(No Model.)

3 Sheets—Sheet 1.

W. P. HOSKINS.

SOFA BERTH.

No. 544,982. Patented Aug. 20, 1895.

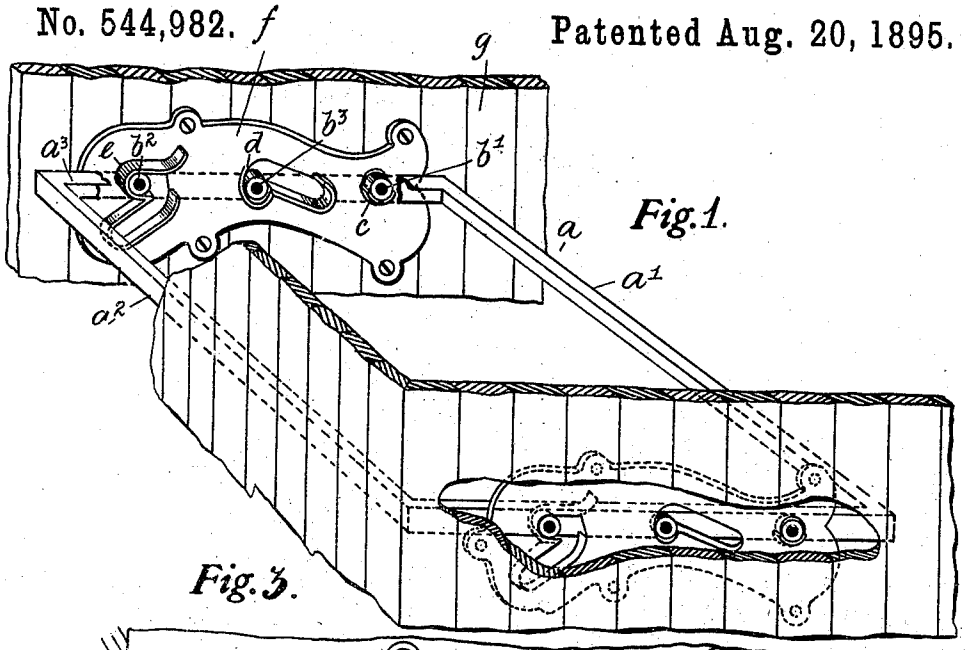
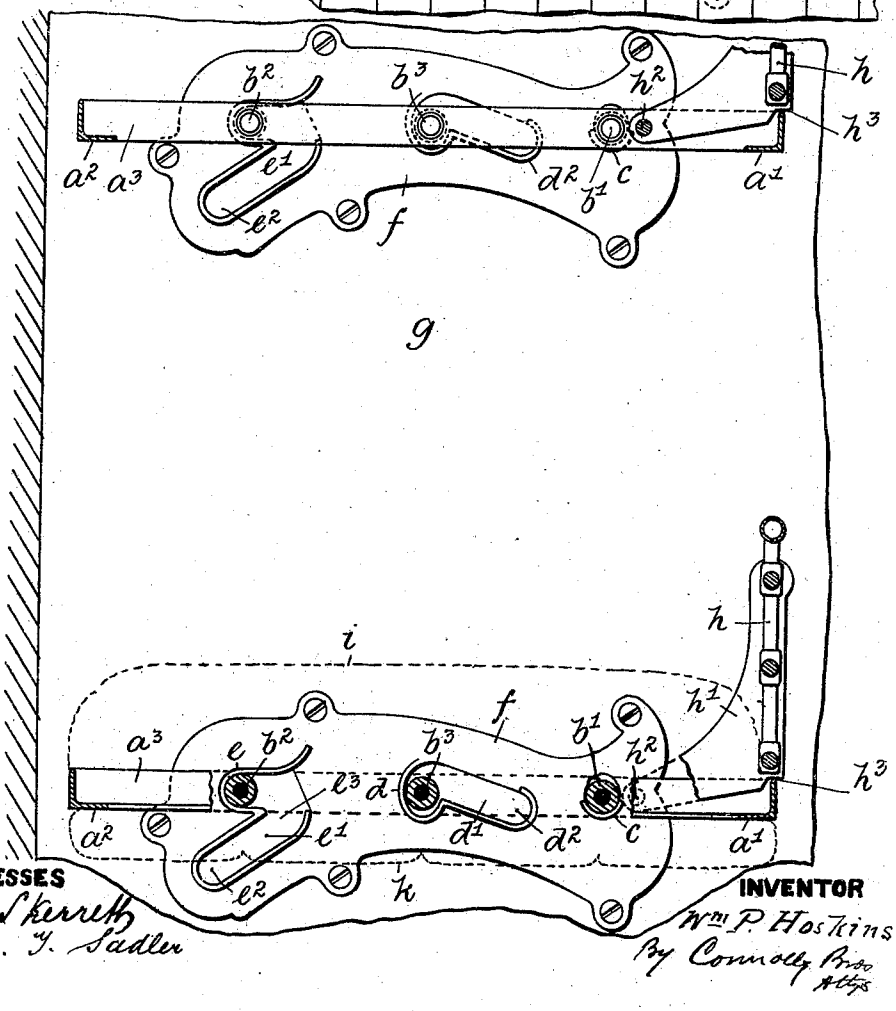


