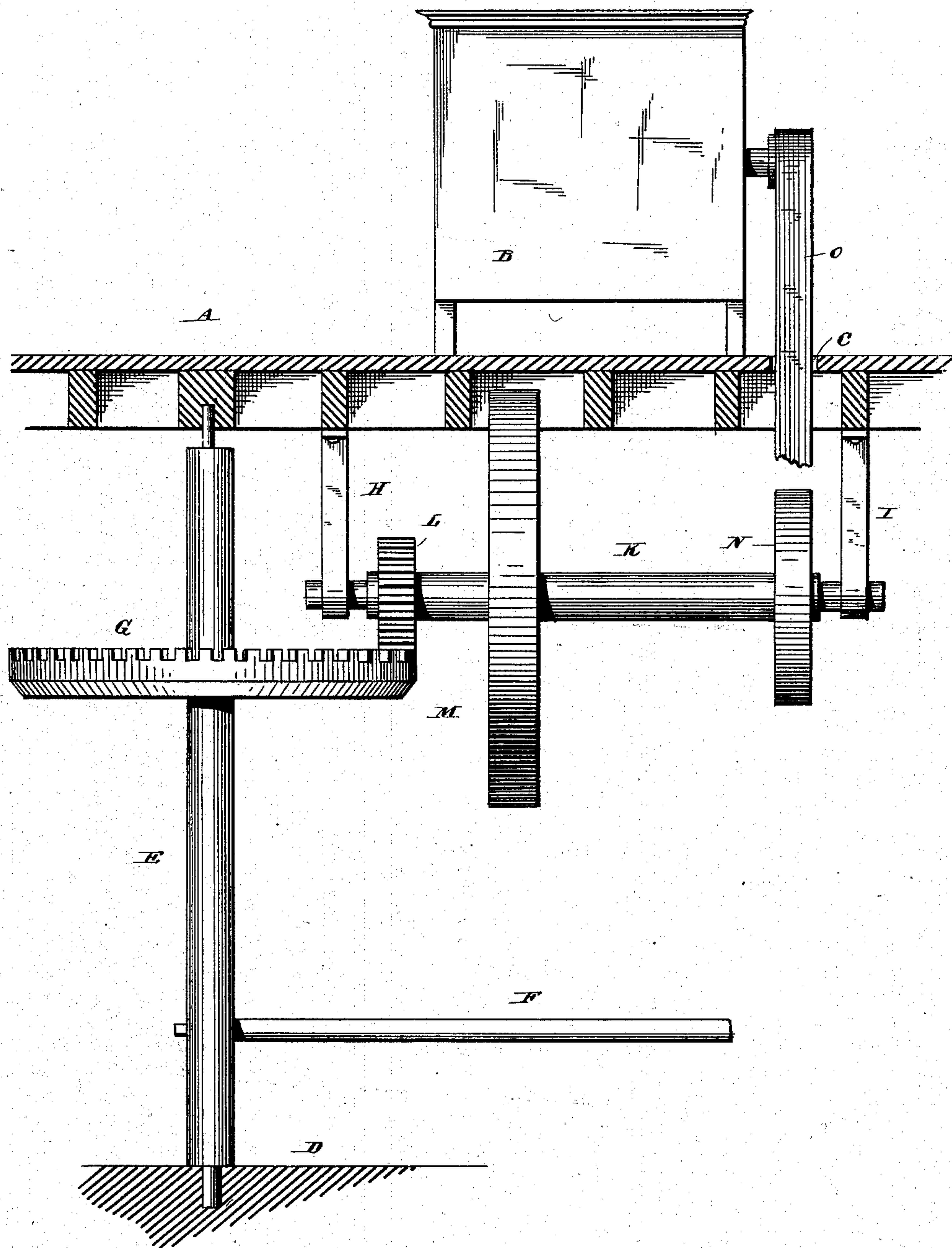


(No Model.)

L. R. NOLAN.
COTTON GIN POWER.

No. 276,454.

Patented Apr. 24, 1883.



Witnesses.
Edwin L. Yewell.
H. A. Faulkner

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UNITED STATES PATENT OFFICE.

LEWIS R. NOLAN, OF AUSTIN, ARKANSAS.

