

No. 662,346.

Patented Nov. 20, 1900.

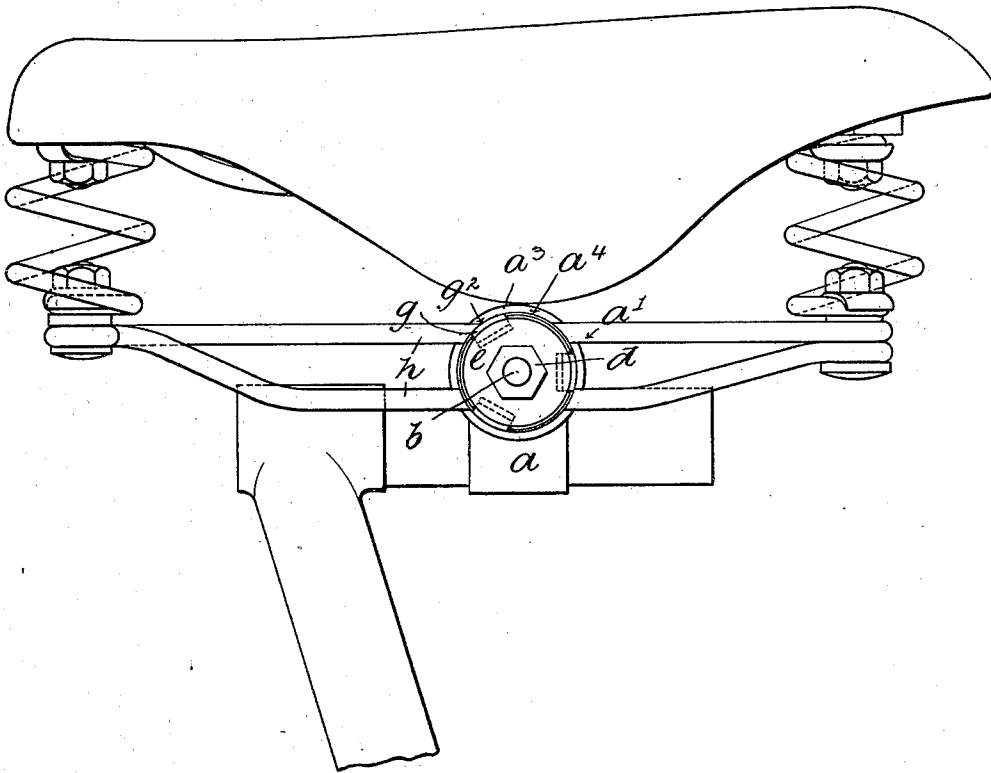
J. B. BROOKS & J. HOLT.
CYCLE SADDLE ATTACHMENT.

(Application filed Mar. 6, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES

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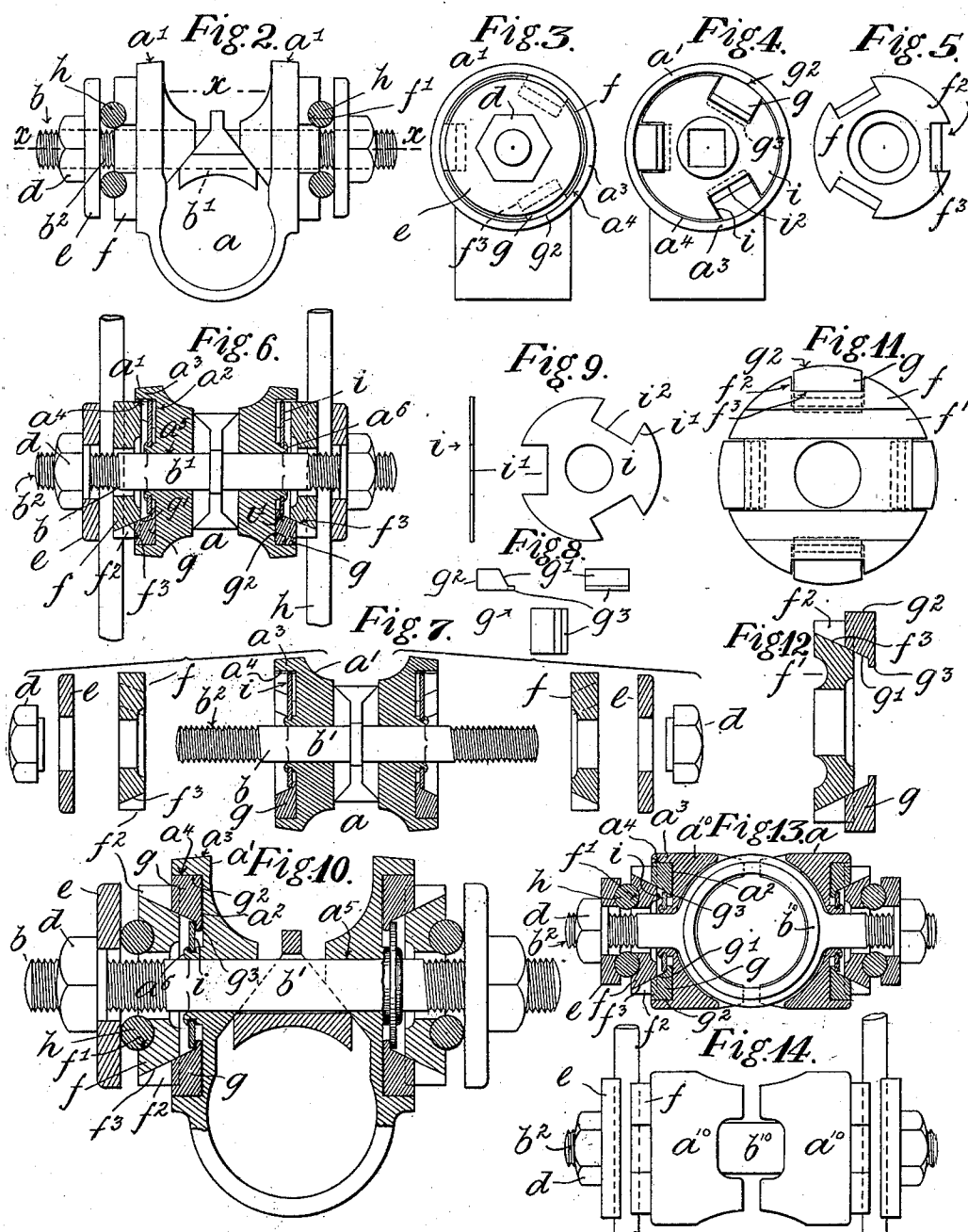
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(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

