

(No Model.)

L. SCOFIELD.

CHECK ROW ATTACHMENT.

No. 388,077.

Patented Aug. 21, 1888.

Fig. 1.

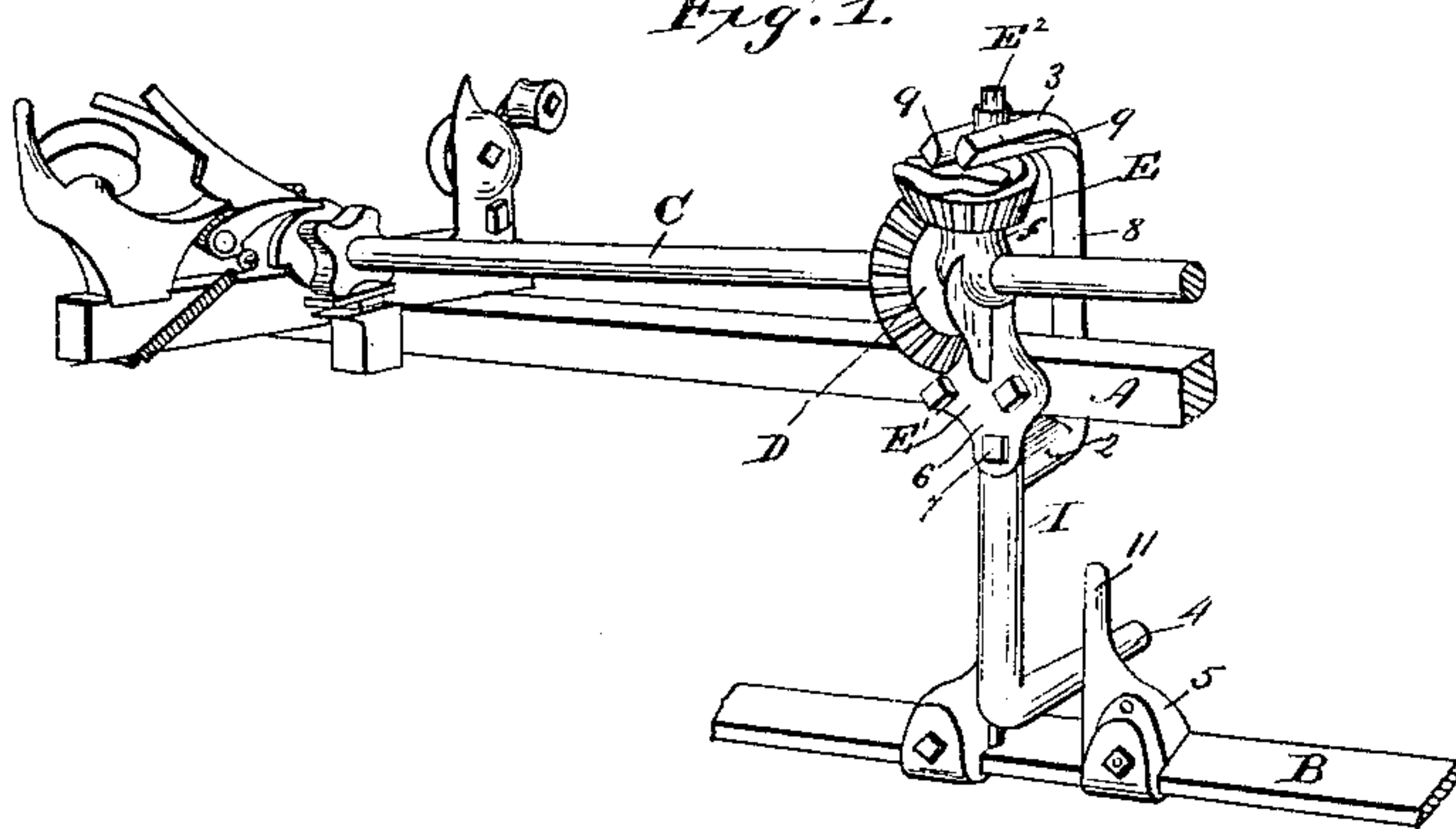


Fig. 2.

