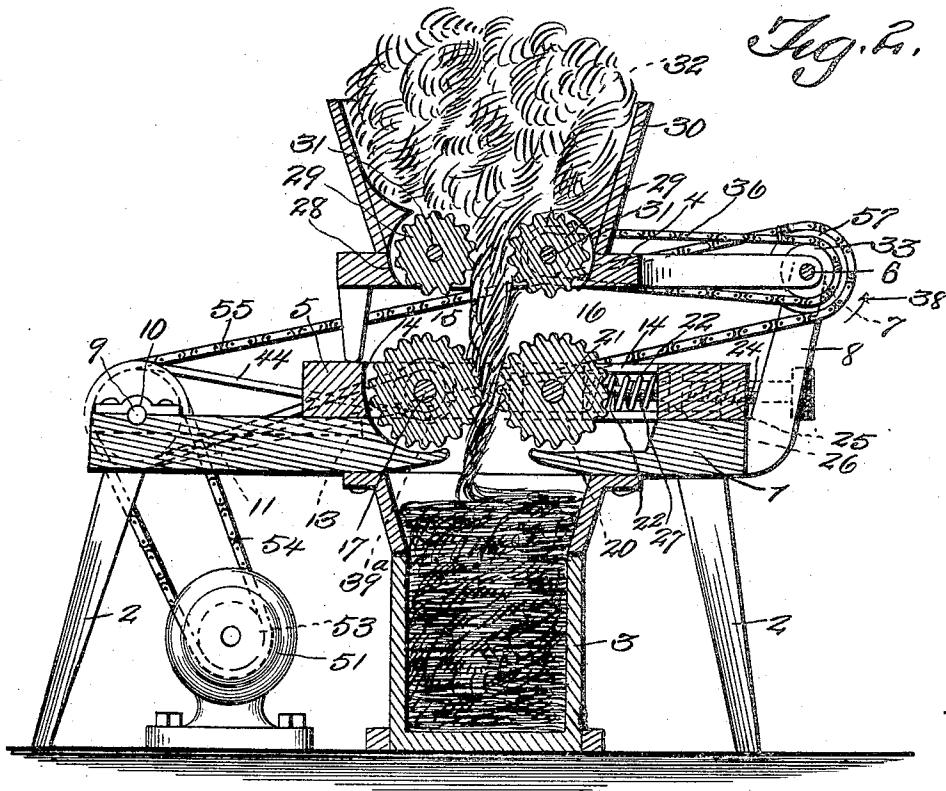
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Witnesses

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UNITED STATES PATENT OFFICE.

BERL C. GALLAREAD, OF CANTON, MISSISSIPPI.

COTTON-COMPRESSOR.

942,443.

Specification of Letters Patent.

Patented Dec. 7, 1909.

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To all whom it may concern:

Be it known that I, BERL C. GALLAREAD, a citizen of the United States, residing at Canton, in the county of Madison and State of Mississippi, have invented a new and useful Cotton-Compressor; and I do hereby 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.

This invention pertains to a new and useful cotton compressor or packer, and the invention in its fundamental characteristics has for its primary object to provide a device of this design having a plurality of corrugated rollers, whereby lint cotton may be compressed and automatically fed into a receptacle, which is placed beneath said rollers, as will be clearly manifest.

The invention has for a further object to provide such a device, whereby the pressure of one of the corrugated rollers is regulated, which corrugated roller is provided with resilient means, the purpose of which is to hold the said roller yieldingly in contact with the cotton, as the same passes over the yieldingly disposed roller and its co-operating stationary roller, as is clearly evident.

The invention has a further object to provide means whereby the frame, composed of swinging beams and carrying the rollers, may be raised and lowered without altering the tension of the belting; and also means whereby the said frame or cover of the cotton compressor may be detached therefrom, as will be clearly apparent when examining the drawings.

This invention comprises further objects and combinations of elements, which will be hereinafter more fully described, shown in the accompanying drawings, and the novel features thereof will be pointed out by the appended claims.

The features, elements and the arrangement thereof, which constitute the above entitled invention, may be changed and varied, that is to say, in an actual reduction to practice with the understanding that the changes and variations accruing from said reduction to practice are limited to the scope of the appended claims.

To obtain a full and correct understanding of the details of construction, combinations of features, elements and advantages,

reference is to be had to the hereinafter set forth description and the accompanying drawings in connection therewith, wherein—

Figure 1 is a perspective view of the cotton compressor or packer. Fig. 2 is a sectional view through the cotton compressor or packer, clearly illustrating the stationary corrugated rollers and the yieldingly disposed roller, and the means for regulating the pressure of the yieldingly disposed roller. Fig. 3 is an enlarged detail sectional view, clearly illustrating the means for regulating the pressure of the yieldingly disposed roller.

In regard to the drawings, wherein similar reference characters indicate corresponding parts in the several illustrations, by figures, 1 designates a frame having suitable supports or legs 2, and under which frame a box or other receptacle 3 is disposed for receiving the cotton, in which it is designed to be pressed. Supported above the frame are two hinged frames 4 and 5, the frame 4 being hinged or pivotally mounted upon a shaft 6, mounted in suitable bearings 7 of brackets 8; while the frame 5 is hinged or pivotally mounted upon a shaft 9, mounted in suitable bearings 10 of the frame 1, through the medium of the rods or bars 11, as shown clearly in Figs. 1 and 2. The bars 11, at one of their ends are provided with eyes 12 to receive the shaft 9, while their opposite end portions 13 are secured to the sides of the frame 5, as clearly shown in Figs. 1 and 2.

