(No Model.)

D. D. GRIFFIN.

STALK SPLITTING MACHINE FOR WHIPS.

No. 508,937. Patented Nov. 21, 1893.

Fig. 1.

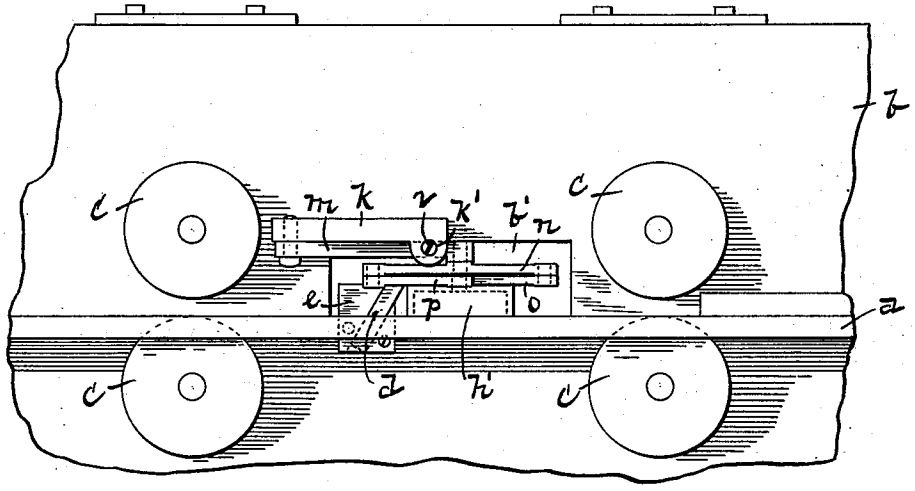
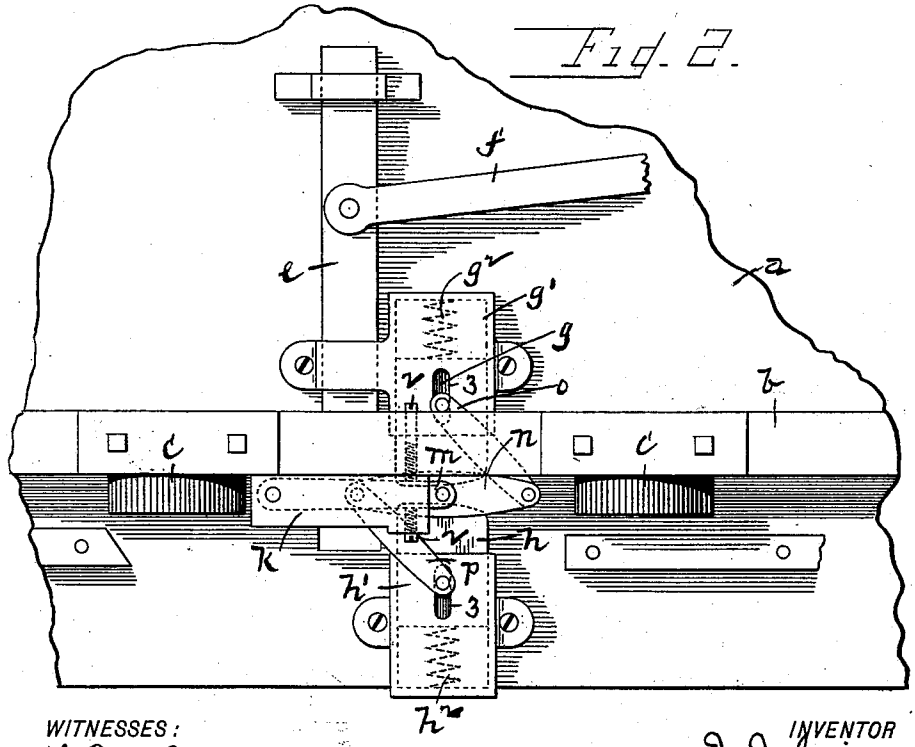


Fig. 2.



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DUANE D. GRIFFIN, OF WESTFIELD, MASSACHUSETTS.

STALK-SPLITTING MACHINE FOR WHIPS.

SPECIFICATION forming part of Letters Patent No. 508,937, dated November 21, 1893.

Application filed July 14, 1892. Serial No. 440,059. (No model.)

To all whom it may concern:

Be it known that I, DUANE D. GRIFFIN, a citizen of the United States, residing at Westfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Stalk-Splitting Machines for Whips, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to machines for splitting the rattan stalks used in forming whip centers, of the class shown and described in Letters Patent No. 454,497, issued June 23, 1891, to one Reed, in which a split extending from end to end of the stalk, in a diagonal line, is made by a knife and suitable feeding and guiding devices for the stalk, thereby dividing the stalk into correspondingly tapered halves. In the use of such machines much trouble has been encountered by the fact that the stalks necessarily differ more or less in diameter even when selected as carefully as possible to sort them into different sizes, and the stationary guiding devices upon the machine being set to correspond with a given size of stalk, such slight variations in diameter prevent many of the stalks from being rigidly held from lateral movement by the guides, and an equal division thereof by the knife is rendered impossible, thereby causing a waste of much of the stock.

It is the object of my invention to provide a form of stalk guide for such machines which will be of a self-centering character, that is to say, which, being adjusted for stalks of a given size, will automatically adapt itself to slight variations in the diameters of the stalks in such manner as to bring their axial centers to the same plane regardless of such variations.

