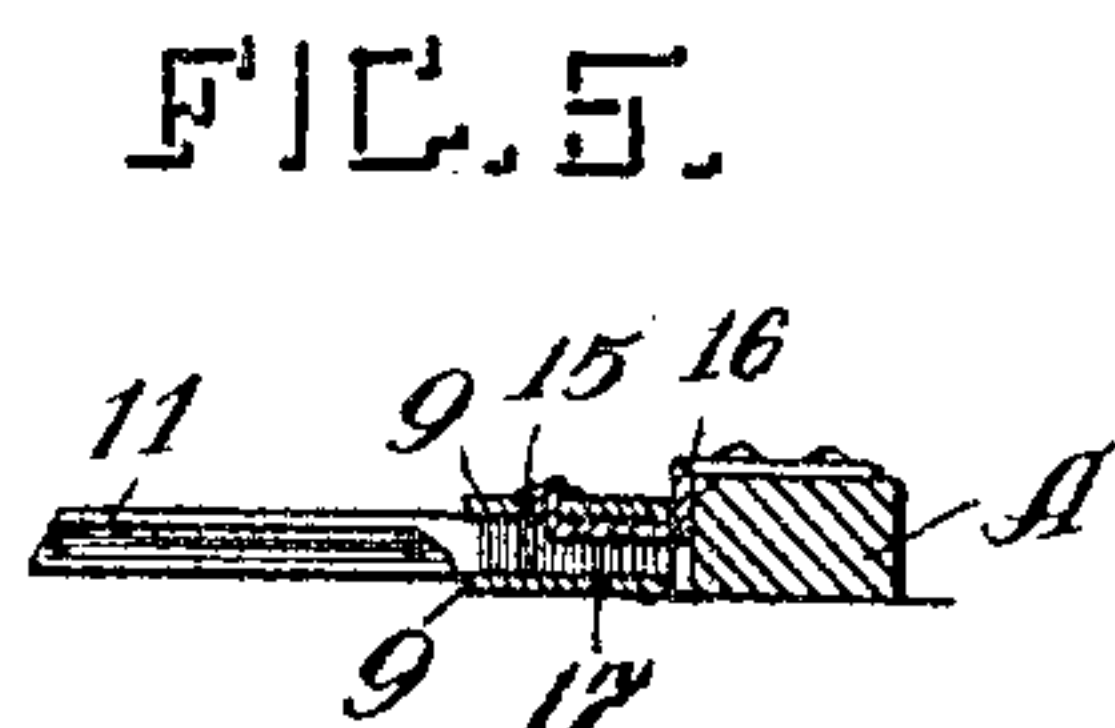
