

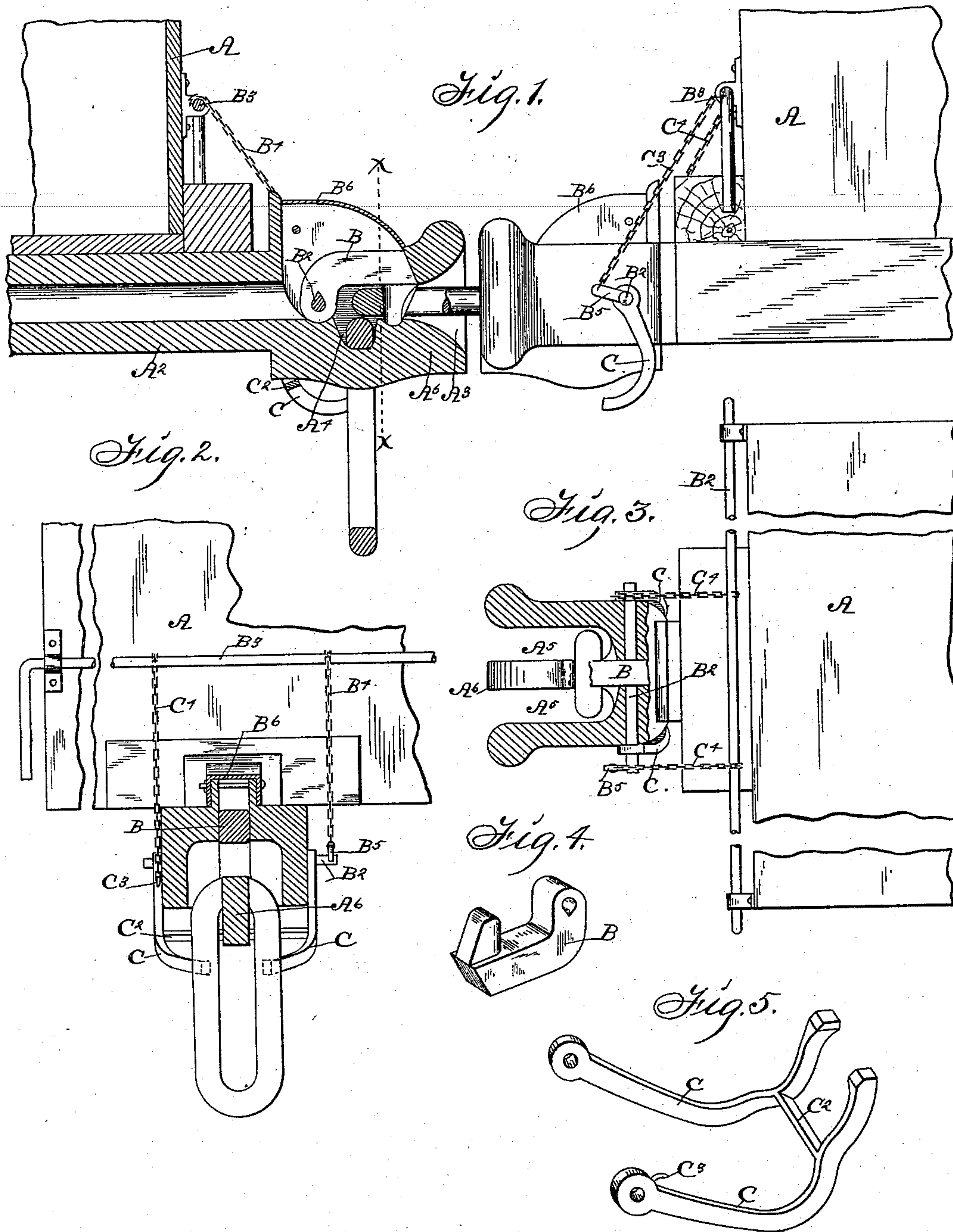
(No Model.)