JOHN BOULTBEE BROOKS, OF BROMSGROVE, AND JOHN HOLT, OF ASTON, ENGLAND, ASSIGNORS TO THE J. B. BROOKS & COMPANY, LIMITED, OF BIRMINGHAM, ENGLAND.

CYCLE-SADDLE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 662,346, dated November 20, 1900.

Application filed March 6, 1900. Serial No. 7,527. (No model.)

To all whom it may concern:

Be it known that we, JOHN BOULTBEE BROOKS, managing director, residing at Fin-stall, Bromsgrove, in the county of Worcester, and JOHN HOLT, works manager, residing at 97 Frederick road, Aston, near the city of Birmingham, England, subjects of the Queen of Great Britain, have invented certain new and useful Improvements in Cycle-Saddle At-tachments, of which the following is a speci-fication.

This invention relates to cycle-saddle at-tachments, and has for its object to provide an improved construction of attachment-boss having means which prevent any inadvertent slipping of the parts from their set positions after clamping and yet admit of an infinitely fine adjustment of the said parts being ob-tained.

Figure 1 of the accompanying drawings re-presents a side elevation of a cycle-saddle fitted with an improved attachment-boss construct-ed and arranged in accordance with our in-vention. Fig. 2 represents an end elevation of the said boss, with the frame-wires gripped between the washers thereof shown in sec-tion. Fig. 3 is a side elevation of the said boss separately. Fig. 4 is a like elevation as Fig. 3, but with outer washer and inner washer (which is in the form of a thrust or wedge plate) removed. Fig. 5 is an elevation of the inside of one of the said inner washers or thrust-plates. Fig. 6 represents a hori-zontal section of the boss upon the dotted line x , Fig. 2. Fig. 7 shows various views of the component parts of the boss disassembled or separated from one another. Fig. 8 re-presents an elevation, end view, and plan of one of the series of three friction-blocks or lock-ing-bolts employed in the improved device shown in Figs. 1 to 7. Fig. 9 shows an edge view and elevation of one of the retaining-plates used in connection with the said bolts. Fig. 10 represents, upon a further-enlarged scale, a boss or clip having four locking-bolts; and Fig. 11 shows an elevation, and Fig. 12 a section, of one of the thrust-plates thereof shown in connection with its series of lock-ing-bolts. Figs. 13 and 14 show in horizon-

tal section and plan our invention applied 50 to another kind of saddle attachment-boss.

The same letters of reference indicate cor-responding parts in Figs. 1 to 12.

