(No Model.) 3 Sheets—Sheet 1.

W. P. CANNING.

DEVICE FOR SUPPORTING AND ADJUSTING THE FRONT AND BACK COVERS OF CARDING ENGINES.

No. 481,222. Patented Aug. 23, 1892.

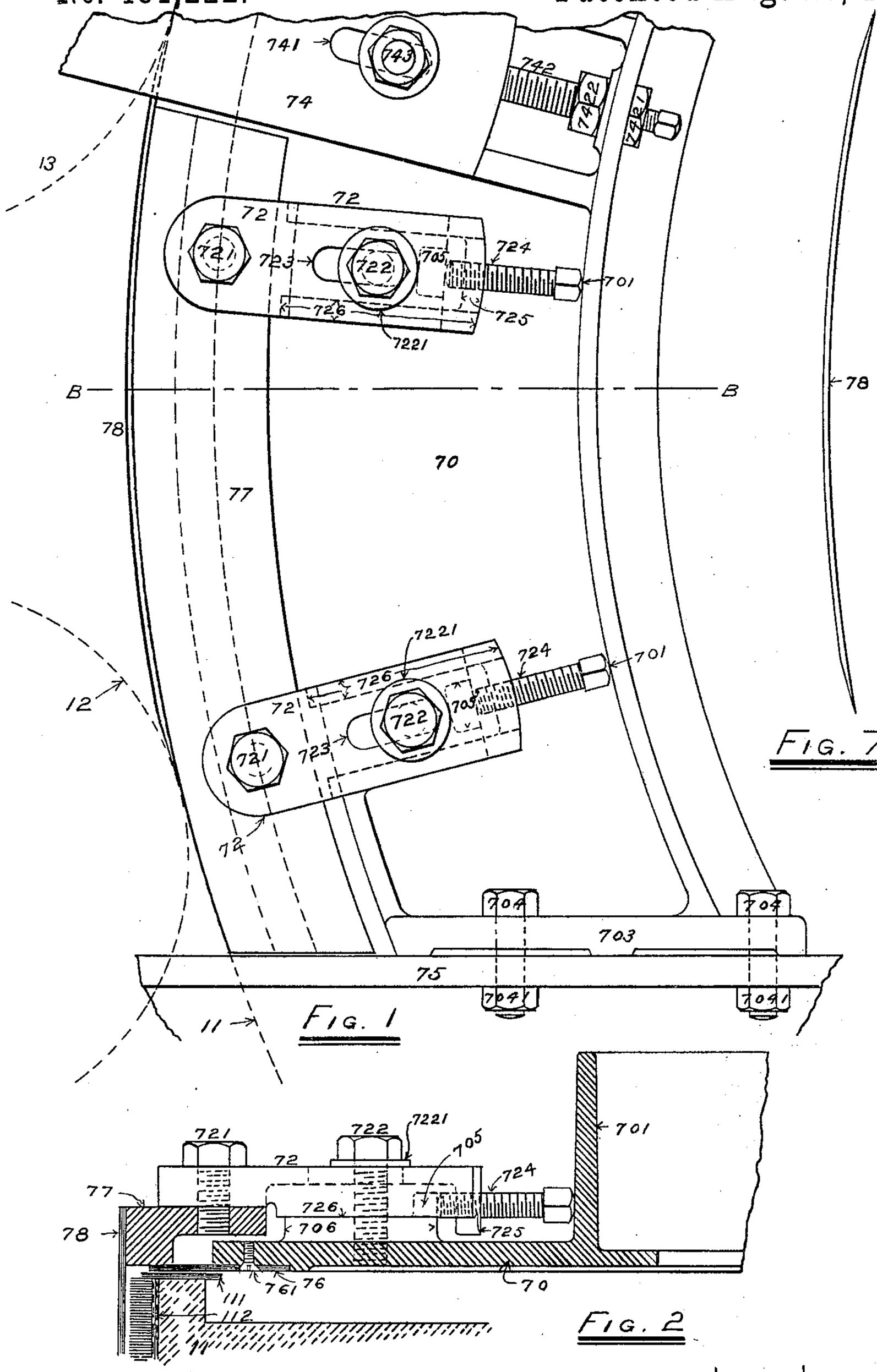

FIG. 1

FIG. 7.