Fig. 1.

Fig. 3.



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(No Model.) 3 Sheets—Sheet 2.

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Fig. 2.

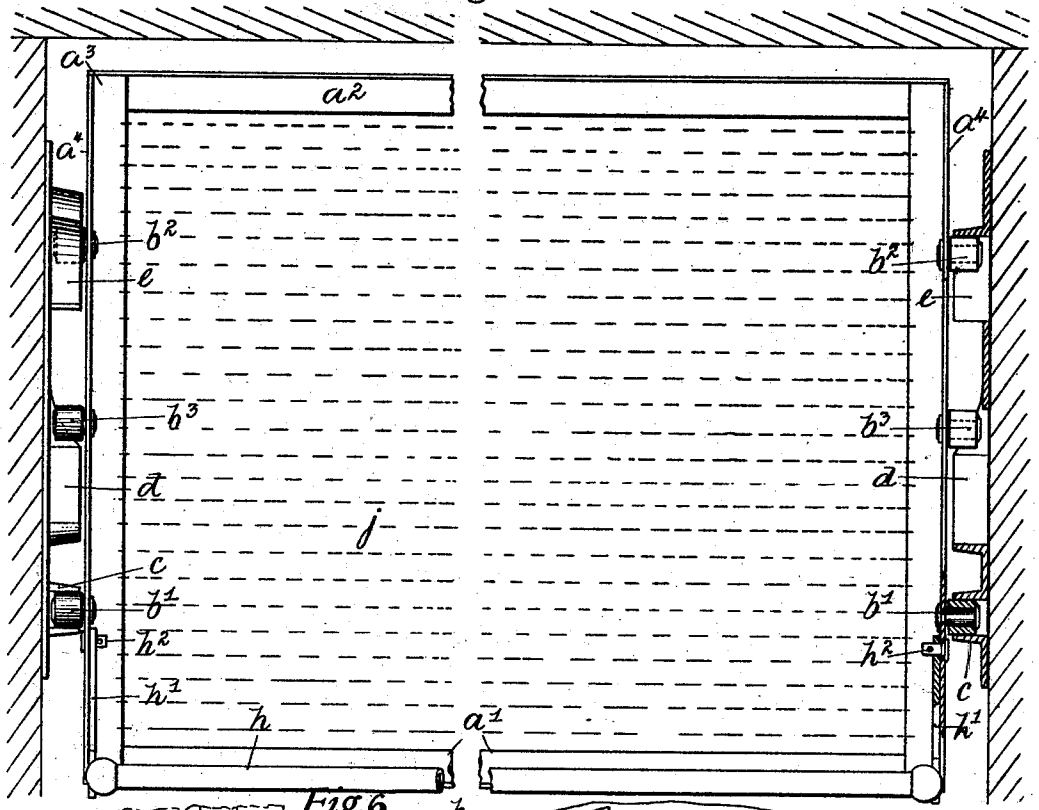

Fig. 6.