To this end my invention consists in the guiding means constructed and operating as hereinafter fully described and particularly pointed out in the claims.

Referring to the drawings, in which like letters and numerals designate like parts in the several views, Figure 1 is a side view of so much of a stalk splitting machine having applied thereto my novel guiding means as are necessary to be shown for a full understanding of the invention. Fig. 2 is a plan view of the same parts.

The letter *a* designates a portion of the bed or table, *b* the vertical side-wall of the frame, and *c c* two of the pairs of feed-rolls, of a stalk splitting machine similar to that shown in the Letters Patent to Reed hereinbefore referred to, by reference to which a clear understanding of the machine and its mode of operation may be had without further illustration or description herein. In said patent, however, a stationary knife is used and dependence is placed upon a laterally movable guide-bar, operated by a cam-actuated lever, to give to the stalk the necessary lateral movement to secure the diagonal division thereof by the knife.

In the machine herein shown a laterally movable knife *d* is used, it being carried at the front end of the same bar *e*, which now becomes a knife-bar, it being actuated by the same cam-actuated lever *f*, as in said patent. I do not however, claim such laterally moving knife as of my invention, the invention sought to be secured herein relating solely to the guiding means for the stalk, to be used in connection with such a knife.

In the practice of my invention, I provide the vertical side-wall *b* with an opening *b'* located immediately in front of the plane of movement of the knife *d*, through which opening projects a guide-block *g*, guided in a housing *g'* and pressed forwardly by a spring g^2, as represented by broken lines in Fig. 2. Directly opposite to said guide-block, at the front side of the table *a*, is located a second guide-block *h*, guided within a housing *h'*, and pressed rearwardly, or toward block *g*, by a spring h^2. Said guide-blocks preferably have their acting faces slightly rounded as shown, and their function is to guide a stalk, fed through the machine by the feed-rolls, in a truly straight line, by bearing against the opposite sides thereof, so that the knife *d* as it is moved laterally by the knife-bar may divide the stalk diagonally into two equal parts. Suitably secured to the wall *b* above said opening is a bracket *k*, provided at one end with two downwardly projecting ears *k'* in each of which is mounted an adjusting screw 2. Pivotally connected to said bracket at its opposite end is the supporting-bar *m*, the free end of which lies between the ends of said adjusting screws 2, by means of

which said free end of the bar can be adjusted laterally in either direction. To the free end of said supporting-bar a lever *n* is pivotally connected at a point midway between its ends, and links *o* and *p* connect the opposite ends of said lever with the guide-blocks *g* and *h* respectively, by means of pins projecting from said guide-blocks through slots 3 in their housings. Said lever and links thus disposed serve as an equalizer for the guide-blocks, by compelling uniformity of movement thereof in opposite directions, while, at the same time, both blocks and the equalizer are adjustable laterally by means of the adjusting screws 2. For example, the bar *m* being adjusted to a position to cause the guide-blocks to accurately guide stalks of a given diameter through the machine, and a stalk being fed to the machine whose diameter exceeds say one-fourth of an inch such given diameter, said stalk, instead of crowding backwardly one of the guide-blocks a distance of one-fourth of an inch and thereby causing the axial center of the stalk to lie to one side of the proper plane, will cause each of the blocks *g h* to recede a distance of one-eighth of an inch, through the action of the equalizer, and there by keep its axial center in the same plane as if its diameter did not exceed that for which the machine is set. The even division of the stalk by the knife regardless of slight variations in diameter is therefore assured. The elastic pressure of the guide-blocks against the stalk, due to their springs g^2 h^2, remains the same, and the feeding action of the rolls *c* is undisturbed by the action of the equalizer.

By means of this simple and inexpensive attachment to a stalk splitting machine of the class specified I remove the only serious objection to such machines as heretofore constructed, and prevent practically all waste of stock by reason of uneven splitting thereof by the knife.

It is obviously immaterial to the invention herein claimed in what manner the knife is given its lateral movement, or what the other adjuncts of the machine may be, the guiding means performing their function in the same manner regardless of changes in the other parts of the machine.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a stalk splitting machine for whips, the combination with a laterally moving knife of the guiding means for the stalk herein described, comprising two spring-actuated guide-blocks located upon opposite sides of the plane of movement of the stalk, a supporting-bar located above said plane, means for adjusting said bar transversely of said plane, and lever and link connections substantially as described between said bar and each of said guide-blocks whereby movement of one block is transmitted to the other block in an opposite direction, substantially as set forth.

2. In a stalk splitting machine for whips, the combination with a splitting knife movable in a plane at a right-angle to the path of movement of a stalk through the machine, of two guide-blocks located upon opposite sides of said path of movement and immediately in front of said knife, springs pressing said blocks toward each other, a laterally adjustable support located above said path of movement, a lever pivotally connected midway between its ends to said support, and links connecting the opposite ends of said lever with said guide-blocks respectively, substantially as set forth.

3. In a stalk splitting machine, the combination with the laterally movable knife *d* and feed-rolls *c*, of the bracket *k* provided with the adjusting screws 2, the supporting-bar *m* pivotally connected at one end to said bracket and projecting between the ends of said screws, lever *n* pivotally connected midway between its ends to said bar *m*, guide-blocks *g h*, and links *o p* connecting the opposite ends of said lever *n* to said blocks respectively, arranged and operating substantially as described.

DUANE D. GRIFFIN.

Witnesses:
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GEO. E. WHIPPLE.