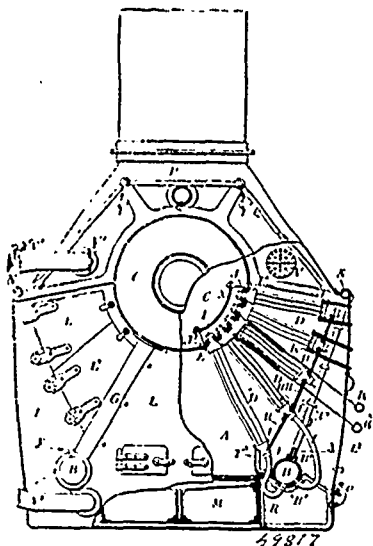
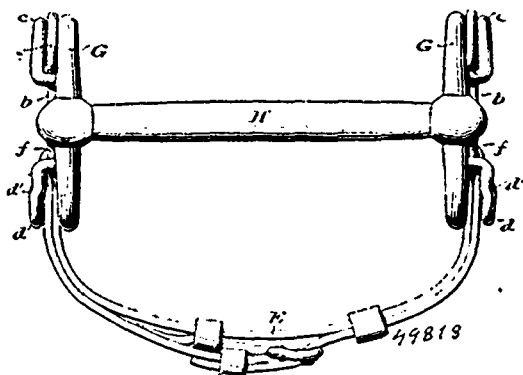


to a lower water chamber of the boiler so that the water circulates from the latter through the cups and tube group to the upper water



and steam chamber while the flames and furnace gases pass in contact with the tube groups there being two or more rows of such tube groups one behind the other on each side of the furnace arranged, substantially as described. 2nd. In water tube boilers having tube groups such as are mentioned in the first claim, attaching the one cup of the group to the upper steam and water chamber by passing the threaded neck of the cup through a hole in the chamber and securing it by means of an internal screw nut and washer, the conical surface of the cup serving to form, with or without packing, the water tight joint outside the chamber, substantially as described. 3rd. A compound water tube for water tube boilers consisting of a group of tubes connected at each end to cups or boxes of conical or ogival shape having at their large flat end a series of holes for the reception of the ends of the tubes and at the small end a tubular neck serving to connect it to other parts of the boiler, substantially as described. 4th. A box or cup for a compound water tube such as is referred to in the preceding claim consisting of a conical or tapering receptacle E having a flat, circular or rectangular face at the larger end, with a series of holes adapted to receive the ends of the water tubes D and a threaded tubular extension at the smaller end, adapted to be secured to the water and steam chambers of the boiler, substantially as described.

**No. 49,818. Bit for Horses. (Mors de bride.)**

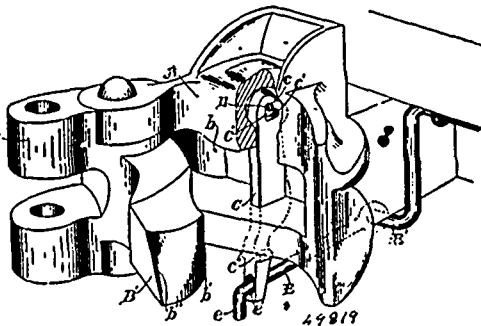


Joseph Glaner, Trenton, New Jersey, U.S.A., 29th August, 1895; 6 years.

**Claim.**—1st. In a bit, the combination of a mouth-piece, two rings attached respectively to the ends of the mouth-piece, and a lever connected with each of said rings, and adapted to swing relatively to the mouth piece, said levers having means at their free ends for attaching the overdraw thereto, and means on their middle portions for attaching thereto the ends of a chin strap, substantially as shown and described. 2nd. In a bit, the combination of a mouth-piece, two rings attached respectively to the ends of said mouth-piece, a lever connected with each of said rings to swing relatively to the mouth piece, each of said levers having means at its free end for attaching thereto the overdraw, and means on its middle portion for attaching the chin strap thereto, and a guide on