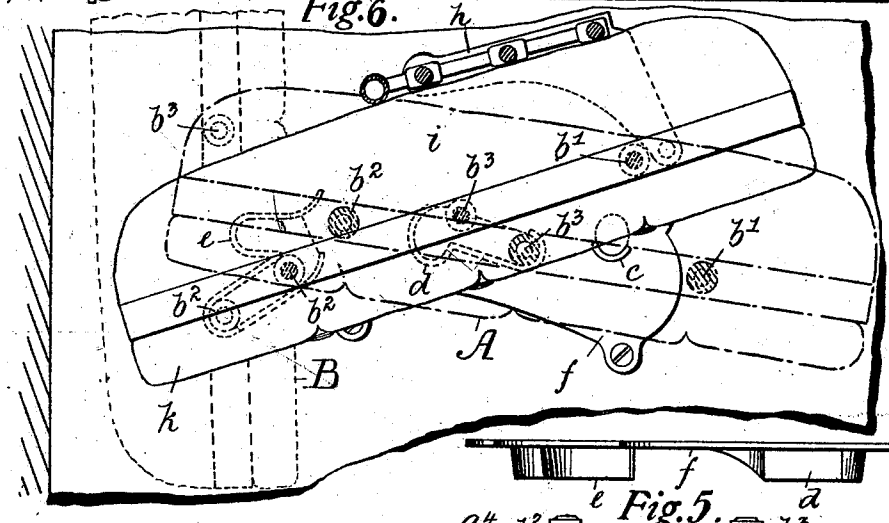

Fig. 4.

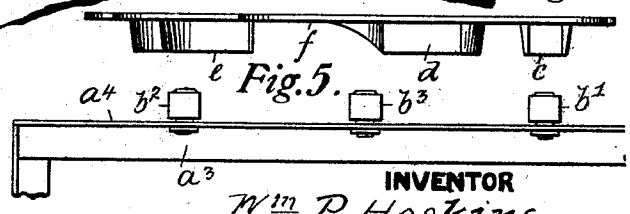

Fig. 5.

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Fig. 7.

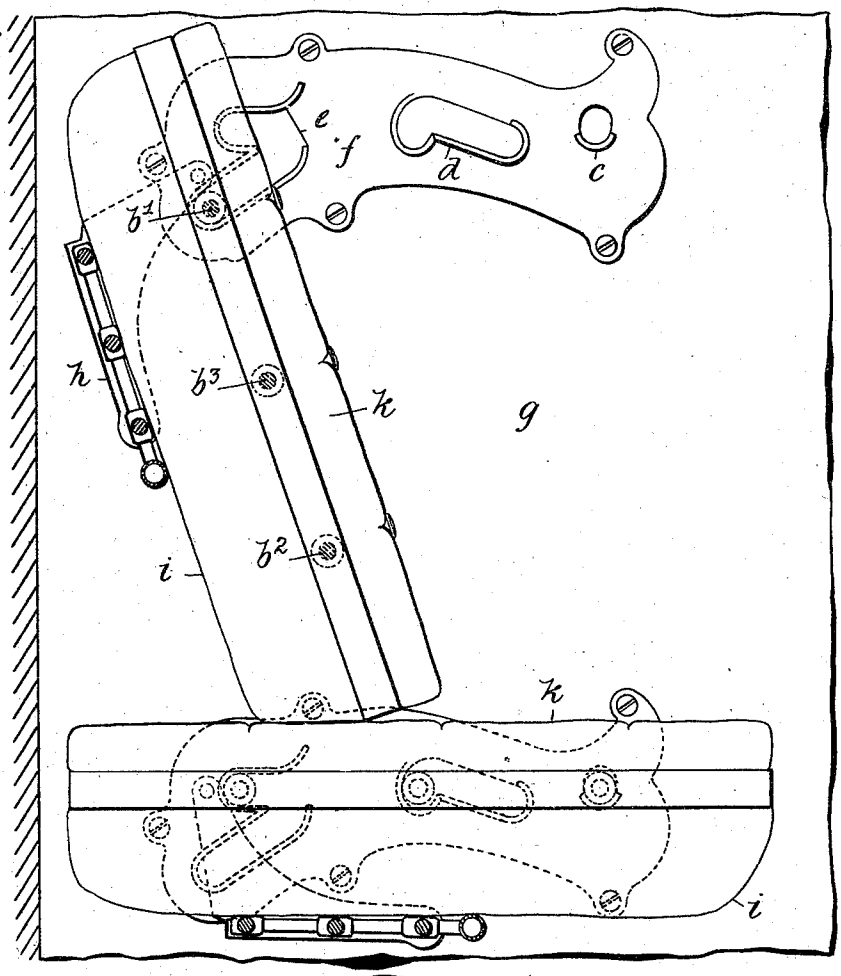


Fig. 8.

