

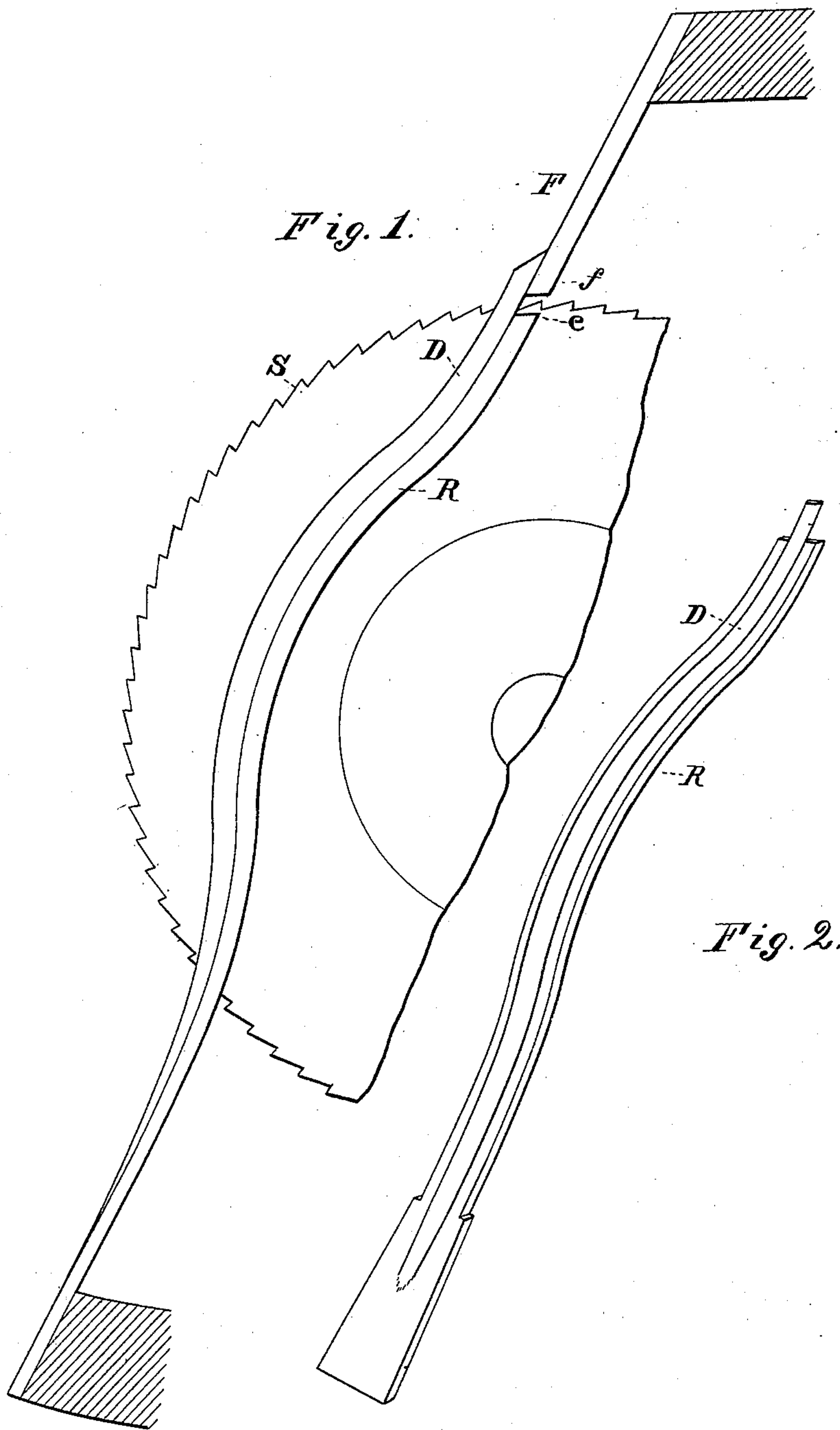
(No Model.)

W. DEERING.

COTTON GIN.

No. 318,362.

Patented May 19, 1885.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM DEERING, OF LOUISVILLE, KENTUCKY.

COTTON-GIN.

SPECIFICATION forming part of Letters Patent No. 318,362, dated May 19, 1885.

Application filed January 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DEERING, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Cotton-Gins; and I do 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 ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention has relation to improvements
15 in saw cotton-gins; and it consists in the construction and novel arrangement of devices, as will be hereinafter more fully set forth and claimed.