FIG. 2

WITNESSES

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(No Model.) 3 Sheets—Sheet 2.

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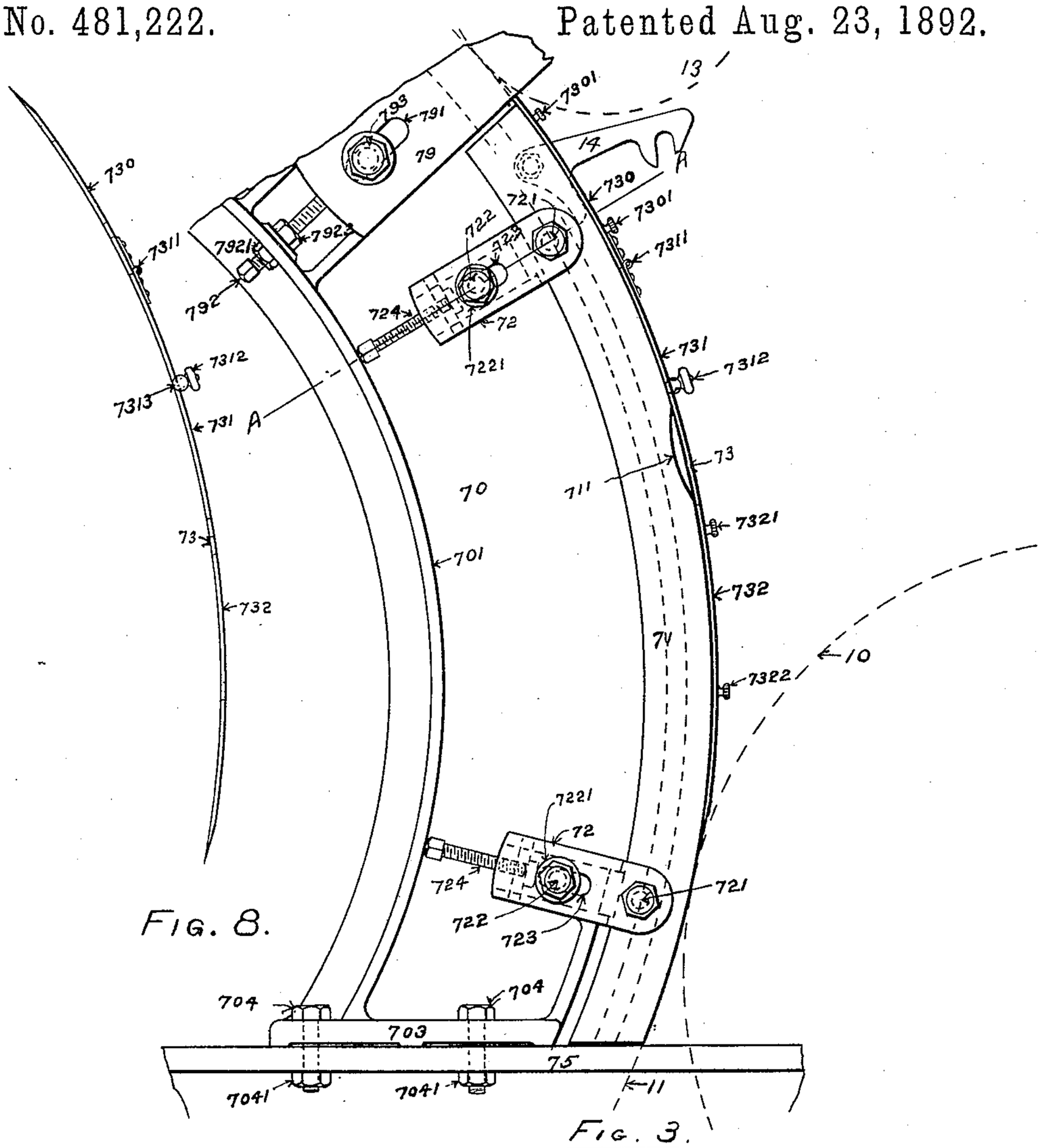

FIG. 8.