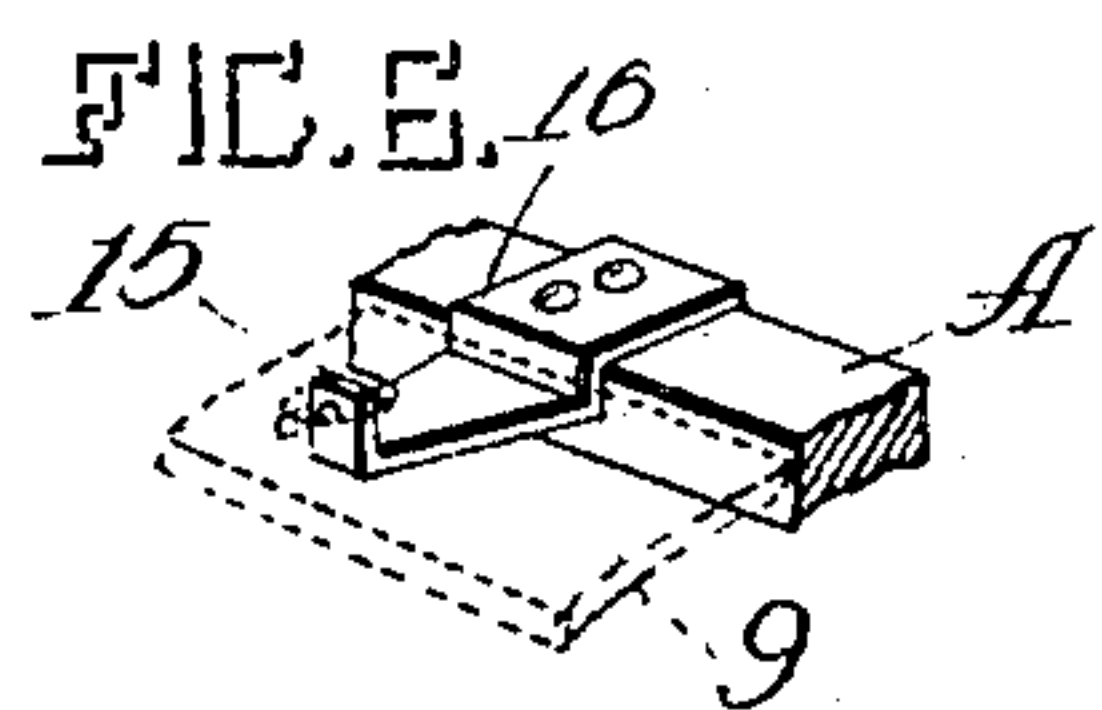
