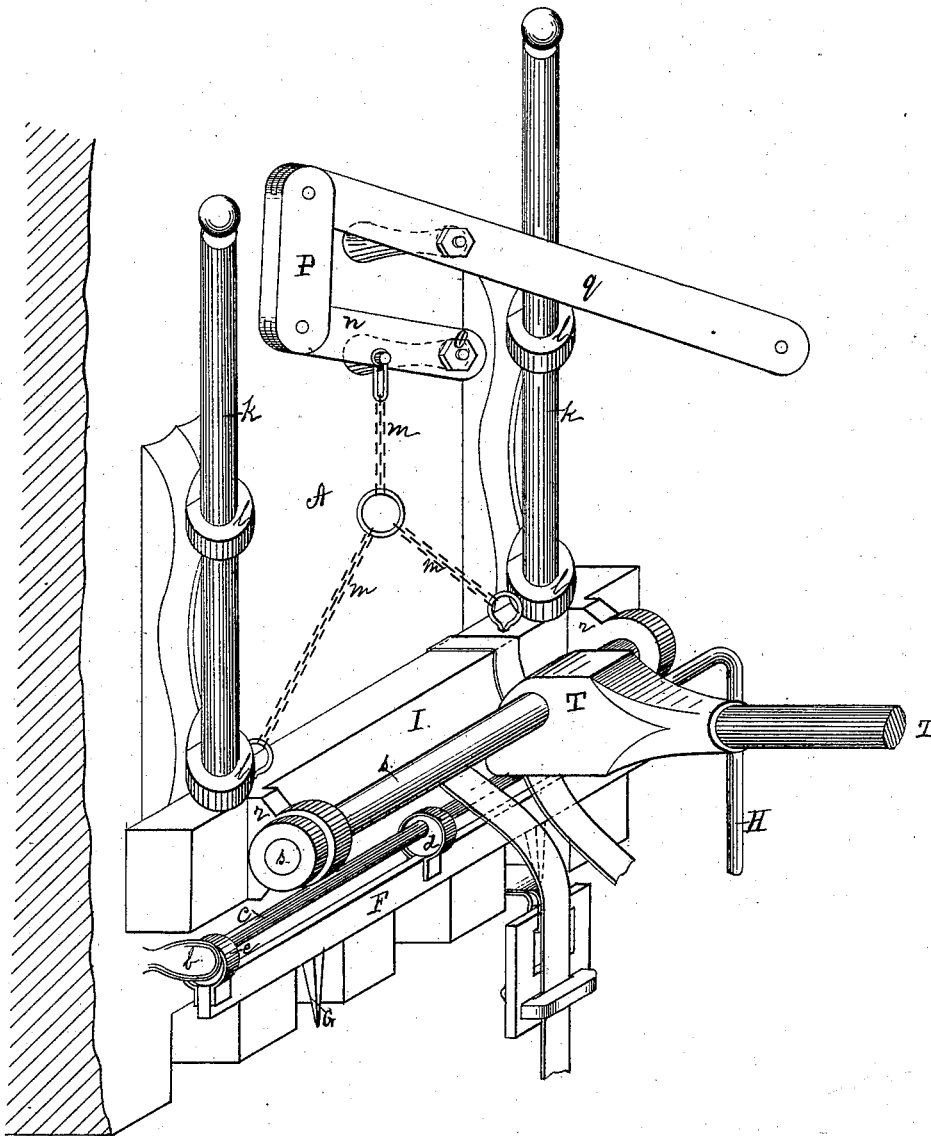


G. BULL & L. KOCH.  
Bale-Band Tightener.

No. 199,617.

Patented Jan. 29, 1878.



Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE BULL AND LOUIS KOCH, OF NEW ORLEANS, LOUISIANA.

## IMPROVEMENT IN BALE-BAND TIGHTENERS.

Specification forming part of Letters Patent No. **199,617**, dated January 29, 1878; application filed August 21, 1877.

