

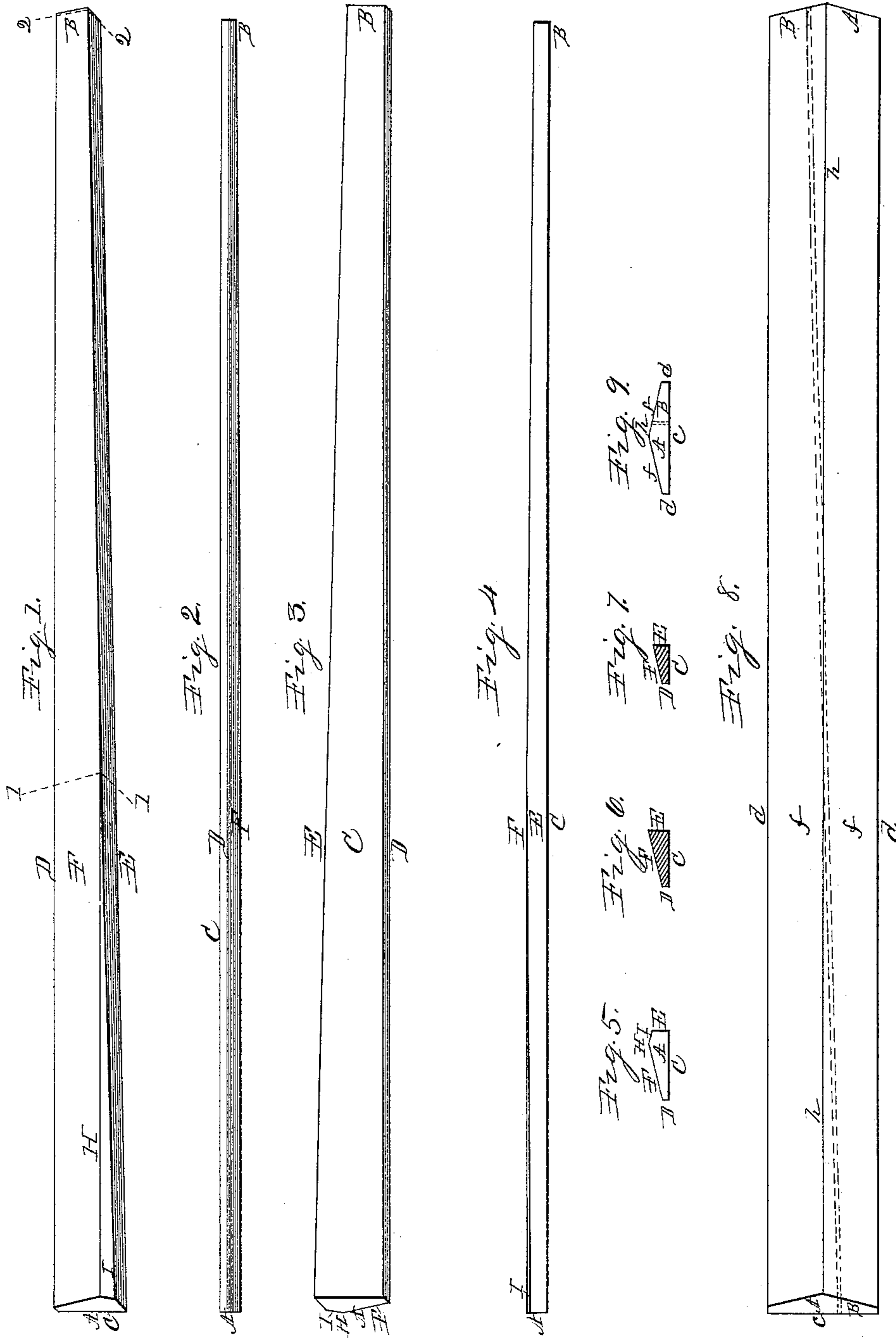
(No Model.)