2 Sheets—Sheet 1.

A. A. BROWER.
CAR COUPLING.

No. 503,646.

Patented Aug. 22, 1893.



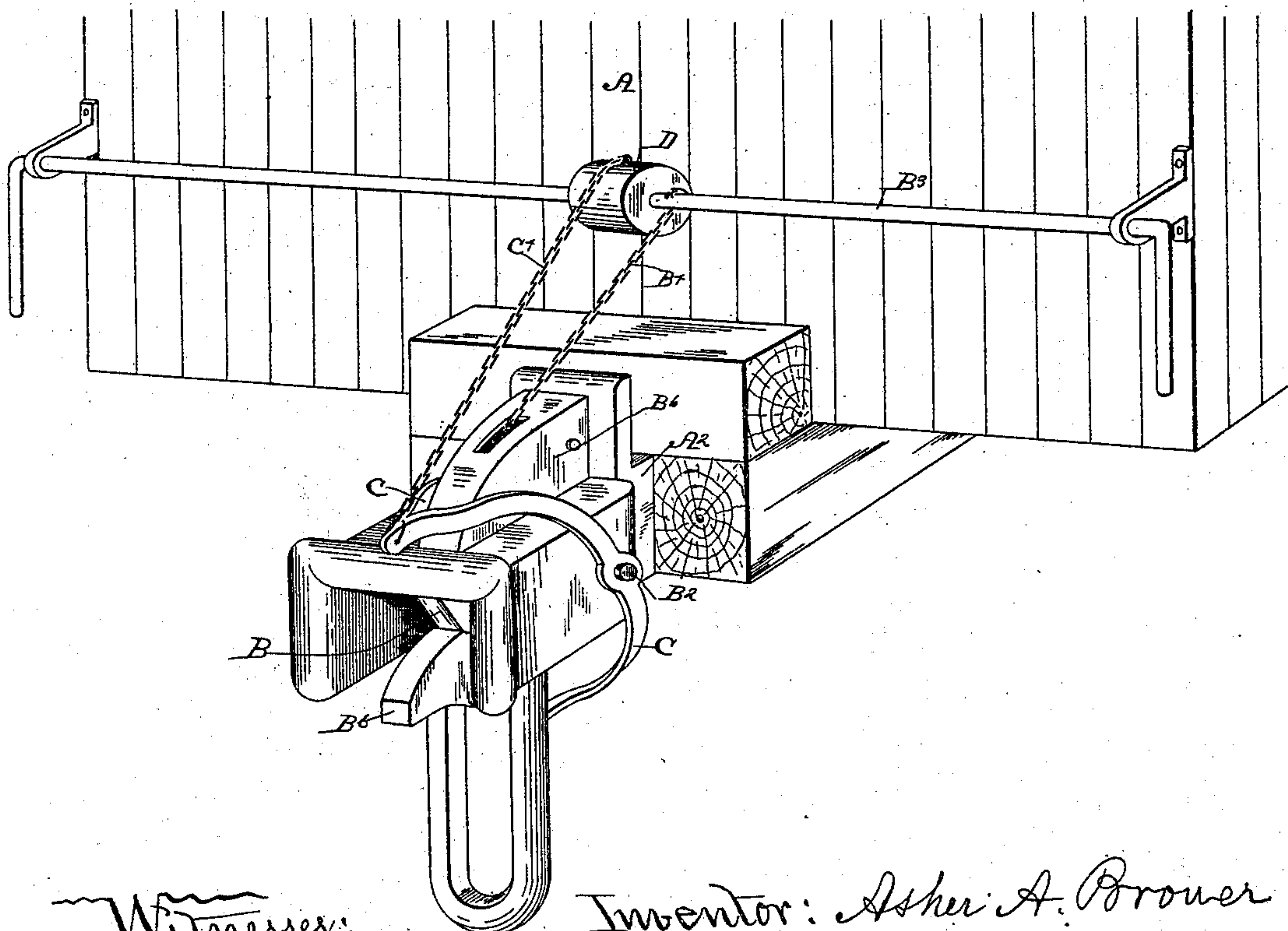
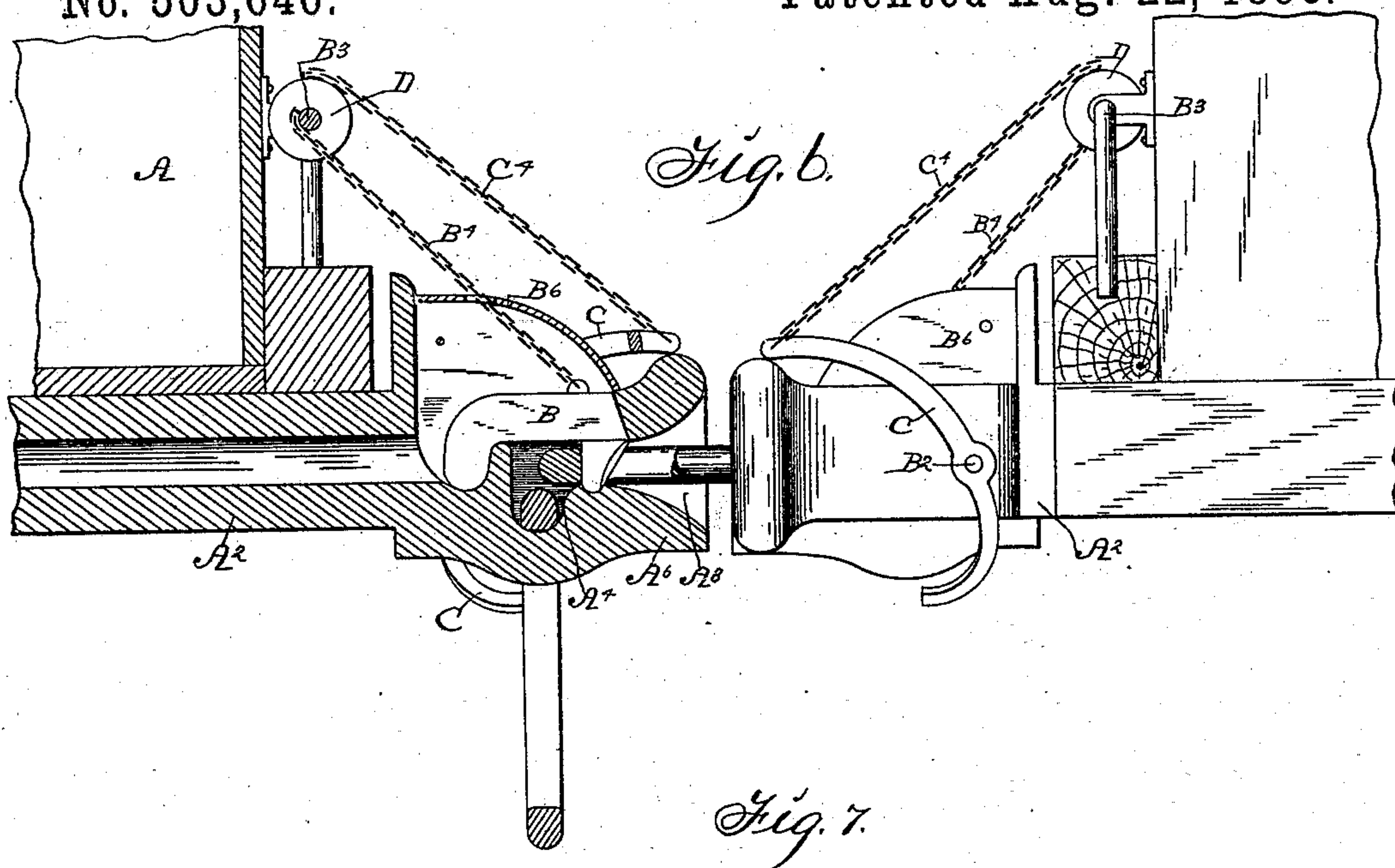
Witnesses:
H. J. Lankey.
J. Ralph Orwig.

