

No. 666,466.

Patented Jan. 22, 1901.

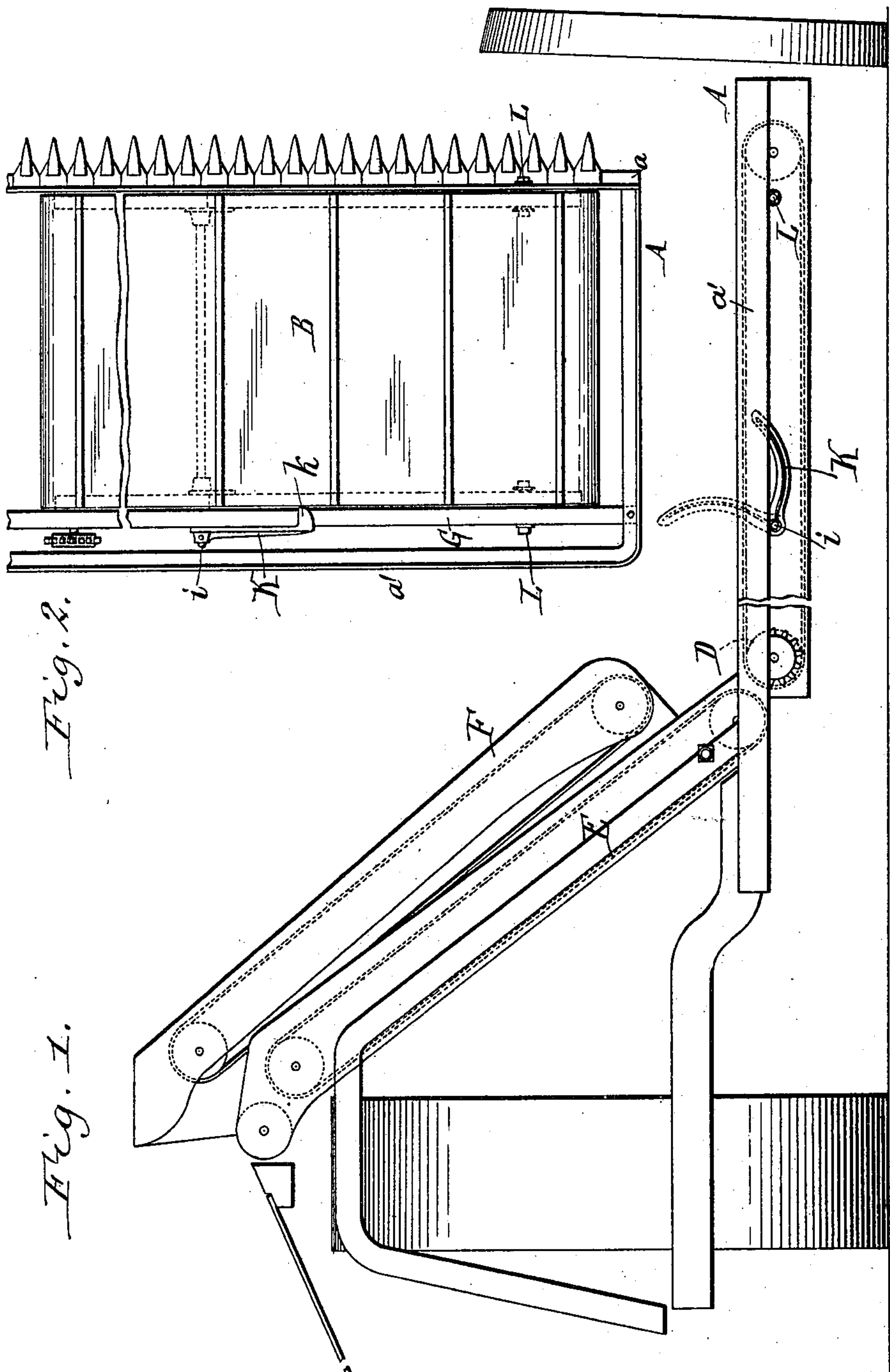
H. J. CASE.

STRETCHING DEVICE FOR GRAIN HARVESTER APRONS.