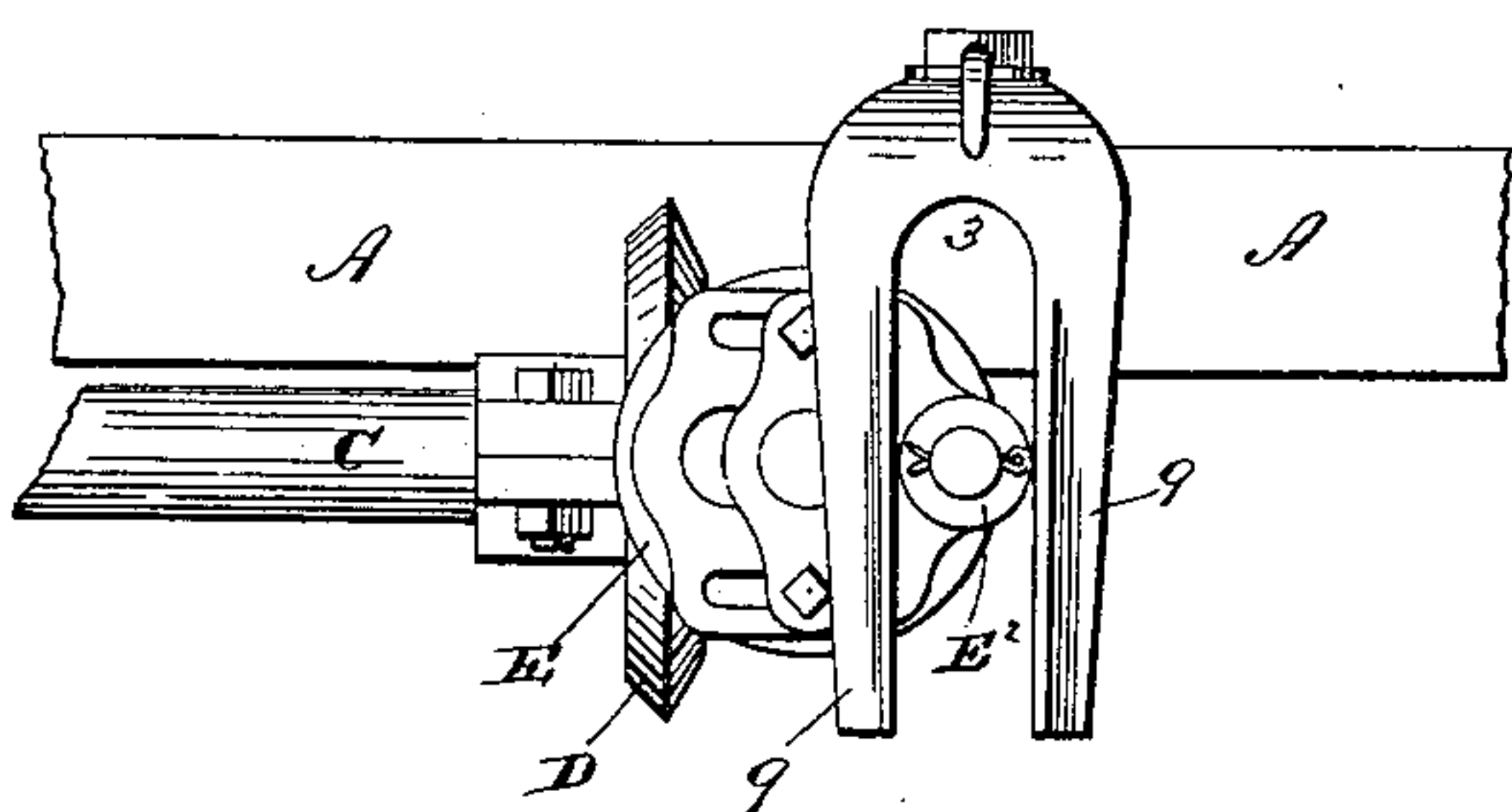


Fig. 3.