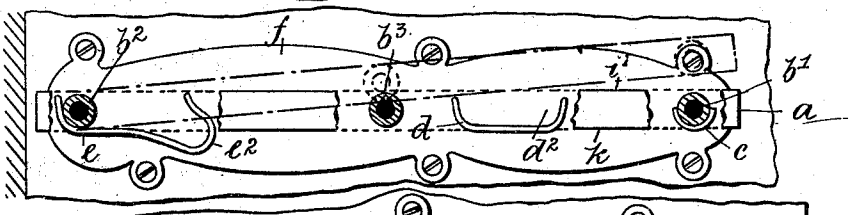
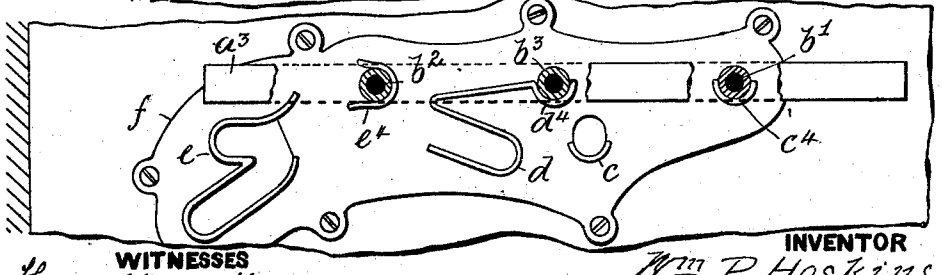


Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM PARISH HOSKINS, OF BIRMINGHAM, ENGLAND.

SOFA-BERTH.

SPECIFICATION forming part of Letters Patent No. 544,982, dated August 20, 1895.

Application filed March 17, 1894. Serial No. 504,021. (No model.) Patented in England September 23, 1893, No. 17,885.

To all whom it may concern:

Be it known that I, WILLIAM PARISH HOSKINS, manufacturer, a subject of the Queen of Great Britain, residing at Upper Trinity Street, Bordesley, in the city of Birmingham, England, have invented certain new and useful Improvements in Sofa-Berths; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, and for which invention Letters Patent of Great Britain have been granted to me bearing date the 23d day of September, 1893, No. 17,885.

This invention has relation to sofa or settee berths to be used principally on board ship, in railway carriages, and other confined spaces, and has for its object a convertible article of furniture having a turn-up, turn-down, folding, turn-over, and reversible actions.

Figure 1 of the accompanying drawings represents in perspective the framing and supporting parts of a convertible sofa-berth without the lee rail and with the bed and upholstery parts removed and being constructed and arranged according to one form of my invention. Fig. 2 represents upon an enlarged scale a top side plan of the same, showing the dispositions of the brackets and the roller-pivots resting within the outstanding seatings of the said brackets. The right-hand side of the sofa-berth is shown partly in section, while the left-hand side is shown partly in elevation. Fig. 3 represents, partly in section and partly in elevation, a pair of sofa-berths disposed one above another. In this view the bedding is shown upon the upper side and the upholstery is upon the under side, and when in this position the said combined articles of furniture are used as berths. Fig. 4 is an edge view of the top of the bracket. Fig. 5 represents a top side edge view of one of the ends of the sofa-berth framing separately. Fig. 6 represents the sofa-berth in the act of being placed into a position suitable for the folding or stowing away, as shown by the ordinary dotted lines, while the chain-dotted lines represents the position which the sofa-berth takes prior to the same being converted into a sofa. In this view the lee rail is shown folded upon the top of the bed, so as to be out of the way. Fig. 7 represents the pair of berths, Fig. 3, converted into a settee, with the sofa sides of them, respectively, presented outwardly and uppermost. The one sofa side forms a back rest, while the sofa side of the lower sofa-berth forms a seat, and in each case it will be observed that the lee rail is folded out of the way at the back of the article. Figs. 8 and 9 represent modifications of my invention.