(Application filed June 22, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
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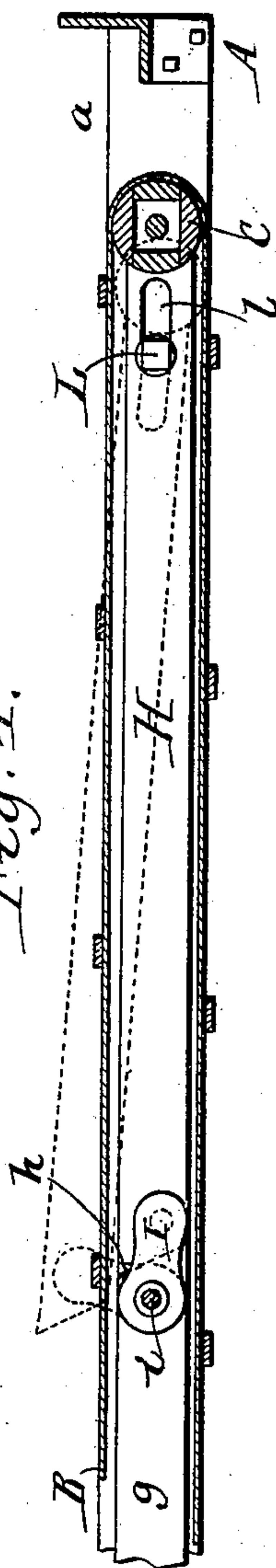
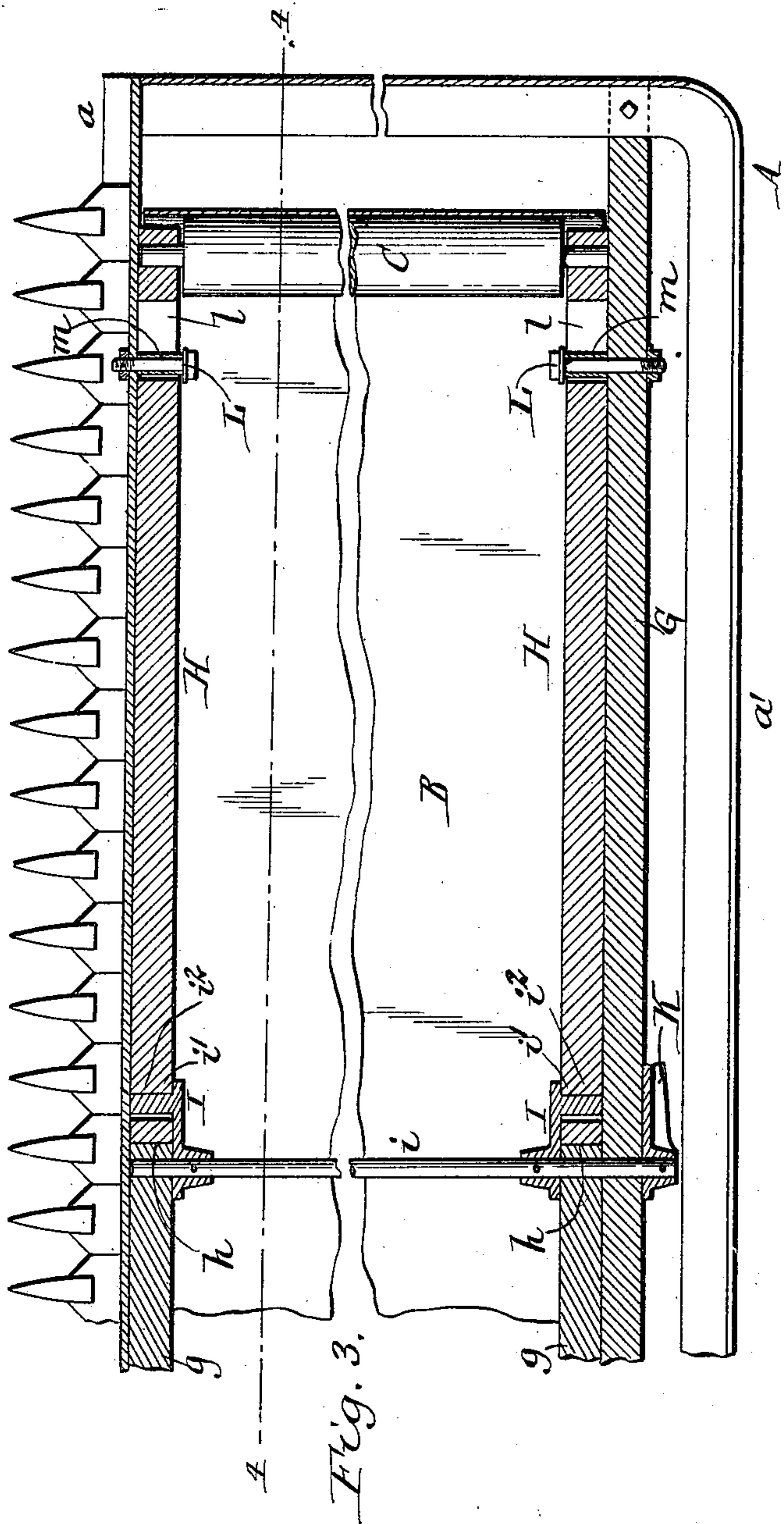
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(Application filed June 22, 1900.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

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STRETCHING DEVICE FOR GRAIN-HARVESTER APRONS.

SPECIFICATION forming part of Letters Patent No. 666,466, dated January 22, 1901.

Application filed June 22, 1900. Serial No. 21,185. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. CASE, a citizen of the United States, residing at Owasco, in the county of Cayuga, in the State of New York, have invented new and useful Improvements in Stretching Devices for Grain-Harvester Aprons, of which the following is a specification.