J. H. JONES.

MANUFACTURE OF HARVESTER FINGER BARS.

No. 353,636.

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MANUFACTURE OF HARVESTER FINGER-BARS.

SPECIFICATION forming part of Letters Patent No. 353,636, dated November 30, 1886.

Application filed January 30, 1886. Serial No. 190,352. (No model.)

To all whom it may concern:

Be it known that I, JAMES HERVA JONES, a citizen of the United States, residing in the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Finger-Bars, of which the following is a specification.

This invention relates to finger-bars of harvesting-machines. Its object is to produce a light-weight finger-bar for harvesting-machines, of a conformation possessing great resistance in the direction of the strains to which a finger-bar is subjected in use, and having a conformation capable of easy construction. To this end I have designed and constructed the finger-bar represented in the accompanying drawings.

In the drawings, Figure 1 is an upper face and rear edge representation, in isometrical, of my improved finger-bar. Fig. 2 is a front edge representation of the bar. Fig. 3 is an under face and front edge representation of the bar in isometrical. Fig. 4 is a rear edge view of the bar. Fig. 5 is a shoe or heel end view of the bar. Fig. 6 is a transverse section on dotted line 1. Fig. 7 is a transverse section on dotted line 2. Fig. 8 is a plan view, in isometrical, of a bar from which to produce my improved finger-bars; and Fig. 9 is an end representation of the bar represented at Fig. 8.

The finger-bar represented in the figures in plan is of the usual taper form, being of greater width at its shoe or heel end A than at its divider or point end, B, the reduction being made on the rear edge of the bar to produce the taper. The under face, C, of the bar is a plane even surface, and its front edge, D, and rear edge, E, are substantially at right angles with its under face. The front edge, D, of the bar is of uniform thickness throughout its entire length, and from its front edge rearward the bar increases in thickness in the same plane throughout its entire length, and this increasing in thickness extends at the heel end portion of the bar to near its rear edge, to a point on the upper surface, F, thereof, (represented by a crown-line, H,) extending from its heel end parallel with its front edge until it intersects the rear inclined edge thereof, in this instance a little over one-third the length of the bar from its heel end. The rear edge of the bar, being inclined rela-

tively with its front edge, cuts the rearward transverse angle or rearward increasing thickness of the bar obliquely and produces a uniform decreasing thickness of the back edge thereof from the point of intersection of the crown-line with its rear edge to its point end. The portion I of the bar between the crown-line H and its rear edge is produced on its upper face on a rearwardly-decreasing transverse angle, the same as the surface F of the bar. The inclination of the rear edge of the bar relatively with its front edge cuts its rear inclined decreasing upper surface, I, obliquely, and produces a uniform decreasing thickness of its rear edge from the intersection of the crown-line therewith toward its heel end.

In this construction of a finger-bar the thickest part of its rear edge is at the point of intersection of the crown-line with its rear edge, from which point its thickness diminishes uniformly in opposite directions toward its opposite ends, and the thickness of the bar on the crown-line H is uniform throughout its length. In this construction of finger-bar, by reason of the opposite equal transverse angles forming its upper face on both sides of the crown-line, in connection with the taper angle of its rear edge cutting the upper face-angles obliquely on both sides of the crown-line, I produce finger-bars of uniform angles both transversely and lengthwise, with thin forward edge to receive the guard-fingers, and presents but little obstruction to the passage of the cut grass over the bar, and a width sufficient to resist edgewise or lateral strain, a depth or thickness on its rear edge to prevent undue sagging or crowning of its central portion in use or in handling, and its wedging or triangular form in transverse section operates to resist torsional strains. This construction of finger-bar is adapted to machines employing finger-bars of various lengths, but is more especially applicable to machines known as the "long bar" or "wide cut" machine, in which finger-bars of unusual lengths are employed.