It is known that seed-cotton, when put into
20 a saw cotton-gin, rolls, under the action of the saws, continuously upward, so that when looking into a gin at work what is seen is apparently a cylinder of seed-cotton rolling upward and outward toward the front of the hopper,
25 or, as it is commonly called, the "roll-box." It is also known that the moment the seed-cotton stops rolling, the saws, although still in revolution, lose their normal action on the cotton, and that at the place or places of the break
30 there is, until the rolling again commences, no further separation of the lint from the seed, and it is known that the breaking of the rolls takes place only when the teeth of the saws meet some undue impediment at the points
35 where the serrated margins of the saws pass through the ribs out of the roll-box. Therefore it is that in making gins great care is taken that no such impediment shall have a first cause in the ribs themselves. In the greater number
40 of all gins thus far introduced the ribs are solid bodies extending from the lower to the upper edge of the roll-box, and with due care exercised in relation to form and workmanship there is no such first cause in these gins; but
45 in the class of gins referred to—viz., those having the ribs made in sections—there is an inherent liability to such a cause of impediment. The heaviest work in all gins is at the points where the saws carry the lint from the
50 seed through the ribs out of the roll-box. The solid ribs of the greater proportion of gins re-

tain their proper position and firmness when the gin is in operation; but in the gins of the character referred to the ribs are at the points unsupported extremities, and therefore it is
55 that, owing to shrinkage or warping of the frame-work, as well as to the multitudinous vibrations involved, a greater or lesser number of these unsupported extremities sink or rise out of their due relation to each other, and so
60 cause the extremities of the upper sections to present greater or lesser shoulders, which operate in antagonism to the requisite unimpeded upward rolling of the seed-cotton in the roll-box. Thus, if the end of the rib which termi-
65 nates at the base of the teeth of the saws sinks in any degree inward, it follows that the end of the rib which terminates about the tips of the teeth necessarily presents a shoulder which in that degree acts as an impediment against the
70 roll. So, if the end of the upper rib or edge of the fender rises in any degree outward, a similar impeding shoulder is presented.

My invention is for the purpose of preventing these shoulders, and the mode of accom-
75 plishing this purpose will be fully understood by reference to the accompanying drawings and the explanation thereof, as follows:

Figure 1 represents a side view of a portion of the saw S and a side or edge view of the rib
80 R, which in its main portion or body terminates at or about the base of the teeth of the saw, as at *e*; also a side or edge view of the upper rib or fender, F, which terminates at or about the tops of the teeth of the saw, as at *f*. Fig. 2 is
85 a view of the rib R and flange in perspective.

In my improved rib the middle flange or shield, D, at the upper end of the rib R projects three-eighths of an inch (more or less) up
90 over the lower end of the rib or lower edge of the fender F, engaging said end or edge, to prevent any sinking of the rib R at the point *e*, without a corresponding sinking of the rib or fender F at the point *f*, and equally to prevent any rising of the rib or fender F without
95 a corresponding rising of the rib R at the point *e*. In this way any rising of the rib or fender F relatively to the end of the rib R to form an impediment is rendered impossible. The shield or projection D is made about three-
100 fifths (more or less) of the width of the main portion or body of the rib R, and is designed

to leave ample space on each side for the passage of the lint carried by the teeth of the saws out of the roll-box. An additional use of this shield is found in this, that it serves to cover
5 and so neutralize the greater portion of any small shoulder which might perhaps be left on the adjacent ends of the rib-sections F and R through a possible inadvertence in workmanship.

10 Having described this invention, what I claim, and desire to secure by Letters Patent, is—

15 1. The lower separable section of a cotton-gin rib provided with a middle projecting flange extending partially the width of the main body of the section and upward beyond the same, in combination with an upper rib-section or fender, whereby the formation of obstructing shoulders at the points where the

saws carry the seed-cotton out of the roll-box 20 is prevented, substantially as specified.

2. In a saw cotton-gin in which the ribs terminate at or about the base line of the teeth of the saws and begin again at or about the line of the outer points of the said teeth, the combination of the upper and lower sections, the 25 latter having middle flanges projecting up over the lower ends of the upper ribs or fenders, to prevent the formation of obstructing shoulders at the points where the saws carry the seed- 30 cotton out of the roll - box, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM DEERING.

Witnesses:

MARY C. REXTER,

THOMAS HILL.