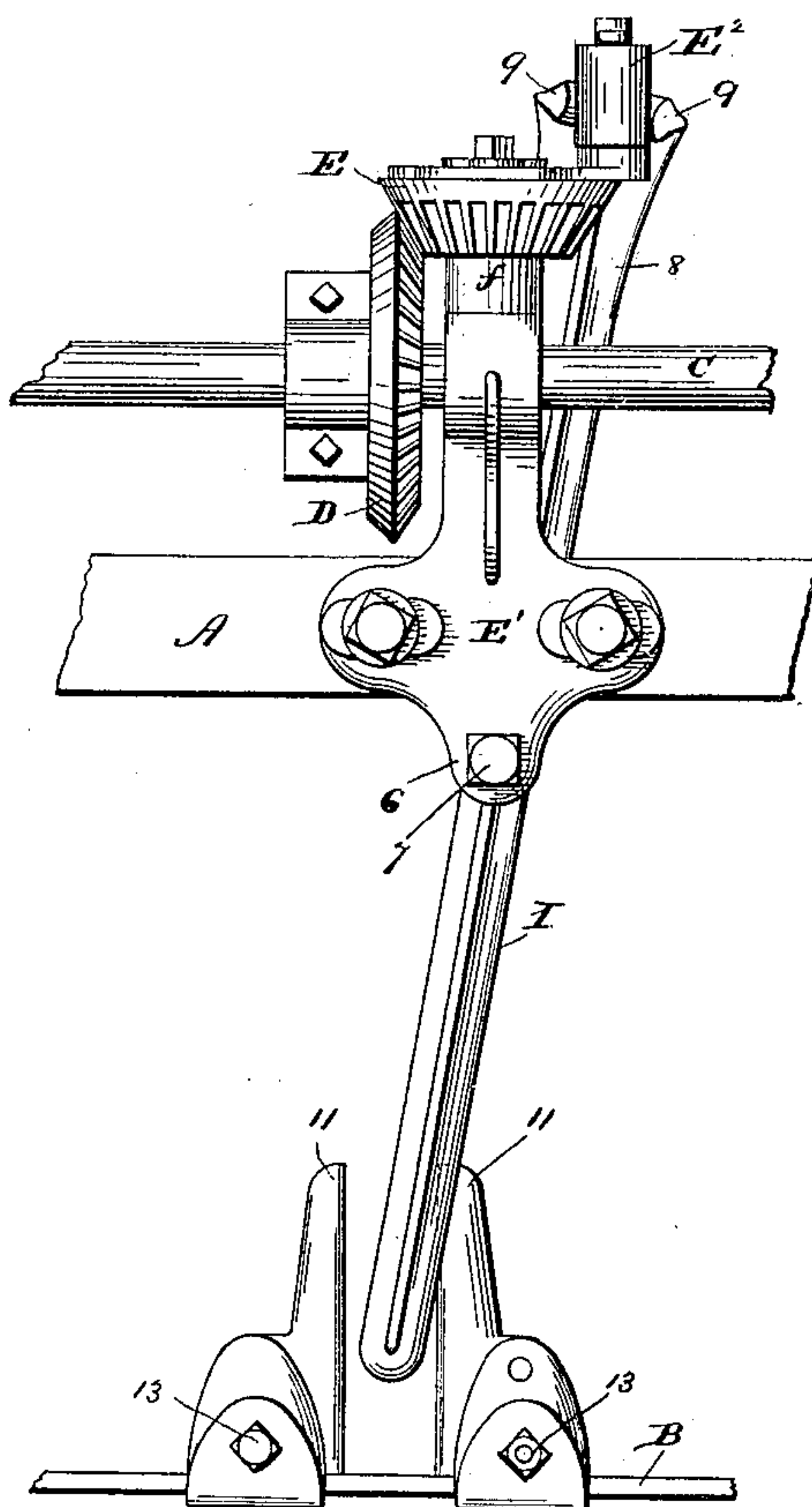