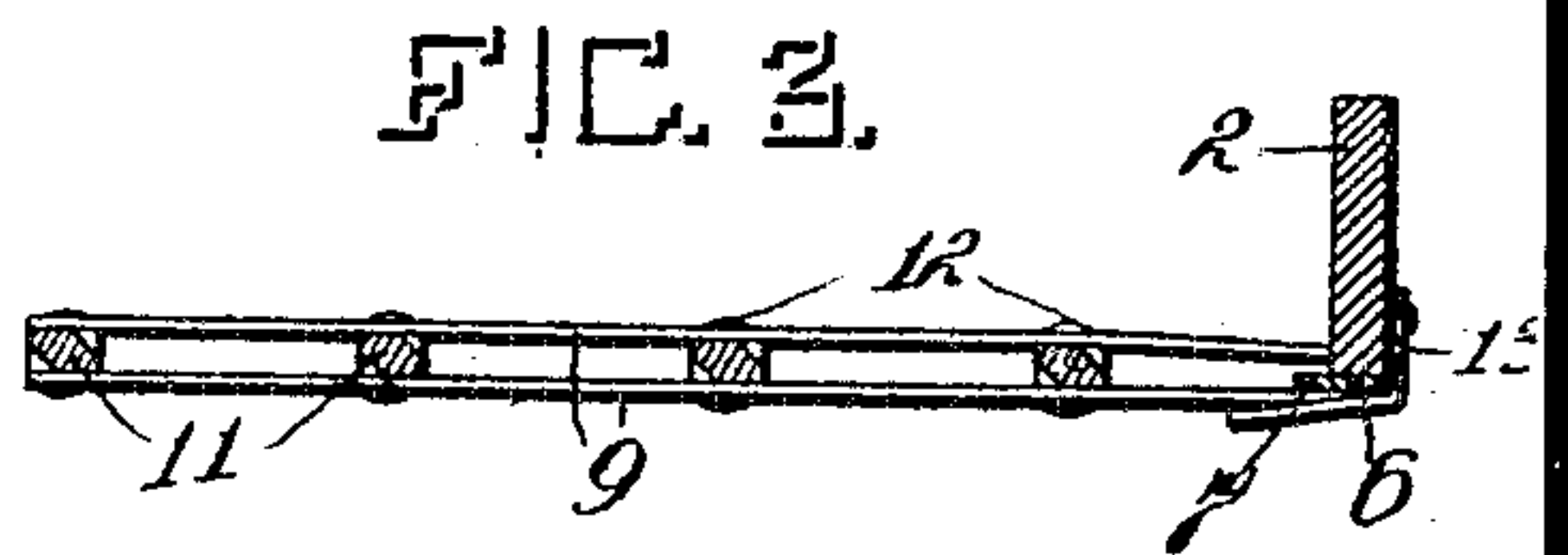
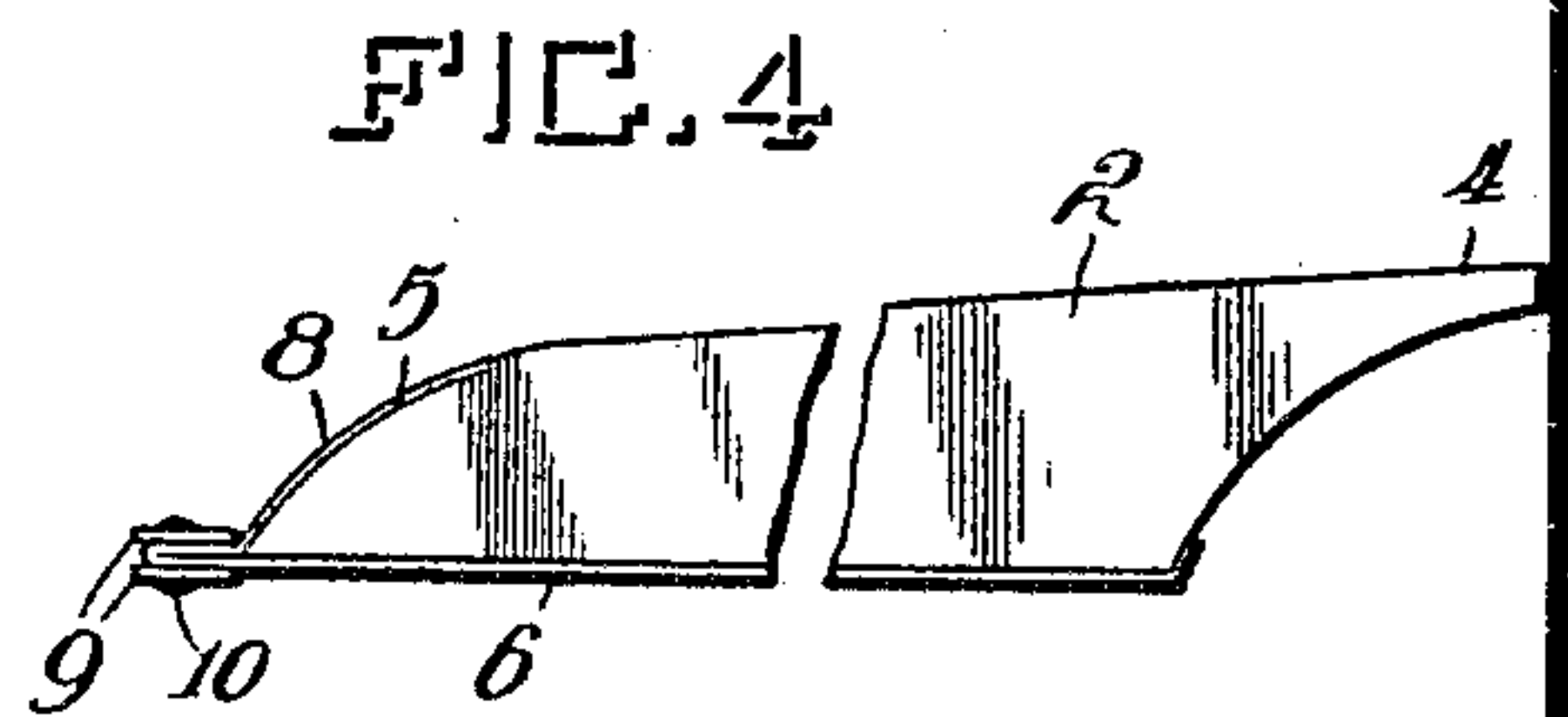