*To all whom it may concern:*

Be it known that we, GEORGE BULL and LOUIS KOCH, residents of the city of New Orleans, parish of Orleans, and State of Louisiana, have invented a certain new and useful Improvement in Bale-Band Tighteners; and we do hereby declare the following to be a full, clear, and correct description of the same, reference being had to the annexed drawing, making a part of this specification.

This invention relates to a press attachment through the agency of which the bands employed in securing bales of cotton, &c., may be tightened around the same, so as to prevent any expansion of the bale after it has been released from pressure.

The accompanying drawing represents a perspective view of our invention, or rather a sufficient portion thereof to clearly indicate its nature.

A is designed to represent the upper platen, in front of which we support, by means of two or more bearings, *b*, a horizontal rod, *c*, on which is keyed or otherwise secured several eccentrics, *d*. On these is suspended, by metal rings *e*, a horizontal bar, *F*, the lower edge of which is provided with metal points *G*, the latter so arranged as to operate directly in front of the channels, as shown. One end of the rod *c* is bent, or provided with a handle, *H*, the pulling down of which will cause the eccentrics to press the points *G* through the bale-bands, thus securely holding the upper ends of the said bands while the slack is being drawn in from below.

The above portion of the apparatus may be thrown upward out of the way of the hands by simply raising the handle to a vertical position.

The tightening apparatus proper is composed of a horizontal plate or bar, *I*, which is provided with two or more vertical rods, *k*, operating in guides *l*, that are cast or otherwise secured to the face of the platen. This device is suspended, by means of a chain, *m*, from a lever, *n*, that has one of its ends pivoted to the platen, as at *O*. The outer end of this lever is connected, by a link, *P*, with an upper lever, *q*, that is pivoted in about the same manner as the lower one. Its free end

extends to the end of the press, at which point the power is applied for raising the apparatus. In front of the plate *I* is supported, by bearings *z*, a horizontal rod, *s*, on which is loosely fitted a half-dozen or more levers, *T*, the inner ends of which are made so as to operate as cams, and serve to securely clamp the bands between their ends and the plate *I*. The bands are readily released from this position by simply raising the levers, so as to throw its greatest diameter away from the plate *I*.

This invention may be used with any of the gripe-ties at present in use, or with the slotted bands. In the present instance it is shown in connection with an entirely original tie, which, being the subject of a separate patent, is not herein described.

The operation of our invention is as follows: After the bands have been placed around the bale the bar *F* (if previously thrown up out of the way) is turned down against the face of the platen. The handle *H* is then pressed downward, so as to force the points *G* into the metal bands. The free ends of the said bands are then passed up through the buckles, and in rear of the plate *I*. They are next pulled over and down in front of the same, and after all the slack has been drawn in by hand the levers *T* are brought down, so as firmly to clamp the said ends against the plate *I*. When all the bands have been thus treated, the power is applied to the end of the lever *q*, so as to raise the whole frame and tighten all the bands simultaneously, producing a bale of uniform thickness and great density.

For the release of the bale it is only necessary to throw up the handles of the levers *T*, when the platen is raised, the bale rolled out, and the ends of its bands clipped off in the usual manner.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In combination with the bar *F* and eccentrics *d*, the points *G*, substantially as and for the purpose described.

2. In a baling-press, a horizontal rod, *c*, operating in bearings *b*, and provided with han-

dle H and eccentrics *d*, in combination with a bar, F, the latter suspended from the said eccentrics by rings *e*, in a manner which will admit of its points G being vertically operated or swung out of the way when not in use, as described.

3. In a baling-press, a tightening device operated by means of compound levers, the said device consisting of a horizontal plate, I, provided with vertical guides, and with a bar, *s*,

the latter furnished with cam-levers T, for clamping the ends of the bands, as and for the purpose specified.

In testimony whereof we have hereunto signed our names.

GEORGE BULL.  
LOUIS KOCH.

In presence of—  
J. CONNOR,  
A. S. BECK.