(No Model.)

A. B. SMITH.

MOWING MACHINE FINGER BAR.

No. 441,337. Patented Nov. 25, 1890.

FIG. 1.

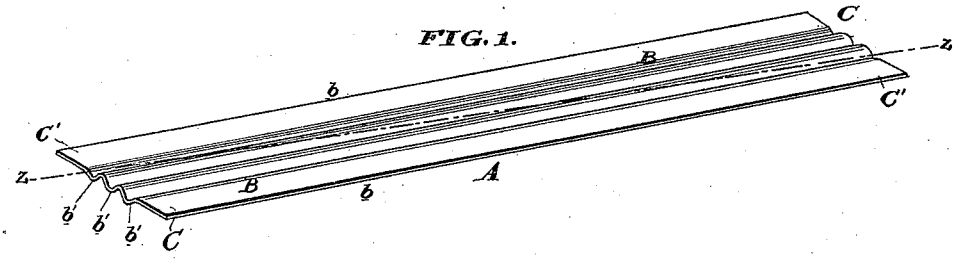


FIG. 2.

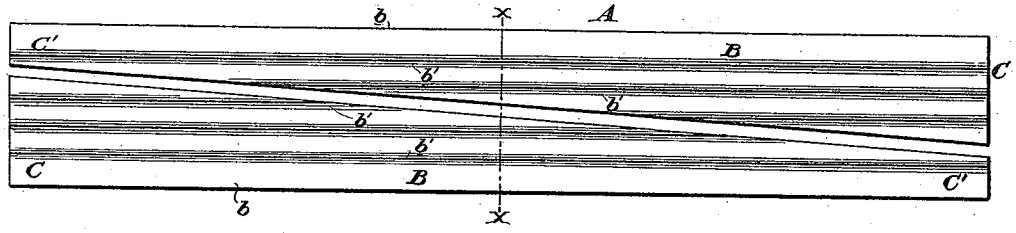


FIG. 3.

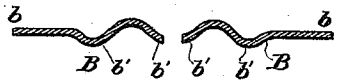


FIG. 4.

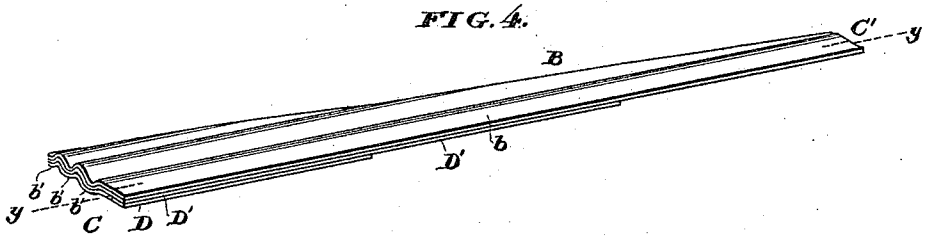


FIG. 5.



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MOWING-MACHINE FINGER-BAR.

SPECIFICATION forming part of Letters Patent No. 441,337, dated November 25, 1890.

Application filed November 11, 1889. Renewed October 24, 1890. Serial No. 369,168. (No model.)

To all whom it may concern:

Be it known that I, ABIA B. SMITH, of Pittsburg, county of Allegheny, State of Pennsylvania, have invented a new and useful Mowing-Machine Finger-Bar, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the construction of finger-bars for mowing and reaping machines; and my object is to provide a finger-bar which can be made of unusual length without liability to curve, which bars of the ordinary construction have, and without requiring an undue amount of metal.

My device is particularly intended for use on that class of mowing-machines in which the finger-bar is balanced from the frame of the machine by the action of a spring upon the inner end of the bar—such, for instance, as is shown in the patent of Ephraim Smith, No. 233,035, dated October 15, 1880.

My invention will be best understood after an explanation of the drawings, in which it is illustrated, and the novel features which I desire to claim in this application are clearly pointed out in the claims.

Reference being now had to the drawings, which illustrate my invention, Figure 1 is a perspective view of a plate such as I prefer to prepare in the manufacture of my cutter-bars, and from which two cutter-bars are made by severing the blade on the oblique line *z z*. Fig. 2 is a plan view of the same plate severed in the manner above stated into two cutter-bars. Fig. 3 is a cross-section through the two cutter-bars on the line *x x* of Fig. 2. Fig. 4 is a perspective view of the cutter-bar having, also, an additional strengthening device consisting of supplemental or re-enforcing plates secured to the main bar; and Fig. 5 is a cross-section on the line *y y* of Fig. 4.

I form my cutter-bars, as is usual, with a gradually-decreasing width from the inner end to the outer end, B being the cutter-bar, C the inner end, and C′ the outer end thereof. The front of the cutter-bar is formed plain and flat, so as to afford a secure face on which the fingers can be attached, as is shown at *b*. Back of this face I form one or more corrugations *b′ b′*, &c., running parallel with the front edge of the cutter-bar and vanishing in the oblique back edge thereof. Preferably a series of two or more corrugations are formed, as is shown in the drawings, and the inner one may, if desired, run the whole length of the bar. The function of these corrugations is to stiffen and strengthen the bar in the part in which such strengthening is most required—namely, its inner end—and by the plan shown they gradually run out and vanish toward the outer end of the bar, where the additional strength provided by them is not required. These bars are conveniently prepared by rolling a rectangular plate of the form shown in Figs. 1 and 2 and marked A, the corrugations *b′* being formed through the center of this plate and the plate then cut by an oblique line *z z*, so as to form two cutter-bars of the kind desired.

In order to still further re-enforce and strengthen the bar at its inner end, I secure to the cutter-bar proper one or more supplemental re-enforcing plates of similar cross-section running from its inner end toward (but not to) its outer end. Preferably I use two sets of re-enforcing plates, (marked D and D′,) the one D′ running to a point beyond the center of the bar, preferably about two-thirds of its length, and the other D secured to this plate and running to a point inside of the center of the bar, preferably about one-third of its length. In this way I am enabled to use a lighter cutter-bar proper and yet give it the requisite strength by means of the re-enforcing plates situated at the parts where it is exposed to the greatest strain.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A mowing-machine finger-bar of gradually-increasing width from outer to inner end, having a plain flat front face to hold the fingers and one or more corrugations in its rear formed parallel to its front edge and vanishing in the oblique line of its back.

2. A mowing-machine finger-bar of gradually-increasing width from outer to inner end, having a plain flat front face to hold the fingers, a series of corrugations in its rear

formed parallel to its front edge and vanishing in the oblique line of its back, and having one or more re-enforcing plates of similar cross-section secured to and beneath it, so as to extend from its inner end toward (but not to) its outer end.

3. A mowing-machine finger-bar of gradually-increasing width from outer to inner end, having a plain flat front face to hold the fingers, a series of corrugations in its rear formed parallel to its front edge and vanishing in the oblique line of its back, and having a re-enforcing plate of similar cross-section extending beneath it from its inner end beyond its center, and a second similar re-enforcing plate secured to the first and extending to a point on the inner side of the center.

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