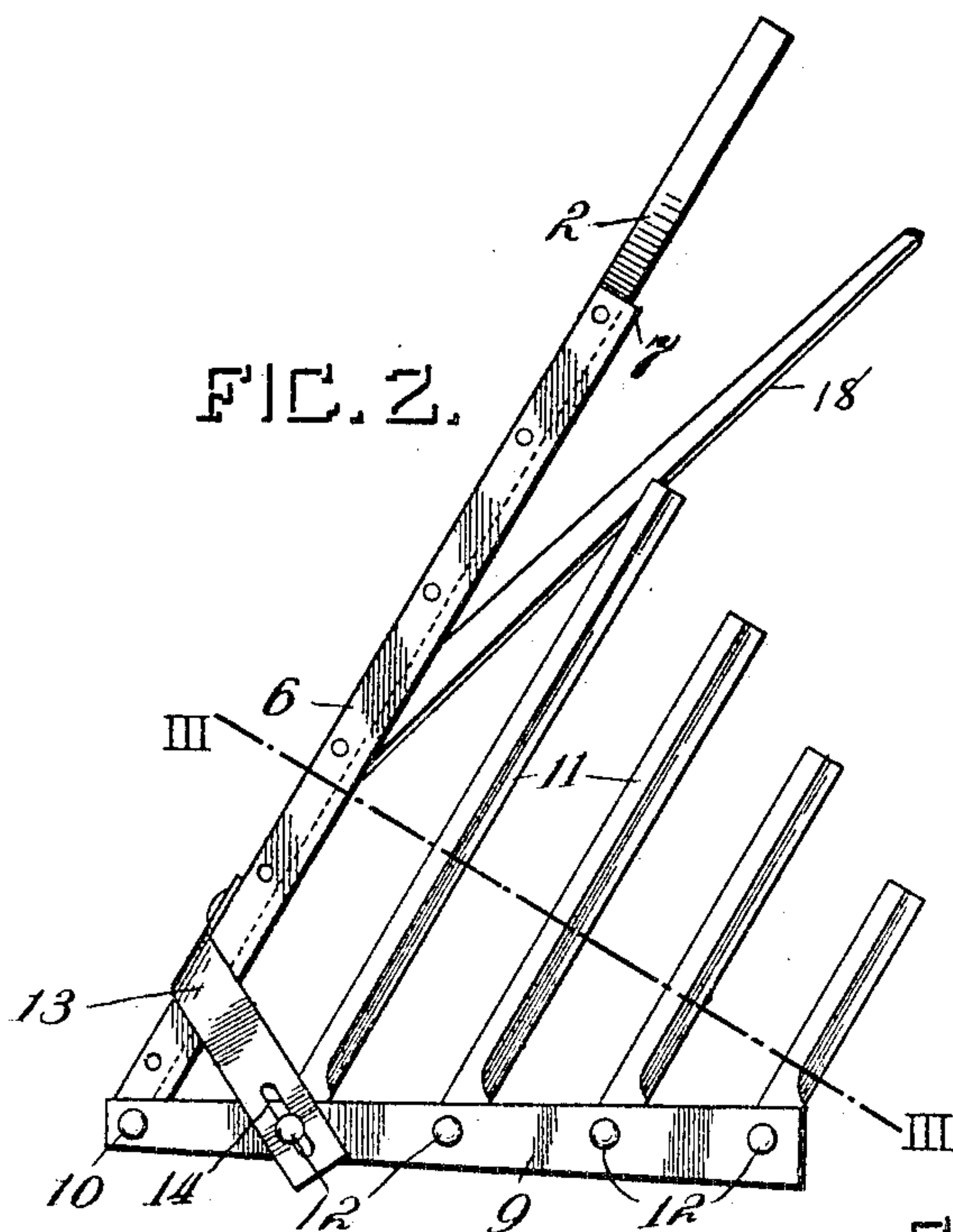