FIG. 3.

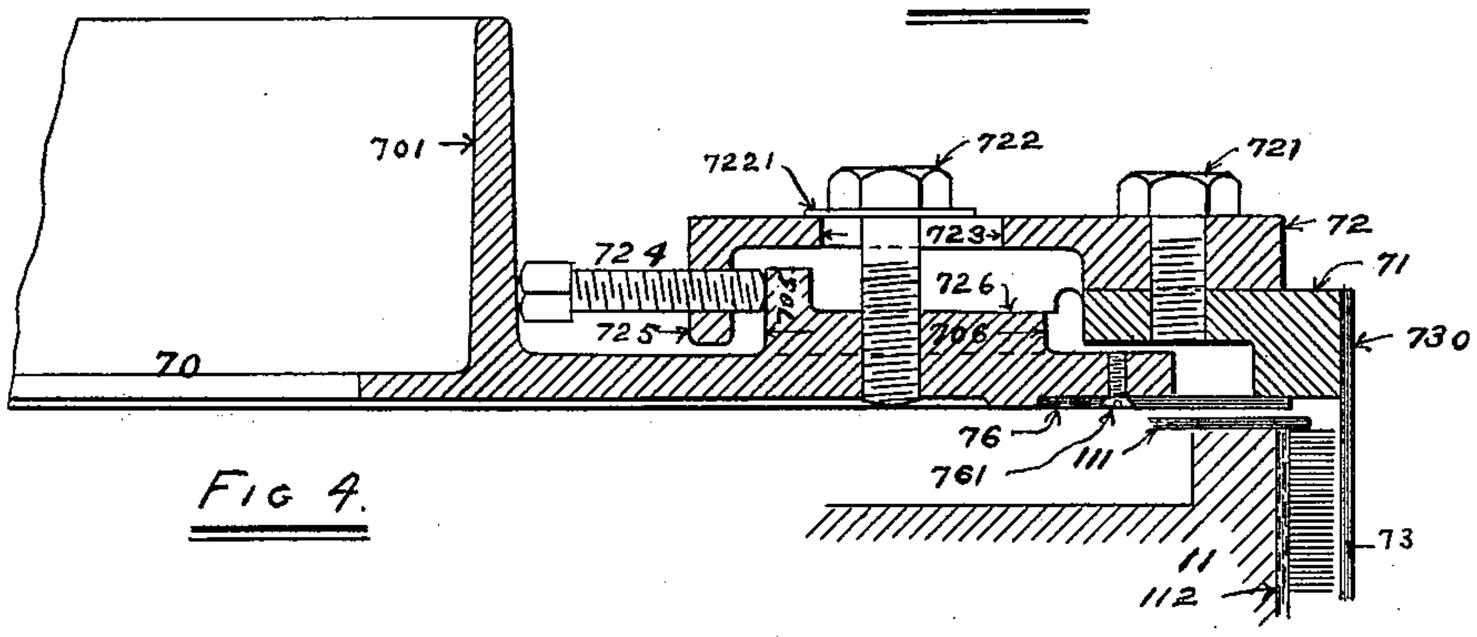

FIG 4.

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(No Model.) 3 Sheets—Sheet 3.