This invention relates to a stretching or tightening device for the traveling endless aprons which are used in the elevating and conveying mechanisms of grain-harvesters. In order to keep such aprons in good working order, it is necessary to slacken the apron when the machine is not in use—for instance, over night—and in order to induce the persons who attend to this class of machines to slacken the aprons when the day's work is done and to tighten the same again in the morning, rather than leave the aprons under tension overnight, the stretching devices should be of such construction that they require no particular effort for their manipulation and that the desired adjustment is produced quickly. My invention is designed to meet these requirements and has reference more particularly to a stretching device for the aprons of the platform conveyer and of the lower elevator.

In the accompanying drawings, consisting of two sheets, Figure 1 is a rear elevation of the platform conveyer and elevators of a grain-harvester, showing my improved stretching device applied to the platform conveyer. Fig. 2 is a top plan view of the platform conveyer. Fig. 3 is a sectional top plan view of the platform conveyer on an enlarged scale. Fig. 4 is a longitudinal vertical section in line 4 4, Fig. 3.

Like letters of reference refer to like parts in the several figures.

A represents the platform-frame, which may be of any suitable construction. As shown, it is provided with a front bar *a*, which carries or forms the finger-bar, and with a rear bar *a'*.

B is the apron of the platform conveyer, C the adjustable stretching-roller at the grainward end thereof, and D the roller at the stubbleward end.

E is the lower elevator, and F the upper elevator.

My improved stretching device is shown as applied to the grainward roller of the platform conveyer and is constructed as follows:

G represents a sill which is arranged in the platform-frame, near the rear bar *a'* thereof, so that the platform-apron B runs between this sill and the front bar *a* of the frame.

g represents the usual cleats secured to the inner sides of the front bar *a* and sill G for supporting the marginal portions of the apron. H represents movable arms which form continuations of these cleats and which are provided at their grainward ends with openings in which the shaft of the stretching-roller C is journaled. These arms are movable longitudinally, so as to move this roller toward or from the roller at the opposite end of the platform, thereby loosening or tightening the apron. This movement of the arms is effected by a rock-shaft *i*, provided with cranks I, which engage with the arms H at the stubbleward ends of the latter. The meeting faces *h* of the cleats *g* and arms H are oblique, as indicated in Fig. 4, to insure a close fit of the same against each other when the arms are in their extended position.

The shaft *i* is actuated by a hand-lever K, which is secured to the rear end of the shaft and provided near its free end with a projection or lip *k*. The latter bears upon the sill G when the arms are fully extended, and the cranks I are so arranged on the shaft *i* that in this position of the parts the cranks have passed downwardly beyond the dead-center, so that the tension of the apron holds the lip *k* down upon the sill G and the meeting faces *h* of the cleats and arms in close contact, thereby holding the parts securely in this position.

The arms are guided in their longitudinal movements near their grainward ends by longitudinal slots *l*, in which engage horizontal bolts L, secured, respectively, to the front bar *a* and the sill G of the frame. These bolts are preferably provided with spacing-sleeves *m*, which are inserted between the head on the inner end of each bolt and the adjacent frame-bar in order to prevent the

head from bearing against the inner side of the arm H so hard as to interfere with the free movement of the arm. Upon turning the rock-shaft the outer portions of the arms
5 carrying the movable or stretching roller slide forward or backward on the bolts.

By swinging the hand-lever K from one position to the other the apron is tightened or slackened. The hand-lever is shown in Fig.
10 1 in full lines in the tightened position and in dotted lines in the slackened position. The movable arms carrying the adjustable roller are shown in Fig. 4 in full lines in their extended position, in which the apron is taut,
15 and in dotted lines in their retracted position, in which the apron is slack.

The same stretching device may also be employed in connection with the elevator-aprons and is particularly desirable for use
20 with the lower roller of the lower elevator-apron.

I claim as my invention—

1. The combination with an endless apron and its supporting-frame, of a stretching-
25 roller, longitudinally-movable arms in which said roller is mounted, and a crank-shaft

whereby said arms are moved longitudinally for tightening or loosening said apron, substantially as set forth.

2. The combination with an endless apron 30 and its supporting-frame, of a stretching-roller, movable arms in which said roller is mounted, guide devices whereby said arms are guided longitudinally near said roller, and an adjusting-shaft and cranks connected 35 with the opposite ends of said arms, substantially as set forth.

3. The combination with an endless apron and its supporting-frame, of a stretching-roller, movable arms in which said roller is 40 mounted, guide devices connecting said arms with said frame near said roller and consisting of bolts and longitudinal slots, and an adjusting-shaft and cranks connected with the opposite ends of said arms, substantially as 45 set forth.

Witness my hand this 18th day of June, 1900.

HENRY J. CASE.

Witnesses:

H. A. SOMERS,
C. LOUIS PULSIFER.