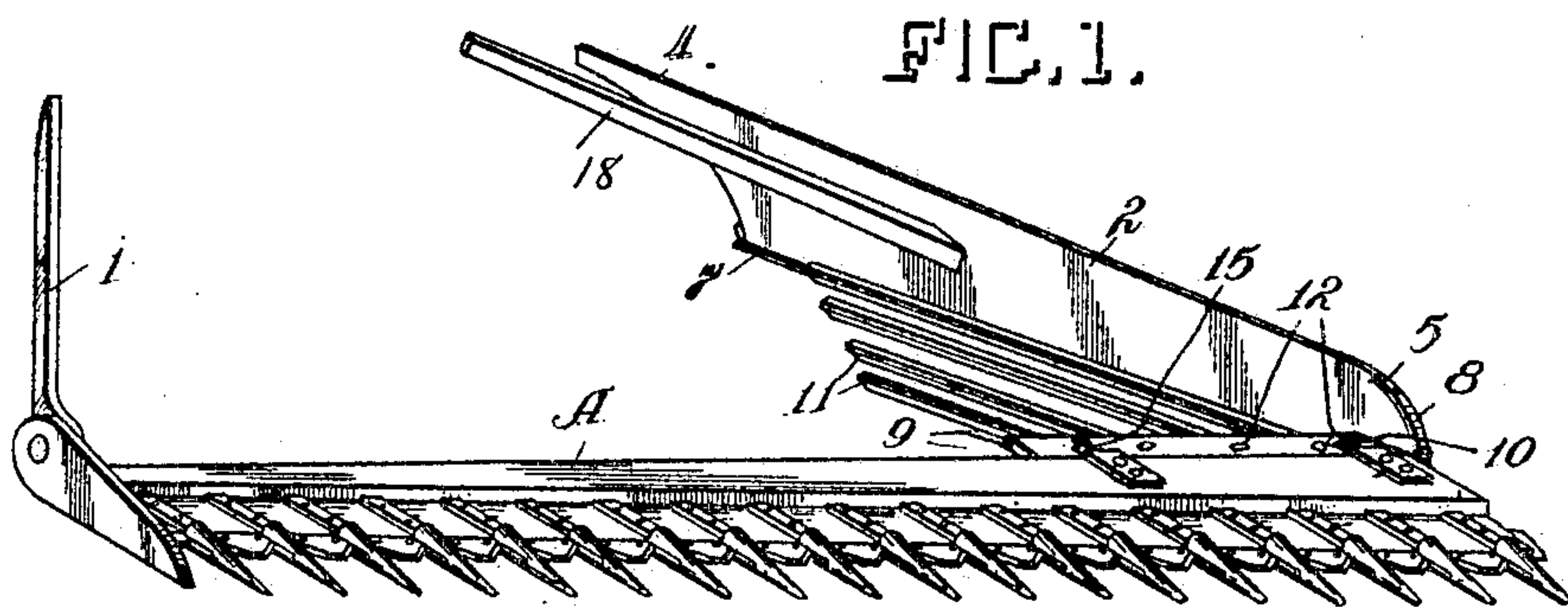