The attachment-boss consists of a U-shaped clip or body part a , adapted to encircle and 55 grip the L-pin or seat-pillar, with outer faces or cheeks a' of the said clip being sunken or recessed at a^2 , so as to form an annular flange or abutment a^3 , having a plain inner periphery a^4 . Square or angular holes are 60 made through the said cheeks at a^5 to re-ceive the correspondingly-sectioned middle part b' of the cross-pin b , whose outer ends b^2 , which are screw-threaded, carry the clamp-ing-nuts d , the outer frame-gripping washers 65 e , and the inner washers f , which latter also act as thrust-plates, through the medium of which a series of friction-blocks or radially-working locking-bolts g , located and retained 70 within the recesses of the cheeks, are forced outward and into locking contact with the peripheries of the abutment-flanges a^3 . Thus each of the two inner washers or plates f (which may have keep grooves or channels 75 f' on their outer sides for the reception of the frame-wires h) has cut into it a series of gaps f^2 , corresponding in number to the se-ries of bolt-blocks employed, which may be in any suitable number, with the edges f^3 of the said gaps inclined so as to provide a se- 80 ries of inwardly-tapering or wedge-like bear-ing-surfaces around the inner face of the thrust-plate, which are opposed to and come against the inclined inner ends g' of the bolt-blocks g , whose sides are embraced by or con- 85 fined within the gaps f^2 of the thrust-plate, while their outer ends or faces g^2 come against the inner periphery of the flange or abutment of the clip-cheeks. The thrust-plates and their respective loose bolt-blocks are thus 90 constrained to move together when the wash-ers and saddle-frame are rotated to effect an alteration in the tilt adjustment of the sad-dle relative to its support, while in order to retain or secure the locking-blocks within the 95 recesses when the washers and thrust-plates are removed cage plates or keepers, such as i , are employed, consisting of thin metal

disks fitted onto and being free to rotate around necks or collars a^6 , which surround the holes a^5 in the cheeks and are riveted or bushed over the disks (see Figs. 6, 7, and 10) to secure them to the clip, while the said plates are gapped at i' to form guides for the bolt-blocks to radially work within; but the edges i^2 of the said gaps are arranged to overlap lips or small flanges g^3 , formed along the inner edges of the said bolts, which are thereby secured against inadvertent detachment.

By screwing up a nut or the nuts of the pin the elements are drawn together, and by the impingement of the inclined planes or bearing-surfaces of the thrust-plates on the opposed inclined planes of the radial bolt-blocks the said blocks are driven outward and made to forcibly impinge against and set up frictional contact with the inner peripheries of the abutment-flanges, thus locking the whole of the connected parts against rotation.

It is obvious that our improved system of locking is applicable to all forms of saddle attachment-bosses in which frame-gripping or frame-carrying washers are employed—such, for instance, as that shown in Figs. 13 and 14, which has an eyebolt b^{10} and loose pillar-gripping cheek a^{10} , the other parts of which correspond to and are marked with the same letters of reference as the like parts shown in Figs. 1 to 9.

Instead of forming inclined planes or bearing-surfaces on the opposed parts of both the bolt-blocks and the thrust-plates it is obvious that the inclines may be formed only upon the bolts or upon the thrust-plates.

Having fully described our invention, what we desire to claim and secure by Letters Patent is—

1. A cycle-saddle attachment, comprising a boss adapted to be clamped on the seat-pillar and provided with two flanged peripheries, radially-movable bolts arranged to engage the peripheries of said flanges, a thrust-plate arranged to thrust the bolts into engagement with the flanges, means for actuating the thrust-plates and means for securing the saddle-frame to the thrust-plates, said thrust-plates and bolts being rotatably adjustable

relative to the boss to permit of the saddle being tilted, substantially as described.

2. A cycle-saddle attachment, comprising a boss adapted to be clamped to the seat-pillar and provided with two flanged peripheries, radially-movable bolts arranged to engage the peripheries of said flanges, thrust-plates provided with gaps in which the bolts move, and having beveled edges arranged to engage the bolts and thrust them into engagement with the flanges, means for actuating the thrust-plates and means for securing the saddle-frame to the thrust-plates, said thrust-plates and bolts being rotatably adjustable on the boss to permit of the saddle being tilted, substantially as described.

3. A cycle-saddle attachment, comprising a boss adapted to be clamped to the seat-pillar and provided with two cheeks having annular flanges on their outer faces, a cross-pin having angular portions fitted in corresponding apertures in the cheeks and provided at its opposite ends with threaded cylindrical extensions, radially-movable bolts arranged to engage said flanges, gapped disks secured to the cheeks over the bolts and operating to hold the latter in place on the cheeks, thrust-plates loosely arranged on the cross-pin opposite the cheeks and provided with gaps in which the bolts move and having beveled edges arranged to engage correspondingly-beveled ends on the bolts which project through the gaps in the disks and thrust said bolts into engagement with the flanges, washers arranged on the outer ends of the cross-pin, and nuts for forcing the nuts toward the thrust-plates to clamp the saddle-frame between the washers and said plates, thrust-plates and bolts being rotatably adjustable relatively to the cheeks to permit of the saddle being tilted, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JOHN BOULTBEE BROOKS.
JOHN HOLT.

Witnesses:

HENRY SKERRETT,
ARTHUR T. SADLER.