In the foregoing I have described the plane face C of my improved finger-bar as the under side, and the inclined faces F and I as its upper side, and I prefer to so employ it; but it is capable of being reversed, to employ the side C as its upper side.

In the manufacture of my improved finger-

bar I employ the following process, using a bar substantially such as represented at Figs. 8 and 9, a product of a rolling-mill, of suitable material, rectangular in plan, having its edges d of uniform thickness throughout its length, its under face, e , in the same plane throughout its length and width, and its upper surfaces, f , in apposite equal inclined planes rising from its edges d in opposite equal angles to its center crown-line, h , on which line the bar throughout its length is uniform, but of a thickness greater than its edges d . This bar—a product of a rolling-mill—is produced in the same manner as other metallic bars are produced, by passing the material through rolls of a construction to give the bar the required conformation. The bars thus produced are cut or otherwise reduced to the required length, and are then subjected to a slotting or dividing process, to accomplish which the bar is placed on the bed of a planer in a position diagonal to the movement of the bed, and in such position thereon relatively with its movement that the diagonal dotted lines on the upper surface of the bar shown in Fig. 8 shall coincide with the movement of the planer-bed. A slotting-tool is then placed in the planer-head and adjusted to remove the portion of the bar between the dotted lines on its upper surface, and the process of planing is continued until the bar is divided, producing two complete like finger-bars, substantially as shown in Figs. 1 to 7, inclusive, and as hereinbefore described.

I claim as my invention—

1. A tapered finger-bar uniform in thickness on its front edge and its rear edge of greater thickness than its front edge, said bar diminishing on its rear edge in width and thickness toward its free or divider end.

2. A finger-bar of taper form in plan, having its rear edge of greater thickness than its front edge, said rear edge produced in opposite uniform tapers in equal opposite angles from its point of greatest thickness nearest its shoe or heel end, substantially as and for the purpose set forth.

3. A finger-bar of taper form in plan, uniform in thickness on its crown-line, and having its rear edge of greater thickness than its front edge, said rear edge produced in opposite uniform tapers in equal opposite angles from its point of greatest thickness nearest its shoe or heel end, substantially as and for the purpose set forth.

4. A finger-bar of taper form in plan, having its front edge uniform in thickness, its rear edge of greater thickness than its front edge, said rear edge produced in opposite uniform tapers in equal opposite angles from its point of greatest thickness nearest its shoe or heel end, substantially as and for the purpose set forth.

5. A finger-bar of taper form in plan, having its front edge uniform in thickness, its crown of uniform thickness greater than its front edge, and its rear edge of greater thickness than its front edge, said rear edge produced in opposite uniform tapers in equal opposite angles from its point of greatest thickness nearest its shoe or heel end, substantially as and for the purpose set forth.

6. A finger-bar of taper form in plan, having one plane side, and its rear edge of greater thickness than its front edge, said rear edge produced in opposite uniform tapers in equal opposite angles from its point of greatest thickness nearest its shoe or heel end, substantially as and for the purpose set forth.

7. A finger-bar of taper form in plan, having one plane side uniform in thickness on its crown-line, and its rear edge of greater thickness than its front edge, said rear edge produced in opposite uniform tapers in equal opposite angles from its point of greatest thickness nearest its shoe or heel end, substantially as and for the purpose set forth.

8. A finger-bar of taper form in plan, having one plane side, its front edge uniform in thickness, its rear edge of greater thickness than its front edge, said rear edge produced in opposite uniform tapers in equal opposite angles from its point of greatest thickness nearest its shoe or heel end, substantially as and for the purpose set forth.

9. A finger-bar of taper form in plan, having one plane side, its front edge uniform in thickness, its crown of uniform thickness greater than its front edge, and its rear edge of greater thickness than its front edge, said rear edge produced in opposite uniform tapers in equal opposite angles from its point of greatest thickness nearest its shoe or heel end, substantially as and for the purpose set forth.

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Witnesses:

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