COTTON-GIN POWER.

SPECIFICATION forming part of Letters Patent No. 276,454, dated April 24, 1883.

Application filed January 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, LEWIS R. NOLAN, of Austin, in the county of Lonoke, and in the State of Arkansas, have invented certain new and useful
5 Improvements in Cotton-Gin Powers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon,
10 making a part of this specification.

This invention relates to cotton-gin powers; and it has for its objects to provide improved means for driving the gin and regulating the rotation of the saws to a uniform and even
15 rate of speed. It has been found that a better grade or sample of cotton is produced when the speed of rotation of the ginning-saws is uniform and regular than when their rotation is irregular and unsteady. It is a fact that
20 while a sudden jerk will break or sever the strands or fibers of fibrous material, a steady and even or uniform pull or tension will not. From this demonstrative truth arises the reason of the better quality of the staple of the
25 cotton ginned in a gin operated by my improved power mechanism, for by its use the saws are given a uniformity and evenness of rotation, as distinguished from an irregular and jerking rotation or intermittent faster and
30 slower revolution, the former acting to steadily draw the cotton between the gin-ribs, preserving the natural length of its fibers unbroken, and the latter acting to jerk and unsteadily draw it through, severing the fibers and reducing the commercial value of the staple. This
35 difficulty is overcome and the objects above mentioned are obtained by the means illustrated in the accompanying drawing, forming a part of this specification.

40 In the figure presented a portion of the second floor of a building is shown in vertical section, a cotton-gin located thereon, and my improved power mechanism set up beneath the floor.

45 The letter A designates the floor, above alluded to, of the building, the same being of the ordinary or any approved construction, and the letter B a cotton-gin, the driving-shaft whereof is provided with the usual band-pulley, the latter being adjusted to set in the ver-
50 tical plane with a belt or band hole, C, in the

floor, the object of which arrangement will presently appear.

At any suitable point on the lower or ground floor is constructed or formed a step or jour- 55
nal bearing, D, in which is fitted and adapted to rotate the lower journal of a vertical driving-shaft, E. The upper end of said shaft is provided with a corresponding journal, which fits into a bearing secured to the under side of 60
the upper floor. The shaft is also provided near the lower floor with a pole or tongue, F, for a purpose which shall presently appear. Near the opposite end of said shaft E, and rigidly secured thereon, is a horizontal driving 65
gear-wheel, G.

Depending at suitable points from the upper floor are two hangers, H and I, respectively, in each of which, at its lower extremity, is formed a bearing for the respective journal 70
ends of a horizontal power-transmitting shaft, K. On this shaft, near one end, is rigidly secured pinion L, which intermeshes with the driving gear-wheel hereinbefore mentioned. A balance or speed-regulating wheel, M, is also 75
secured to the shaft K intermediate its ends, which serves to maintain a perfectly uniform and regular rate of speed. The letter N indicates a band-pulley which is fastened securely upon the shaft K, and over which and the pul- 80
ley on the gin-shaft passes a band or belt, O, the said belt playing through the aperture in the floor, above alluded to. A horse or other animal is hitched to the pole and driven around the vertical shaft E, imparting rotary motion 85
to the driving gear-wheel G, which in turn rotates the band-pulley N through the medium of the pinion L and its supporting-shaft K. The belt O transmits rotary motion from pul- 90
ley N to the gin-saw shaft, the speed-regulating wheel M serving to keep up a perfect and uniform rate of rotating travel of the gin-saws, the object of which has hereinbefore been indicated.

I am aware that it is not broadly new to combine with a main driving-shaft having a driv- 95
ing gear-wheel secured thereon a power-transmitting shaft provided with a balance-wheel, and with pinions which serve to receive and transmit power, and do not, therefore, broadly 100
claim such as my invention.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

5 In a cotton-gin power, the combination of the driving-shaft having means for giving it rotation and a main driving gear-wheel, the power-transmitting shaft having a pinion, a band-pulley, and a speed-regulating wheel, with the cotton-gin and connecting-belt, substantially as shown and described.

In testimony whereof I affix my signature, in presence of two witnesses, this 27th day of November, 1882.

LEWIS R. NOLAN.

Witnesses:

J. A. CHAMPLIN,
R. L. BROWN.