W. P. CANNING.

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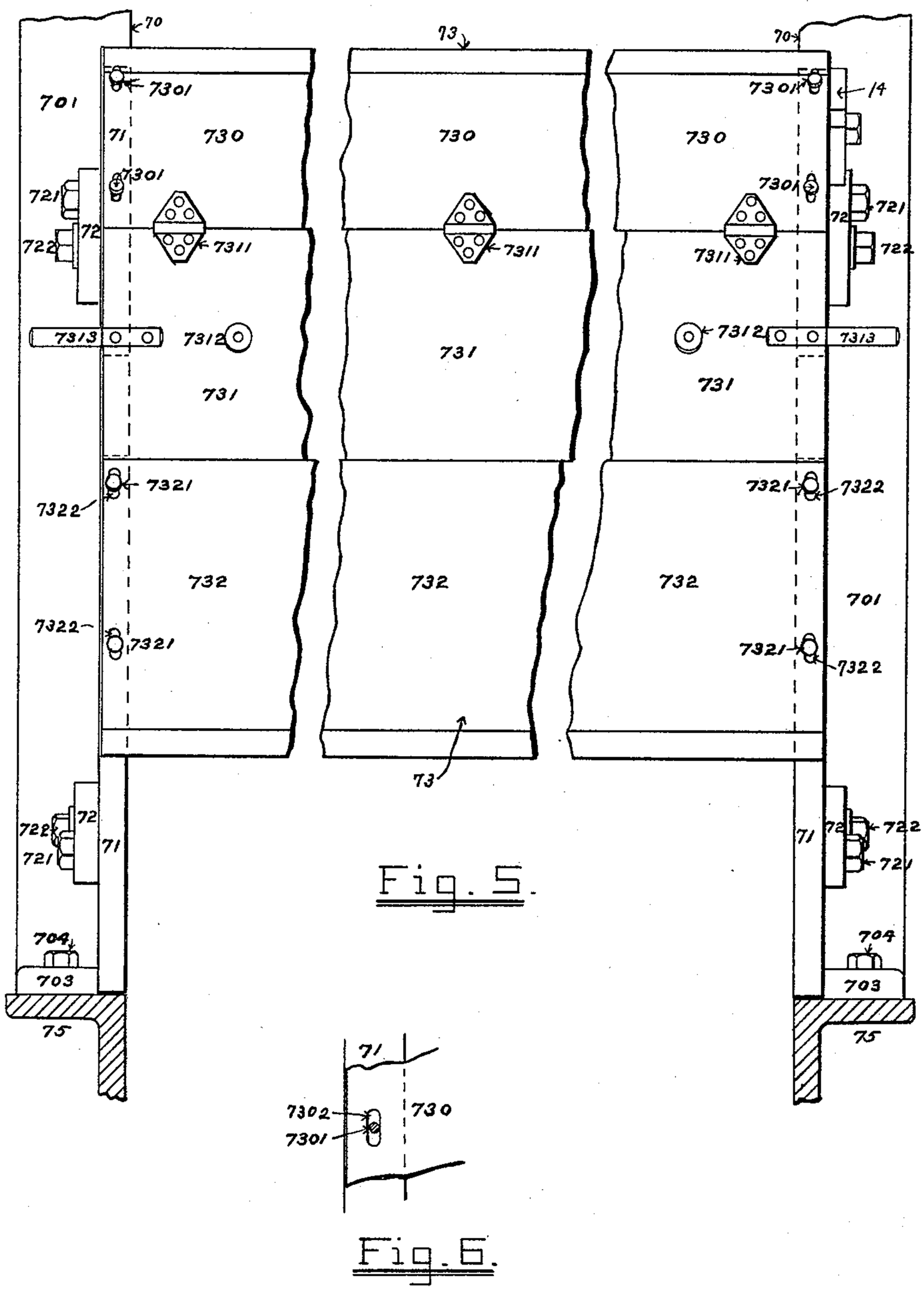

Fig. 5.

Fig. 6.

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Inventor.
William Pitt Canning.

UNITED STATES PATENT OFFICE.

WILLIAM PITT CANNING, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THE LOWELL MACHINE SHOP, OF SAME PLACE.

DEVICE FOR SUPPORTING AND ADJUSTING THE FRONT AND BACK COVERS OF CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 481,222, dated August 23, 1892.

Application filed June 3, 1892. Serial No. 435,418. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PITT CANNING, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Devices for Supporting and Adjusting the Front and Back Covers of Carding-Engines, of which the following is a specification, reference being had therein to the accompanying drawings.