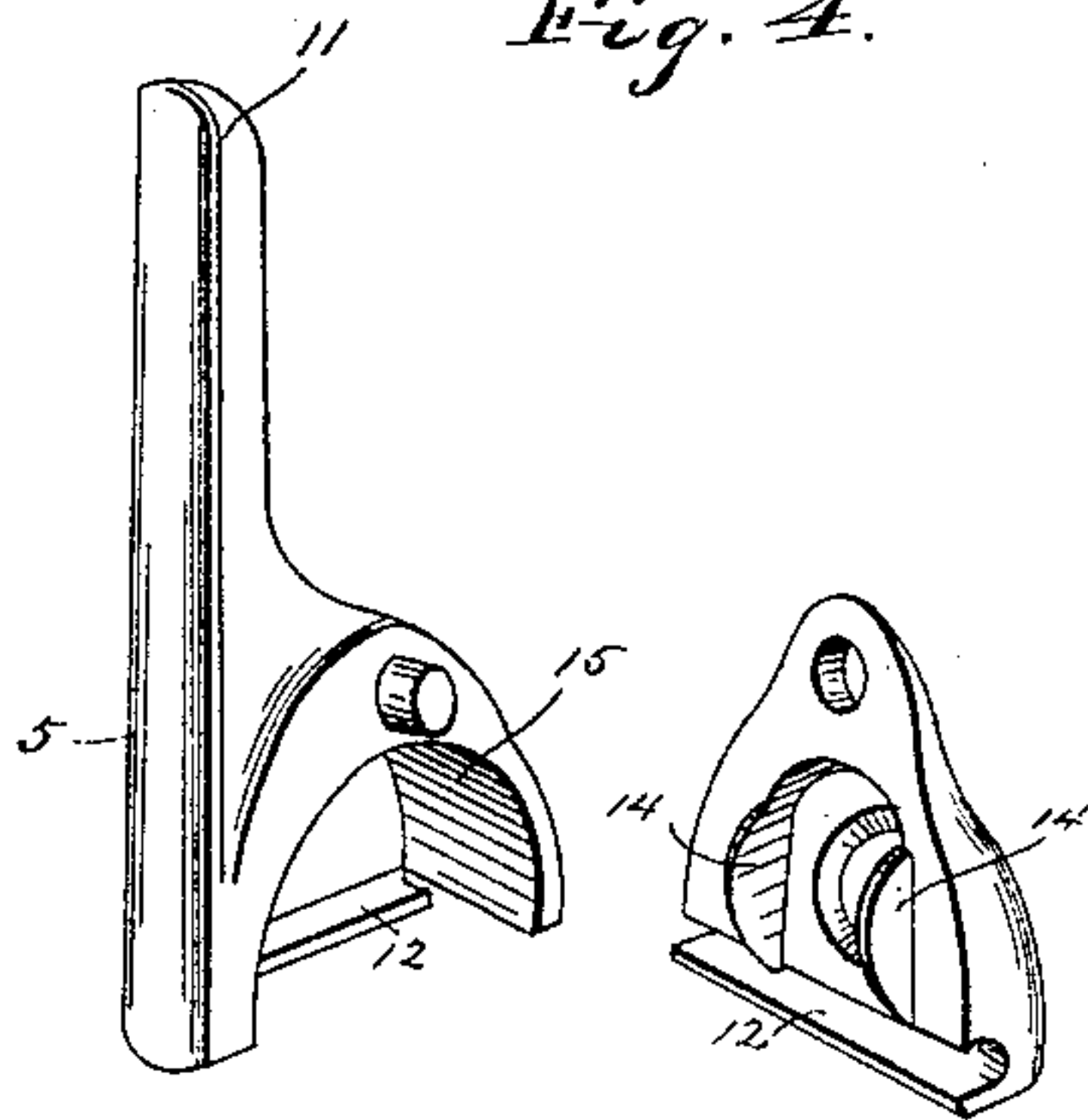