each ring for the lever connected with said ring, and a guide on said ring for the chin strap, substantially as shown and described. 3rd. In a bit, the combination of a mouth-piece, two rings attached respectively to the ends of said mouth-piece, a fulcrum bar attached to each of said rings a lever fulcrumed on each of said fulcrum bars to swing relatively to the mouth-piece, each of said levers having means at its free end for attaching thereto the overdraw, and means on its middle portion for attaching thereto a chin strap, and a guide on each ring for the lever connected with said ring, and a guide for the chin strap, substantially as shown and described. 4th. The combination of the mouth-piece of a bit, two rings attached respectively to the ends of said mouth-piece, a lever connected with each of said rings to swing relatively to said mouth-piece, said levers having at their free ends means for attaching the overdraw thereto and means on their middle portions for attaching the chin strap thereto, a chin strap connected at its ends with said levers, an overdraw connected with the free ends of said levers and the lines attached to said rings, substantially as shown and described.

**No. 49,819. Car-Coupler. (Attelage de chars.)**



Charles W. Hinton, Los Angeles, California, U.S.A., 29th August, 1895; 6 years.

**Claim.** 1st. A car-coupling comprising a swinging knuckle provided with an arm, a swinging locking bar adapted to lock the arm against movement and to be swung out of the path of the arm, and suitable means arranged to engage and hold the bar in position to allow the arm to pass and means arranged to be operated by the arm to release the bar, and allow it to swing into its normal position after the arm has passed out of the path of the bar. 2nd. A car-coupling provided with a swinging knuckle having an arm rigidly fixed thereto, a locking bar pivoted to swing into and out of the path of the arm, and arranged to be reciprocated to raise it in the draw-head, a locking device arranged to lock the bar in its elevated position, and suitable means arranged to be operated by the arm to release the bar from the locking device. 3rd. A car-coupling provided with a swinging knuckle having an arm rigidly fixed thereto, a swinging locking bar pivoted by its upper end in the draw-head and arranged to swing into and out of the path of the arm, and having its pivot hole elongated and provided with two pivot seats, one above the other, the bar being arranged to engage a shoulder on the draw-head when the bar is swung to the rear out of the path of the arm and raised in the draw-head to seat the lower pivot seat upon the pivot, and to be released therefrom when the bar is lowered to seat the upper pivot seat upon the pivot, and suitable means for operating the bar. 4th. A car-coupling having a swinging knuckle provided with an arm projecting therefrom and adapted to be chambered in the draw-head, a swinging locking bar pivoted in the draw-head, and arranged to normally extend across the path of the arm, and to swing to allow the arm to pass the bar, a suitable catch arranged to engage the bar when the bar is swung to allow the arm to pass, suitable means arranged to be operated by the arm to release the bar from the catch so the bar will swing into the path of the arm after the arm has passed thereby, the rear face of the arm being bevelled and arranged to engage the bar to swing it out of the path of the arm when the arm is forced to the rear, and means for swinging the bar to allow the arm on its forward movement to pass the bar. 5th. In a car-coupling having a swinging knuckle provided with an arm projecting therefrom and adapted to be chambered in the draw-head, the combination therewith of a locking bar provided with an elongated pivot hole having two pivot seats, one arranged above the other, and provided with a lug arranged to engage with a shoulder on the draw-head to allow the arm to pass the bar when the bar rests with the pivot in one of the pivot seats, and to be released from such shoulder to allow the bar to spring into the path of the arm when the bar is shifted to cause the bar to rest with the pivot in the other pivot seat, the pivot arranged to pivot the bar in the draw-head, and suitable means for operating the bar.

**No. 49,820. Car-Coupler. (Attelage de chars.)**

Charles W. Hinton, Los Angeles, California, U.S.A., 29th August, 1895; 6 years.

**Claim.**—1st. In a car-coupling, the reciprocating locking bar arranged to engage the arm of the draw-bar, to incline forward and