In Figs. 1 to 7 a is a rectangular-shaped framing having an outer or front side a' and an inner side a^2 with ends a^3, each being provided with rest-trunnions or roller-pivots b' b^2 b^3 standing outwardly from the outer sides a^4 of the said ends. These roller-pivots or rest-trunnions b' b^2 b^3 are disposed at distances from the terminations of the ends and either take or seat themselves within concaved outstanding seatings or pockets c d e of supporting-brackets f, connected at either side of the berth-framing and respectively affixed to the bulk-heads or cabin-walls g of a berth. The rest-seating c of each side is simply a semicircular outstanding flange or open-topped pocket, while the pocket d, which has a race d' and a fulcrum-seating d^2, is of such a depth that it is normally clear of the roller-pivot b^3, so that the frame is supported at each side by the end pivots b' b^2, and the pivot b^3 has only the function of a turning-pivot when the framing of the sofa-berth has been shifted forward, so as to bring the said pivot onto the fulcrum-seating d^2. The seating or pocket e has a race e' and a fulcrum seating or pocket e^2, within which latter the rest-trunnion or roller-pivot b^2 takes and therein turns when the berth is folded or stowed away, as hereinafter described.

In the lee rail, which comes upon the front side a' of the framing, h is a full length lee framing consisting of connected-together bars with the ends of the rail mounted upon crank-arms h' inwardly pivoted at h^2 to the ends a^3 of the framing a, and with the fore parts of them formed with shoulders h^3, which take their bearings upon the top side of the front rail a'. The said lee rail is normally kept in

its fencing-in position by gravity, although the same may be kept in its fencing-in position by screw-pins, cotters, or other means.

i is the berth side of the combined article of furniture, having upon it ordinary bedding resting upon a woven-wire or other bottom *j*, (see Fig. 2,) and *k* is the sofa or settee side, which may be upholstered in plush or otherwise, as may be desired.

Operation: Assuming that the sofa-berth is in a position, as in Figs. 1, 2, and 3, which represents the article in use as a berth or bed, and that the same requires to be reversed and converted into a sofa or lounge, the lee rail is turned down upon the top of the bed, as in Fig. 6, and then the front part of the framing is taken hold of and bodily lifted, so that the frame turns upon the rest-trunnions or roller-pivots b^2, within the end bearings or pockets *e*, as the fulcra. When thus slightly elevated, pull the sofa-berth bodily forward until the turning pivots or trunnions b^3 come above the bottoms of the races *d'* of the pockets *d*, when, by allowing the front of the sofa-berth to slightly fall and by continuing the pull, the said last-named turning-pivots slide down the races *d* into the fulcrum-pockets d^2, at the ends of them when the sofa-berth is in the position represented by the chain-dotted lines A in Fig. 6, and when in this position the pivots b' b^2 are clear of the rest seatings or pockets *c* and *e*, and the sofa-berth can now be rotated or turned about the pivots b^3 as centers, and when the settee side *k* has been brought uppermost then the article is pushed bodily backward and at the same time the front is slightly raised, when the roller-pivots b^2 pass into the seatings or pockets *e*, and when there the front of the berth is further elevated so as to clear the front pockets or seatings *c*, and when the sofa-berth has been fully pushed home to the ends of the said pockets *e* the front of the article is dropped and the roller-pivots b' take into and rest within the seatings *c;* hence the supporting of the sofa-berth with the sofa side uppermost. In converting the article again into a berth the same operation, as described, would be repeated.

To fold up or stow away the sofa-berth from the position represented in Figs. 1, 2, and 3, first turn over the lee rail *h* upon the bedding *i*. Then slightly lift the front of the sofa-berth and pull the same forward until the roller-studs b^2 come opposite to the mouths e^3 of the races *e'* of the pockets or recesses e^2, as in the full lines in Fig. 8. Now allow the sofa-berth to slide back full home, and when the roller-pivots b^2 are within the end seatings e^2, then fold the berth up into the position represented by the dotted lines marked B in Fig. 6.