Fig. 4.



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CHECK-ROW ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 388,077, dated August 21, 1888.

Application filed March 7, 1888. Serial No. 266,434. (No model.)

To all whom it may concern:

Be it known that I, LEVI SCOFIELD, of Grand Haven, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Check-Row Attachments; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to that class of check-row planters in which the actuating devices, or those through which motion is communicated directly to the feeding devices or seed-bar, are located centrally of the machine or between the two mechanisms for engaging the check-row cord or wire on either side of the machine; and said invention consists, primarily, in the novel construction, arrangement, and combination, with the crank, of a single pivoted bar or link engaging the crank-pin and transmitting motion therefrom to the seed-bar, all as hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of a portion of a check-row attachment, illustrating the application of my invention. Fig. 2 is a top plan view, and Fig. 3 a front elevation, of a portion of a check-row attachment with my improvements applied thereto. Fig. 4 is a view in perspective of the sectional stops.

Similar letters of reference in the several figures indicate the same parts.

Of the mechanism shown, A is the cross bar, upon which the several devices constituting the check-row attachment are mounted. B is the slide-bar for actuating the feeding mechanism. C is the shaft intermittingly rotated by suitable devices applied thereto in position to be actuated at intervals by the check-row cord or wire. D is a gear-wheel on shaft C; and E is a gear-wheel supported upon a bracket, E', and carrying the crank-pin E², made adjustable to accommodate the throw of different planters. These several parts, which are herein referred to merely for the purpose of illustrating the present invention, are constructed and arranged in any well-known manner for conjoint operation, and

hence are to be regarded as preferred forms only of the parts or mechanisms represented.

Between the crank-pin E² and slide bar B, and in lieu of the more or less complex devices heretofore employed in this class of check-row attachments, I interpose a single lever or connecting-bar, I, pivotally supported, as at 2, and provided with a furcated end, 3, embracing the crank-pin, and an arm, 4, working between and engaging stops 5 on the seed-bar. In its preferred form the lever I is pivotally attached to a dependent portion, 6, of the bracket E', supporting the crank-gear E by a bolt, 7, passing through an eye or socket at or near the center of the lever and beneath the cross-bar A. From one end of said socket and in rear of the cross-bar A rises an arm, 8, whose upper end is furnished with two bars or prongs, 9, standing substantially parallel with the fulcrum-pin and projecting laterally across the face of the crank shaft or wheel E.

As is usual in this class of machines, the crank is given a semi-rotation upon the passage of each knot on the check-row cord, and is then held in position until the next succeeding knot is reached, and at each semi-rotation of the crank the feeding devices are actuated by and through the medium of the slide-bar B. It is essential, therefore, that the movements imparted to the slide-bar in opposite directions should be the same, to accomplish which it is necessary that the crank-pin should act equally upon or through the connecting devices at each semi-rotation. This result is accomplished by supporting the lever I on an axis or fulcrum-pin in line with but transverse to the axis about which the crank-pin revolves, with the bearings 9 in the end projected across the face of the crank shaft or gear E, so that the lever I will, as the crank revolves, be reciprocated equally on opposite sides of the crank-shaft, the extremes of movement in opposite directions being reached when the crank-pin stands at right angles to a plane drawn through the crank shaft and fulcrum of lever I; hence the detent or brake for retaining the driving-shaft C in position is so arranged and applied that it will hold the crank-pin at this point when the actuating devices are at rest. Thus the crank is caused to operate positively upon

the slide-bar and through a single member or lever, I, and the throw of the slide-bar in opposite directions is equal, so that the feeding devices will always be operated at intervals corresponding with the spaces between the knots of the check-row cord.