No. 798,930.

PATENTED SEPT. 5, 1905.

W. I. SHORT.  
WINDROWER.

APPLICATION FILED SEPT. 27, 1904.



Witnesses  
Milton Lenoir,  
Walter T. Estabrook

Inventor  
William I. Short  
by Thea G. O'Brien & Co.  
his Attorneys



# UNITED STATES PATENT OFFICE.

WILLIAM I. SHORT, OF QUINCY, ILLINOIS.

## WINDROWER.

No. 798,930.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed September 27, 1904. Serial No. 226,108.

*To all whom it may concern:*

Be it known that I, WILLIAM I. SHORT, a citizen of the United States, and a resident of Quincy, in the county of Adams and State of Illinois, have invented a new and useful Improvement in Windrowers, of which the following is a specification.

My invention relates to an improvement in windrowers, and more particularly to that class of devices attachable to and carried by the mowing-machine to direct and lay the cut material in a long swath behind the cutter-bar.

My invention consists in a device of the foregoing description attachable to any mowing-machine without changing the cutter-bar and being adjustable thereon, the invention comprising an inclined shield-board, in combination with a plurality of rearwardly-extending slats, the shield and slats carried by a bracket, which in turn may be removably secured to the cutter-bar.

My invention further consists in certain other novel combinations of parts, such as will be more fully described hereinafter and particularly set forth in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my device as applied to the cutter-bar of a mowing-machine. Fig. 2 is a bottom plan view thereof. Fig. 3 is a cross-sectional view taken on the line III III of Fig. 2. Fig. 4 is a view in side elevation of the shield-board. Fig. 5 is a detail view in cross-section, showing the manner of securing the attachment to the cutter-bar; and Fig. 6 is an enlarged detail perspective view of the fastening means shown disassembled.

A indicates the cutter-bar of a mowing-machine, which cutter-bar may be of any suitable style and being provided at its outer or extreme right-hand end with the usual divider 1.

To the machine end of the cutter-bar is secured my attachment, which consists of a shield-board 2, inclined away from the vertical and toward the divider, the shield-board also occupying an inclined position relative to the cutter-bar. The shield-board terminates rearwardly in an overhang 4, the forward end of the shield being gradually inclined, as at 5, until the base-line of the shield is attained. The base is straight and has a shoe 6 secured thereto, the width of which is greater than the width of the base and extends laterally thereof, as at 7, to prevent the material being cut from passing or working be-

neath the shield as the machine proceeds. The inclined face 5 is also suitably shod, as at 8, the forward ends or toes of the shoes 6 and 8 extending forwardly of the end of the shield and being secured between the clamping-bars 9 9 by means of a suitable fastening 10.

The clamping-bars extend parallel with and are secured to the cutter-bar of the machine, the clamping-bars adapted to embrace the forward ends of the slats or fingers 11 11, which slats or fingers extend rearwardly and approximately parallel with each other, the length of the slats gradually decreasing as they approach the divider. A greater or lesser number of slats may be employed, and although I have shown but four this number may be varied according to the length of the cutter-bars and the width of the spaces between each two slats. The forward ends of the slats are secured to the clamping-bars by means of fastening-bolts 12 12 or other suitable devices; but the fastenings may be loosened in order to swing or pivot the slats toward or from the divider 1, in accordance with the point intermediate the ends of the cutter-bar at which the windrow is to be laid. Thus if the windrow is to be laid close to the divider the attachment will be sharply inclined with reference to the cutter-bar, or if the swath is to be left at a point centrally of the cutter-bar the angle of incidence between the cutter-bar and windrower is increased. The slats are diamond-shaped in cross-section to relieve the frictional contact with the ground and to facilitate the sliding off of the cut material.

A brace 13 is provided, one end of which is suitably secured to the outer side of the shield-board, from whence it passes down and beneath the shoe 6 in an oblique direction to the clamping-bars 9, a slotted opening 14 being formed at this point to admit of the passage of one of the bolts 12, by loosening which the shield may be adjusted laterally with reference to the clamping-bars and fingers. The uppermost of the clamping-bars 9 is also provided with two or more series of apertures 15 15, and straps 16 16 are associated with any one of each series of apertures, the straps each provided with a hook at its rear end, the tongue 17 of which is reduced and adapted to be received in the aperture 15, that portion of the clamping-bar between the aperture and its forward edge being seated in the hooked portion of the strap. The forward end of the



strap is perforated for the reception of a bolt or other fastening means attached to the cutter-bar of the machine. The apertures 15 15 admit of an adjustment to bring the straps in  
5 alinement with that portion of the cutter-bar provided with the attaching-bolts.

The shield-board is provided with a guard 18, which is designed to engage the upper ends of the material cut and throw the same toward  
10 the middle of the windrow, so that the heads lie inward.

The operation of my device may be gathered from the foregoing. After the windrower is attached and suitably adjusted with  
15 reference to the cutter-bar the machine is started. The material being cut falls rearwardly upon the slats which, owing to this inclination with reference to the cutter-bar, operate to lay the material in a swath at a  
20 point between the rear ends of the divider and the shield. The brushing of the stubble which projects through the spaces between the fingers 11 11 engages and keeps the cut material moving off of the fingers to prevent  
25 its collection thereon and causes it to follow the inclination of the fingers. The outer ends of the slats lie approximately parallel with the divider 1.