To convert the pair of two-high sofa-berths (Fig. 3) into a settee with back rest, turn the sofa sides uppermost as before. Then place the upper sofa-berth in a position for folding; but instead of folding up let the same fold down, when the said upper sofa-berth assumes the position as in Fig. 7 and forms the back rest to the couch or settee. Instead of attaching the brackets *f* to the sides or bulkheads of a cabin the same may be supported from standards or portable rests.

In Fig. 8 the outstanding seatings or pockets are open topped and the turning-pivots normally locate themselves outside the fulcrum-seatings. *f* is a bracket having outstanding and open-topped seatings with pockets *c d e* e^2, while each end a^3 of the framing *a* has rolled pivots or rest-trunnions b' b^2 b^3, as before. Assuming now that the framing carries a bed upon one side *i* and is upholstered for a couch or sofa on the other side *k*, and assuming that the sofa-berth requires to be reversed or the bed side replaced by the couch, first lift the front of the sofa-berth into the position as represented in dotted lines, then draw the sofa-berth forward until the roller-pivots b^2 nearly enter the pocket-seatings e^2 of the bearings *e*. This done, then drop the front of the sofa-berth and tilt the inner end and run the pivots b^3 to the ends d^2 of the races *d*. When in this position the roller-pivots b' b^2 are clear of the outstanding seating parts, when the sofa-berth can be rotated or turned round upon the pivots b^3 as centers. When turned round or the settee side brought uppermost, then push it backward and drop the inner end roller-studs b^2 into the bearing-pockets *e*, and when pushed fully back and while still in a slightly-oblique position the roller-pivots b' can then be dropped into the seatings *c*. When a back rest is to be made of the settee side of the convertible article, then the pivots b^2 are made to take into the pockets e^2 and the sofa hangs down, as in Fig. 7.

In Fig. 9 the couch-berth is capable of being made to extend itself forwardly beyond its normal position, so that nearly the whole breadth of the settee side may be utilized for sitting, lying, or reclining upon. It will be seen that in the illustration, Fig. 7, the seat-space is limited; hence the necessity for bringing the said seat forward. *f* is a bracket with lower seatings or rests *c*, *d*, and *e*, which are practically the same as those described in the first arrangement, while situated above these said rests or seatings are supplementary ones c^4, d^4, and e^4. b' b^2 b^3 are the roller-pivots upon the ends a^3 of the berth-framing *a*, as before, so that when the sofa-berth is required to be used as a settee then it is lifted by prying from out of the lower rests or pockets and is drawn into the upper ones, and when in the position represented makes the seat come forward beyond its normal position and thereby increases the seat-space of the settee to an extent equal to the distance between the upper and lower seatings.

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

1. In sofa berths, the combination with a revoluble framing having three trunnions at each end, of supporting brackets having each a seating *c*, and two races *d'*, *e'*, and seatings *e*, *d*, communicating with said races, substantially as described.

2. In sofa berths, the combination with a framing having three trunnions on each end, of brackets having each two races and a seating for the reception of said trunnions, substantially as described.

3. In a sofa berth having turn over, turn up, turn down, folding and reversible actions, the combination with the framing *a*, of rest trunnions, the roller pivots *b'*, b^2, b^3, located upon the outer sides a^4, of the ends a^3, of the side framing and adapted to seat themselves upon take and work within and be supported by outstanding portions *c*, *d*, *d'*, d^2, *e*, *e'*, e^2, e^3, of supporting brackets, substantially as described.

4. In a sofa berth having turn over, turn up, turn down, folding, and pull out, actions, the combination with rest trunnions or roller pivots *b'*, b^2, b^3, upon the outer sides of each of the ends supported by and working and turning within outstanding portions *c*, *d*, *e*, of supporting brackets, with supplementary seating and rest brackets c^4, d^4, e^4, for the bringing forward of the said sofa berth, substantially as described.

5. A combined and convertible sofa berth having turn up, turn down, folding, and reversible actions, and with the said article having a frame for receiving bedding upon the one side and being upholstered upon the other, and with each of the opposite ends being provided with three rest trunnions or roller pivots which take and rest within seatings, and work and turn within races and bearings of portions or outstanding portions of supporting brackets, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of February, 1894.

WILLIAM PARISH HOSKINS.

Witnesses:

HENRY L. KERRETT,

ARTHUR T. SADLER.