The bracket E', on which the lever I is pivoted, is secured to the cross-bar A and provided with a bearing for shaft C, and with a stud or pin, f, to receive the wheel E, carrying the crank-pin, whereby the crank and lever I are rigidly connected and held in the proper relative position, and at the same time a support is provided for the shaft.

The lower end of lever I carries a transverse pin or stud, 4, which, when the attachment is in position, stands between the two adjustable cheeks or stops 11, secured to the slide-bar. These stop-pieces 11, as well as the pin 4, are made of sufficient length to provide for the desired latitude of adjustment of the one with respect to the other, and, to facilitate the application of the said stops 11 to the seed-bar and the adjustment longitudinally of said bar, they are each constructed as shown in Fig. 4.

Both sections are provided with flanges or grooved portions 12 around the edges of the bar B, while the principal section, or that to which the pin or bearing 11 is attached, rests upon and stands across the upper face of said bar in rear of the said pin or bearing.

The two sections are united and clamped firmly in position by a bolt, 13, while each section is furnished with one or more lugs, 14, entering a recess, 15, in the opposite section, to hold and lock the two sections with their flanges or grooves substantially parallel, so that by loosening the clamping-bolt the bearings 11 can be slid upon the bar B, without becoming separated or being detached therefrom.

Having thus described my invention, what I claim as new is—

1. In a corn-planter and in combination with the crank and its actuating devices, the lever interposed between said crank and the slide controlling the feeding devices, said bar being supported upon a pivot in line with but transverse to the axis of the crank, and provided with a slotted or furcated end projected across the face of the crank disk or wheel, substantially as described.

2. In a check-row attachment such as described, the combination, with the shaft C and centrally-arranged gears and crank, of the lever slotted or furcated for the reception of the crank-pin, and supported upon a transverse pivot in line with the axis of the crank but below the latter, said lever being also provided with a transverse pin or bearing projected between the cheeks or bearings on the slide-bar, substantially as described.

3. In a check-row attachment such as described, the combination, with the crank and actuating devices for intermittently rotating the former, of a lever pivotally attached to the bracket supporting the crank on a center in line with and transverse to the axis of the crank, said lever being provided on one end with a furcated portion projected across the face of the crank and embracing the crank-pin, and at the other with a transverse pin for engaging stops on the slide-bar, substantially as described.

4. In a check-row attachment such as described, the combination, with the bracket secured to the cross-bar A and supporting the crank above said bar, of the lever pivotally attached to said bracket beneath the bar A and provided with two arms, the one carrying the pin for operating the feeding devices depending beneath the supporting-bar A, and the other extending across said bar A and provided with a furcated or slotted portion engaging the crank-pin, substantially as described.

5. In a check-row attachment wherein the operating-crank is arranged and supported at or near the middle of the cross-bar A, and is driven from a shaft, C, through gears, substantially as described, the combination, with said crank and the actuating devices therefor, of the lever I, pivoted beneath the bar A in line with the axis of the crank, and provided with the furcated end 3, for the reception of the crank-pin, and the pin or stud 4, for engaging the stops 11 on the slide-bar, as and for the purpose set forth.

6. The improved sectional stops or bearings 11, for application to the slide-bar B, constructed, substantially as described, in two sections, one formed with the recess therein and the other with the wings or flanges for entering said recess on either side of the bolt, and both provided with the depending flanges grooved for the reception of the edges of the bar B, and a clamping-bolt engaging the sections to draw them together and clamp their flanges upon the bar B, substantially as described.

7. The improved adjustable and removable stops 11, formed in two sections, each provided with flanges or grooved portions fitting the edges of the bar B, and interlocking projections, one of said sections carrying the bearing or stop-pin and provided with an extended bearing on the top of bar B, in rear of said stop-pin, and a bolt engaging both sections to hold them together and clamp them upon the bar B, substantially as described.

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