Inventor: Ascher A. Brower,
By Thomas G. Orwig, Attorney.

2 Sheets—Sheet 2.

Patented Aug. 22, 1893.

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W. J. Sankey.
J. Ralph Orwig. }

Inventor: Asher A. Brouer
By Thomas G. Orwig, Attorney.

UNITED STATES PATENT OFFICE.

ASHER A. BROWER, OF DES MOINES, IOWA, ASSIGNOR OF TWO-THIRDS TO
W. M. McFARLAND AND W. W. ORRIS, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 503,646, dated August 22, 1893.

Application filed December 27, 1892. Serial No. 456,503. (No model.)

To all whom it may concern:

Be it known that I, ASHER A. BROWER, a citizen of the United States of America, residing at Des Moines, in the county of Polk and State of Iowa, have invented a Car-Coupling, of which the following is a specification.

The object of my invention is to provide a simple, durable and automatic car coupling adapted to carry a reserve link; to provide means whereby the link may be retained in a pendent position when not in use and also adjusted and held extended forward at any desired angle and elevation by a person at the side of a car as required in coupling two cars when their draw heads are not in the same horizontal plane.

My invention consists in the construction and formation of the draw head whereby a link may be secured therein by a hook and be capable of a movement from a vertical to a horizontal position.

My invention consists further in the construction, arrangement and combination with a draw head of means whereby a link may be placed at any desirable incline to engage coupling devices located at different heights relative to the track surface, and in certain other features in the construction, arrangement and combination of parts as hereinafter more specifically set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of two of the couplings attached to cars and in a coupled position one of said couplers being shown in vertical longitudinal section. Fig. 2 is a vertical transverse sectional view through the line $x-x$ of Fig. 1. Fig. 3 is a top view of the same with parts of the draw head broken away to show its interior construction. Fig. 4 is an enlarged perspective view of the link engaging hook. Fig. 5 is an enlarged perspective view of the device for elevating the link. Fig. 6 is a side elevation of two couplers attached to cars and in a coupled position one of said couplers being shown in longitudinal section to illustrate certain modifications of the device shown in Fig. 1. Fig. 7 is a perspective view of the coupler in its modified form attached to a car, as required for practical use.

Referring to the accompanying drawings the reference letter A is used to designate the car, A² a draw bar secured thereto in the ordinary manner and having its draw head formed as follows:

A³ designates a link cavity extending from the face of the draw head rearwardly and having its bottom surface inclined and rounded in such a manner as to direct a link into said cavity. In the rear of said inclined surface is a cavity A⁴, of such a size and shape as to allow the end of a link to be placed therein below the plane of said inclined surface. Portions of the bottom of the draw head are also removed to produce parallel slots A⁵ A⁵ and a link support A⁶ adapted to allow a link when placed in the link cavity through the open front of the draw head to swing to a vertical position and have its top below the plane of the bottom of the link cavity: that is:—the bottom portion of the draw head, A⁶, extending from a point below the rear end of the link cavity consists of a straight piece of metal integral with the draw head and running longitudinally thereof in its central portion and having an upwardly inclined surface on its front face and a notch in the rear of said inclined surface, in which a link may be hung to swing from a horizontal to a vertical position, and be below the plane of the bottom of the link cavity when in a vertical position.

B designates a hook for engaging the link. This hook is fixed to a rock shaft B² in the rear of the draw head to swing vertically a portion of the top of the draw head being removed for this purpose. The pivotal point of the hook B is preferably at or below its draft center, so that a pull upon a link engaged thereby will not tend to raise the hook.

B³ designates a rotatable shaft mounted in suitable bearings secured to the end of a car and B⁴ is a chain wound thereupon and secured to a lever B⁵ which lever is fixed to the said rock shaft B² to provide means for raising or lowering said hook from the side of the car.