The frame 5 is provided with an opening 14, across the diameter of which two corrugated rollers 15 and 16 are disposed, one being a stationary mounted roller having a shaft 17 which is mounted in suitable bearings 18 of the frame 5, while the other roller 16 is mounted in transverse movable bearings 20, that is, the shaft 21 of said roller is mounted in said bearings, as seen clearly in Figs. 1 and 2. These bearings traverse in guideways 22 upon each side of the frame 5, and are provided with pins or studs 23, which are received telescopically, by the hollow portions of the regulating screws 24, which are mounted in threaded apertures 25 of the frame 5, as seen in the sectional view of the drawings. These regulating screws are provided with annular shoulders 26 between which and the bearings 20 coiled springs 27 are disposed, the purpose of which is to hold the corrugated

roller 16 yieldably in contact with the cotton as it passes through or between the rollers 15 and 16, as will be clearly evident.

The frame 4 is provided with an opening 28, as clearly shown. Extending across the diameter of the opening are two stationary mounted corrugated rollers 29, between which the cotton to be pressed is fed, the cotton first entering or fed to the hopper 30, as will be readily understood. The corrugated rollers 29 are provided with shafts 31, and upon and adapted to rotate with one of the shafts 31 is a pulley 32^a, while rotatable with the other shaft 31 is a sprocket wheel 32. Mounted upon the shaft 6 is a sprocket wheel 33 and a pulley 34. Traveling about the sprocket wheel 33 and the sprocket wheel 32 is a sprocket chain 36, and traveling about the pulleys 34 and 32^a is a crossed belt 37. By gearing the corrugated rollers 29 in this manner, they are caused to rotate toward one another, because of the direction of travel of the shaft 6, as indicated by the arrow 38.

Mounted upon the shaft 21 at one end thereof, is a sprocket wheel 39, and carried by and rotatable with the shaft 17 is a pulley 39^a, as shown clearly in Figs. 1 and 2 of the drawings. The shaft 9 has rotatable therewith at one end a sprocket wheel 41, and carried upon said shaft 9 adjacent to the end opposite the sprocket wheel 41 is a pulley 42, as shown clearly in Figs. 1 and 2. Traveling about the sprocket wheel 41 and the sprocket wheel 39 is a sprocket chain 43, while traveling about the pulleys 42 and 39^a is a crossed belt 44. It is evident that the rollers 15 and 16 are rotated toward one another through the medium of the sprocket chain 43 and the belt 44.

In order to regulate the tension of the sprocket chain 43, means are provided to cooperate with the chain 43. This means comprises a downwardly projecting extension 46 of the frame 5, which is telescopically received by the sliding member 47, between which and the frame 5 a spring 48 is disposed, to cause the sliding member 47 to be pressed downwardly, in order that the sprocket wheel 50, will continually contact with the chain 43; in this manner, the tension of the chain is regulated.

51 designates an electric motor which is geared to the shaft 9 by means of the sprockets 52 and 53 and the sprocket chain 54.

55 designates a sprocket chain which travels about sprockets 56 and 57, the sprocket 56 being carried by the shaft 9, while the sprocket 57 is carried by the shaft 6, as seen clearly in Figs. 1 and 2 of the drawings.

From the foregoing, the essential features, elements and the operation of the device, together with the simplicity thereof, will be clearly apparent.

Having thus fully described the invention, what is claimed as new and useful is:—

1. In a cotton compressor, a frame, a pair of frames hinged one above the other and above the first mentioned frame and adapted to swing upwardly and outwardly and provided with openings, corrugated rollers disposed and adapted to rotate within the openings, one of said corrugated rollers having bearing members, one of said hinged frames having guideways to receive said bearing members, said bearing members having studs projecting therefrom, members threaded in one of the hinged frames and provided with hollow portions to receive said studs, tension means surrounding said studs and a portion of said threaded members and adapted to bear against said bearing members in order to hold the guided roller yieldably in contact with its cooperating roller, said threaded members adapted to regulate the tension of the tension means, and mechanism for causing the rollers to rotate toward one another.

2. In a cotton compressor, a frame, a pair of frames hinged one above the other and above the first mentioned frame and adapted to swing upwardly and outwardly and provided with openings, a hopper carried by one of the hinged frames, corrugated rollers disposed and adapted to rotate within the openings, one of said corrugated rollers having bearing members, one of said hinged frames having guideways to receive said bearing members, said bearing members having studs projecting therefrom, members threaded in one of the hinged frames and provided with hollow portions to receive said studs, tension means surrounding said studs and a portion of said threaded members and adapted to bear against said bearing members in order to hold the guided roller yieldably in contact with its cooperating roller, said threaded members adapted to regulate the tension of the tension means, mechanism for causing the rollers to rotate toward one another, a tension device for a portion of said mechanism, and a receptacle to receive the cotton.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BERL C. GALLAREAD.

Witnesses:

R. E. HINTON,
J. H. BROWN.