The objects of my invention are to provide for supporting the front and back plates or covers of a carding-engine in place upon the arches or main bends of the latter in a better manner and more rigidly than heretofore, to enable the positions of the said plates or covers to be adjusted conveniently and readily, and to enable both the top portion and the lower or bottom portion of each plate or cover to be fixed at the desired distance from the surface of the wire upon the main cylinder.

My invention consists in an improved construction and combination of parts, which first will be described in the following specification, and then be particularly pointed out in the claims at the close thereof.

In the accompanying drawings, which form a part of this specification, Figure 1 is a view in side elevation of part of the side framing of a carding-engine with my invention applied thereto, the said figure showing the invention employed in connection with the cover at the back or licker-in end of the carding-engine. Fig. 2 is a view in horizontal section on the line B B in Fig. 1, this figure showing a portion of the main cylinder. Fig. 3 is a view in side elevation of a part of the side framing of a carding-engine, the said figure showing the invention employed in connection with the cover at the front or doffer end of the carding-engine. Fig. 4 is a view in section on the line A A in Fig. 3, this figure showing a portion of the main cylinder. Fig. 5 is a view, mainly in end elevation, looking from the right-hand side in Fig. 3 and showing the cover at the front or doffer end of a carding-engine. Fig. 6 is a detail view showing a portion of the cover which is represented in Fig. 5 and a portion of one of its carrying-bends. Figs. 7 and 8 are edge views of the back and front covers, respectively.

At 75 75 are shown portions of the side framings of a carding-engine, at 70 70 portions of the arches or main bends, at 703 703 the feet of the arches or main bends, at 704 704 bolts for securing said feet to the side framings 75 75, at 7041 7041 nuts on the said bolts, and at 701 701 webs on the arches or main bends.

At 11 is indicated in dotted lines the surface of the wire upon the main cylinder, at 10 the surface of the wire upon the doffer, at 12 the surface of the wire upon the licker-in, and at 13 the line described by the wire upon the traveling top-flats.

At 73 is shown the cover, which partly surrounds the main cylinder at the front or doffer end of the carding-engine, and at 78 the cover which partly surrounds the said cylinder at the back or licker-in end of the carding-engine. The upper edge of the front cover 73 extends into the angle between the main cylinder and the traveling top-flats at the front of the carding-engine, and its lower edge extends into the angle between the main cylinder and the doffer, while the upper edge of the back cover 78 extends into the angle between the main cylinder and the traveling flats at the back of the carding-engine, and the lower edge thereof extends into the angle between the main cylinder and the licker-in. The upper and lower edges of the covers 73 78 are sharpened to a feather-edge, as shown most clearly in Figs. 7 and 8, in order that the said edges may enter freely and to the desired extent into the angles aforesaid. The front cover 73 is fixed upon plate-bends 71 71—one at each side of the carding-engine, as shown in Figs. 3, 4, and 5—and the back cover 78 is fixed upon similar plate-bends 77, one of which is shown in Figs. 1 and 2. The plate-bends 71 71 77 77 are placed closer against the outer flat surfaces of the main bends or arches 70 70 and are held in place by means of the brackets 72 72 72 72, these brackets being secured to the said outer surfaces of the main bends or arches and made adjustable thereon, so as to enable the covers to be brought into the desired position with respect to the surface of the wire on the main cylinder. The curved faces of these bends, which are in contact with the inner surfaces of the covers 73 78, are formed as arcs of circles, which are preferably of about the same ra-

dius as the outer circumference of the wire on the main cylinder. Each bracket is connected with its plate-bend by a cap-bolt 721, passing through the bracket and into the bend, and at least two brackets are applied to each plate-bend.