B⁶ designates a detachable covering placed on top of the draw head to allow a free movement of the hook B and protect the same from snow, ice, &c.

I have provided means for raising the links from a vertical position to any desirable incline in order to couple with draw heads located at various distances from the ground surface, as follows:

C C designate two bent levers joined near their lower ends by the cross piece C² and loosely mounted at their top end portions upon the ends of the rock shaft B² in such a manner as to depend from the sides of the draw head and to have their lower ends adapted to enter the slots B⁵ in the bottom of the draw head when raised.

C³ designates a hook formed on or fixed to the top surface of one of the levers near its point of attachment with the rock shaft B² and C⁴ designates a chain fixed to said hook and wound upon the rotatable shaft B³ in an opposite direction from the chain B⁴ so that when one is wound up the other is loosened. Thus it will be seen that a rotation of the shaft B³ in one direction will raise the hook B and when rotated in an opposite direction will raise the outer end of a link in the coupler.

In the modification shown in Figs. 6 and 7 the chain B⁴ is shown to be extended through an opening in the top of the detachable cover B⁶ and attached direct to the hook B which in this instance is not pivoted to any support but has its rear end rounded and placed in a rounded cavity in the draw head and has its front face inclined downwardly and forwardly to engage a mating portion of the draw head, so that a forward pull upon the hook will prevent the same from being raised and the curved levers, C, C, have their upper ends extended upwardly and forwardly and are united above the draw head and have the chain C⁴ connected therewith and said chain C⁴ is wound upon a drum D to move the levers C C a greater distance upon each revolution of the shaft B³.

Having thus described the construction, operation, and function of each part of the coupler, what I claim as my invention, and desire to secure by Letters Patent of the United States therefor, is—

1. In a car coupling a draw head having a link cavity, a notch in the rear of the link cavity to admit the end of the link and slots in the bottom of the draw head to allow a link having its end in the aforesaid notch to swing to a vertical position and means for elevating the outer end of said link.

2. In a car coupling a draw head having a

link cavity a notch in the rear of the link cavity adapted to admit the end of the link and allow it to pass below the bottom of the link cavity for the purposes stated slots in the bottom of the draw head to allow a link when placed in the said notch to swing to a vertical position and means for elevating the outer end of said link.

3. In a car coupling the combination of the following elements, to wit: a draw head having a link cavity adapted to admit a link and allow it to swing from a horizontal to a vertical position, two bent levers pivoted to the opposite sides of the car and having their lower ends adapted to engage the link and means for manually operating the said levers from the side of a car to elevate the outer end of the link for the purposes stated.

4. In a car coupling the combination of the following elements, to wit: a draw bar connected with a car in the ordinary manner a draw head formed thereon and provided with a link cavity, a notch formed in the rear end of the link cavity as set forth, slots formed in the sides of the bottom of the draw head for the purposes stated, a hook fixed to a rock shaft in the rear end of the draw head and adapted to engage the bottom of the link cavity in advance of said notch, two bent levers loosely mounted upon a suitable support at the sides of the draw head and adapted to be brought into engagement with the said link, to elevate its outer end, a rotatable shaft mounted in suitable bearings attached to the end of the car to be manually operated, a chain attached to said shaft and to the rock shaft to which the said hook is fixed and a chain wound upon the said shaft in an opposite direction from the aforesaid one and attached to the bent levers substantially in the manner set forth for the purposes stated.

5. In a car coupling, a draw head having an open-mouthed link-cavity and parallel slots extending from the front of the draw head rearward, a link support extending forward between the said slots and provided with a depression in its top surface to admit the front of a hook, and a hook pivoted in the link cavity and adapted to pass through an open link and enter and rest in the said depression in said link support, in the manner set forth, for the purposes stated.

ASHER A. BROWER.

Witnesses:

W. J. SANKEY,

THOMAS G. ORWIG.