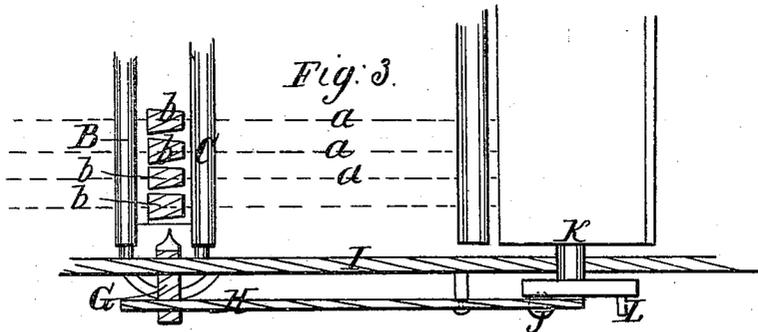
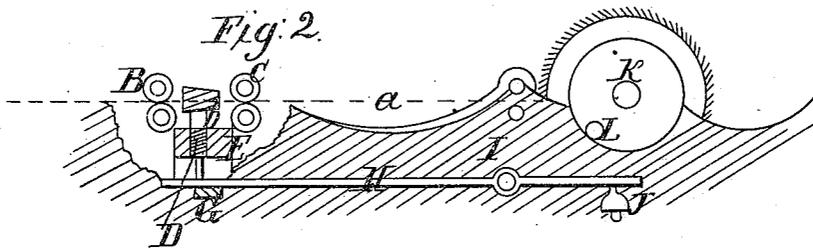
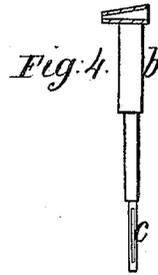
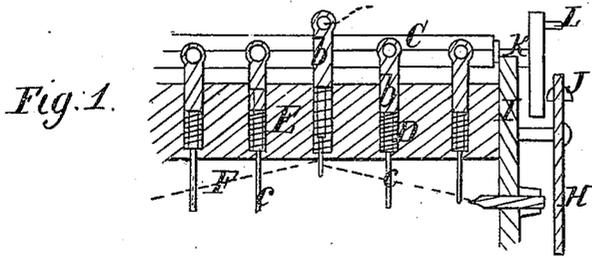


Haythorn & Price.

Carding Mach.

N<sup>o</sup> 81,084.

Patented Aug. 18, 1868.



Witnesses;  
W. M. Owen  
Rosenthal

Joseph Haythorn  
Charles Price  
Inventors;  
per Gardner & Hyde  
attys

# United States Patent Office.

JOSEPH HAYTHORN AND CHARLES E. PRICE, OF THOMPSONVILLE, CONNECTICUT.

Letters Patent No. 81,084, dated August 18, 1868.

## IMPROVEMENT IN ALARM FOR CARDING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, JOSEPH HAYTHORN and CHARLES E. PRICE, both of Thompsonville, Hartford county, State of Connecticut, have invented a new and useful Improved Attachment for Carding-Machines; and we do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the drawings—

Figure 1 is an end view and partial sectional view of my device,

Figure 2 a side view, partly in section, and

Figure 3 a plan view of the same,

Figure 4 being a detail view of one of the parts pertaining thereto.

This invention consists of a new and useful improvement in carding-machines, whereby the operator is warned of the breaking of a strand before it is fed into the machine.

In construction, we form our device as follows:

About a foot and a half back from the feed-rolls we place two pair of rolls, B and C, a few inches apart, each pair having the strands *a a a*, &c., to pass between them. Between these pairs of rolls, B and C, are arranged vertical posts, *b b*, &c., one post for each strand. The strand passes through a funnel-shaped opening in the top of the post, holding the latter down, it being operated by a spring, D, so that it constantly presses up. The construction of this post may be varied; however, without altering the principle involved.

At the lower end of each of the posts, below the frame E, in which the springs are arranged, is a slot, *c*, through which a cord, F, extends across the bed of the machine, being fixed at one end, and attached at the other to a bolt or pin, G, which it draws inwards when any unusual tension is put upon the cord.

Resting upon this pin G is one end of a lever, H, pivoted near the other end to the side of the machine-frame I. At the shorter end is hung a bell, J, the weight of which does not overbalance or even equal the weight of the longer end of the lever.

Upon the tumbler-shaft K, is a pulley, with a pin, L, or a crank or equivalent device, for the purpose of agitating the bell when the shorter end of the lever is brought within reach of it.

The operation of this device is as follows:

When one of the strands breaks, it lets the post corresponding with it fly up, and the lower end of it pulls up the cord attached to the bolt, as shown in fig. 1. The lever, having its rest removed, falls, the longer end downwards, bringing the shorter end, with the bell, within reach of the crank, which agitates it as the tumbler-shaft revolves, and rings the bell.

The advantages of this device are, that the operator is enabled to discover the broken strand, and have plenty of time to mend it, before it reaches the feed-rolls; and this applies to nearly all cases, for the strands rarely ever break after the feed-rolls have been passed, and the spring on the post being made of just the proper strength to be held down by a sound strand, prevents imperfect ones from passing this point.

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

The combination of the rolls B and C, spring-posts *b b*, cord F, with bolt G, and lever H, with its bell, all arranged substantially as described, and applied to a carding-machine, for the purpose set forth.

JOSEPH HAYTHORN,  
CHARLES E. PRICE.

Witnesses:

EDWARD H. HYDE,

J. B. GARDINER.