By preference, I employ two brackets with each plate-bend, one near each end thereof, as shown in the drawings. The face 726 of each bracket 72, which is turned toward the main bend or arch is planed and is in contact with the planed face of a raised spot 706, cast upon the main bend or arch. The planed surface of a spot 706 is seen in elevation in a line in Fig. 2 and in section in a line in Fig. 4. There are no ledges, rabbets, or slideways on the spots 706 706, and hence the brackets 72 72 are free to move upon the spots in such directions as may result from the requirements of adjustment. Each bracket 72 has formed therethrough a slot 723 and a cap-bolt 722, passing through this slot and into the main bend or arch holds the bracket to the latter. A washer 7221 is placed between the head of the bolt 722 and the outer side of the bracket. Each bracket 72 is formed with a flange 725, having a threaded hole therethrough, to which is fitted a set-screw 724, the head of this screw taking bearing against the web 701 of the main bend or arch 70, while the other end thereof bears against a projection 705, cast upon the main bend or arch. The set-screw 724 is used in adjusting the position of the bracket 72, with respect to the main bend or arch, and thus in bringing into the desired position with reference to the wire of the main cylinder the cover with which the said bracket is connected. The slots 723, in the bracket 72, are to permit the movements of the brackets with respect to the main bend or arch.

The front cover 73 is preferably made in three parts, these being numbered 730, 731, and 732 in Fig. 5. The middle part 731 is connected with part 730 or part 732 at the adjacent edge by hinges 7311, as shown, so as to form a door which may be raised to expose a portion of the wire of the cylinder and enable the same to be stripped out or ground conveniently. The covers are held to the plate-bends by bolts 7301 7321, passing through the covers and into the plate-bends. By preference the lower ends of the plate-bends are caused to rest upon the upper surfaces of the side framings, as shown in Figs. 1 and 3, and the covers are made slightly adjustable vertically upon the plate-bends in order to enable the lower edges of the said covers to be placed properly in the angles between the main cylinder and licker-in and main cylinder and doffer. To permit this vertical adjustment, the cover-plates are formed with slots 7302 7322, through which pass the screws 7301 7321, which hold the cover-plates to the plate-bends. At 7312 7312 are knobs or handles which are affixed to the hinged part 731 and at 7313 are pins, also affixed to the said hinged part, one of the said pins being intended to engage with the hinged latch 14 for the purpose of enabling the hinged part 731 to be held raised by the said latch as long as desired. At 711 is a hollowed-out place in the bend 71, which is formed to permit the grinding-roller to reach the wire of the main cylinder without touching the said bend.

It will be observed that each plate-bend is sustained by a bracket 72 near each of the ends thereof. This secures greater rigidity of the plate-bends and cover than exists where the plate-bend at each side of the carding-engine is provided with a support or bracket at one point thereof, as heretofore has been the case, and there is an absence of the liability to warp out of true relationship and to become deflected through blows or pressure which exists in the prior constructions; also each end of the plate-bend may be adjusted independently of the other, which is, as will be perceived readily, a very great desideratum.

I claim as my invention—

1. The combination, with the main bend or arch of a carding-engine, a cover, and a plate-bend to which the cover is secured, of supporting-brackets which, respectively, are connected with the plate-bend near the opposite ends of the plate-bend and means for adjustably securing the said brackets to the main bend or arch, substantially as described.

2. The combination, with the main bend or arch of a carding-engine provided with plane-surfaced spots 706, a cover, and a plate-bend to which the cover is secured, of supporting-brackets which, respectively, are connected with the plate-bend near the opposite ends of the plate-bend and each of which brackets is provided with a plane face 726, fitted to move upon the plane surface of the corresponding spot 706, means for holding the said brackets to the main bend or arch, and means for adjusting the said brackets with relation to the main bend or arch, substantially as described.

3. The combination, with the main bend or arch of a carding-engine provided with plane-surfaced spots 706, a cover, and a plate-bend to which the cover is secured, of supporting-brackets 72 72, which, respectively, are connected with the plate-bend near the opposite ends of the plate-bend and each of which brackets is provided with a plane face 726, fitted to move upon the plane surface of the corresponding spot 706, and also is formed with a slot 723 and a flange 725, a bolt 722, passing through the slot 723 and into the main bend or arch, and a set-screw 724, fitted to a threaded hole in the flange 725 and taking bearings at its ends against projections on the main bend or arch, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM PITT CANNING.

Witnesses:

CHAS. F. RANDALL,

HENRY CALVER.