The advantages incident to the use of my  
30 invention are numerous indeed. The swath can be laid in such position with reference to the standing grain that upon the next round the windrow will lie between the draft-animals and wheels, and hence the seed will not be  
35 run over or stepped upon and threshed out. Another advantage resides in the fact that the swaths can be laid adjacent one another, so as to enable a rake to rake the cut material into suitable bunches for loading on the wagon.  
40 The seed-grain is left standing in the swath, with the heads leaning in from both sides, owing to the inclination of the shield and divider, so that when the swaths are raked, the rake traveling in the same direction as did  
45 the mower, the material is left in forkfuls with the heads to the center. In this way the shaking and treading out or threshing of the grain as it lies is avoided and a seed crop may be gathered with ease. Even ripe clover,  
50 which must usually be mowed when covered with heavy dew, can be harvested when my device is used without losing but a very small percentage thereof.

The device is applicable to cutter-bars of  
55 varying lengths, wherefor the parts are adjustable, and its use saves much time and labor hitherto expended. For instance, where the mower does not leave a windrow a rake is necessary to rake the cut material into wind-  
60 rows, which windrows are subsequently torn to pieces when loading on the wagon.

By the use of my device the cut material is confined in a swath and may be loaded upon the wagon without the necessity for raking,  
65 or a raker taking two swaths may be used to

rake the swaths into bunches or forkfuls suitable for throwing upon the wagon.

From the foregoing it is evident that many changes might be made in the form and arrangement of the several parts described 70 without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the precise construction herein set forth; but,

Having thus fully described my invention, 75 what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a cutter-bar, of a windrower comprising a pair of clamping-bars, slats, the forward ends of which are ad- 80 justably secured between the clamping-bars, a shield, the forward end of which is pivotally secured between clamping-bars, separate means connecting the shield and clamping-bars for adjustably retaining the shield at any 85 desired angle and means for removably securing the windrower to the cutter-bar.

2. The combination with a cutter-bar, of a windrower located at one end thereof, the windrower comprising a pair of clamping- 90 bars suitably secured to the cutter-bar, a plurality of adjustable slats received and held between the clamping-bars, the slats extending rearwardly at an angle to the cutter-bar, a shield, and a shoe carried by the shield, the 95 shoe provided with a toe adjustably held between the clamping-bars.

3. The combination in a windrower with clamping-bars, of slats secured between the bars, an inclined shield, and a shoe carried by 100 the shield, the toe of the shoe extending forwardly of the shield and between the clamping-bars, and means passing through the toe and the clamping-bars to adjustably retain the shield. 105

4. The combination, in a windrower, with a shield, of a plurality of adjustable slats, the slats being approximately diamond-shaped in cross-section and resting on one of their plane 110 faces on the ground or stubble.

5. The combination with a cutter-bar, of a shield and a plurality of slats, a plurality of clamping-bars spaced apart from each other, the shield and slats secured to the clamping-bars, one of the clamping-bars provided with 115 an aperture, a fastening means provided with a hook at one end, the hook receivable in the aperture, the width of the clamping-bar between the aperture and one edge lying in the hook and means for securing the fastening 120 means to the cutter-bar.

6. The combination with a cutter-bar, of a windrower comprising a supporting member, slats, the forward ends of which are adjustably secured to the supporting member, a 125 shield the forward end of which is pivotally secured to the supporting member, separate means connecting the forward end of the shield and the supporting member for adjusting the angle of the shield with relation to the sup- 130

porting member and retaining it in such adjusted position and means for securing the windrower to the cutter-bar.

5 7. The combination with a cutter-bar, of a windrower a suitable supporting-bar secured to the cutter-bar and parallel therewith, slats secured to the supporting-bar, and a shield pivotally connected to the support, a brace carried by the shield, the brace passing beneath the shield and across to the supporting-bar, the brace provided with a slot and means

passing through the slot and engaging the supporting-bar to retain the shield in its adjusted position.

In testimony whereof I have signed this 15 specification in the presence of two subscribing witnesses.

WILLIAM I. SHORT.

Witnesses:

DAVID N. SHARKILLIE,  
E. D. FREDENBURG.