

(No Model.)

J. W. D. FIFIELD.

BOOT TREE.

No. 246,301.

Patented Aug. 30, 1881..

Fig. 2.

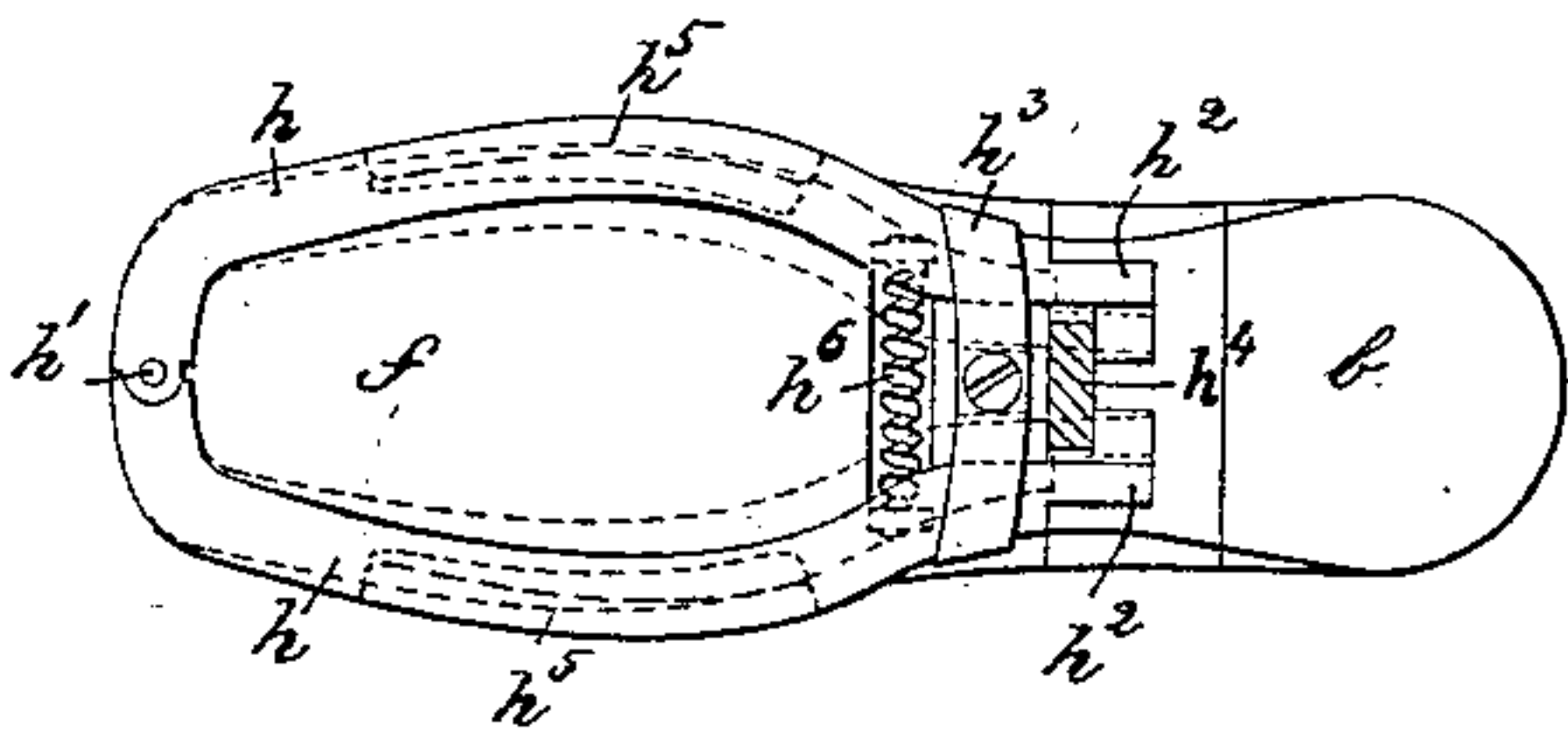


Fig. 1.

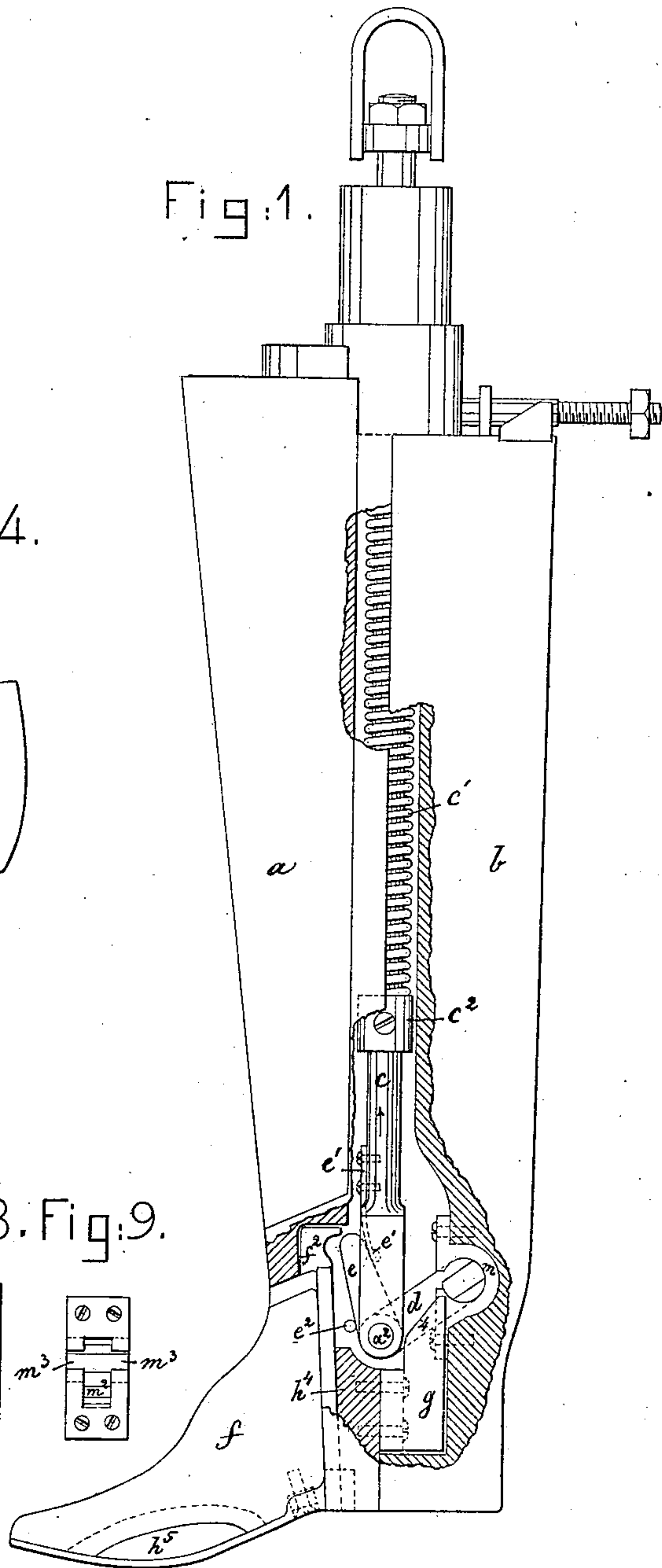


Fig. 3.

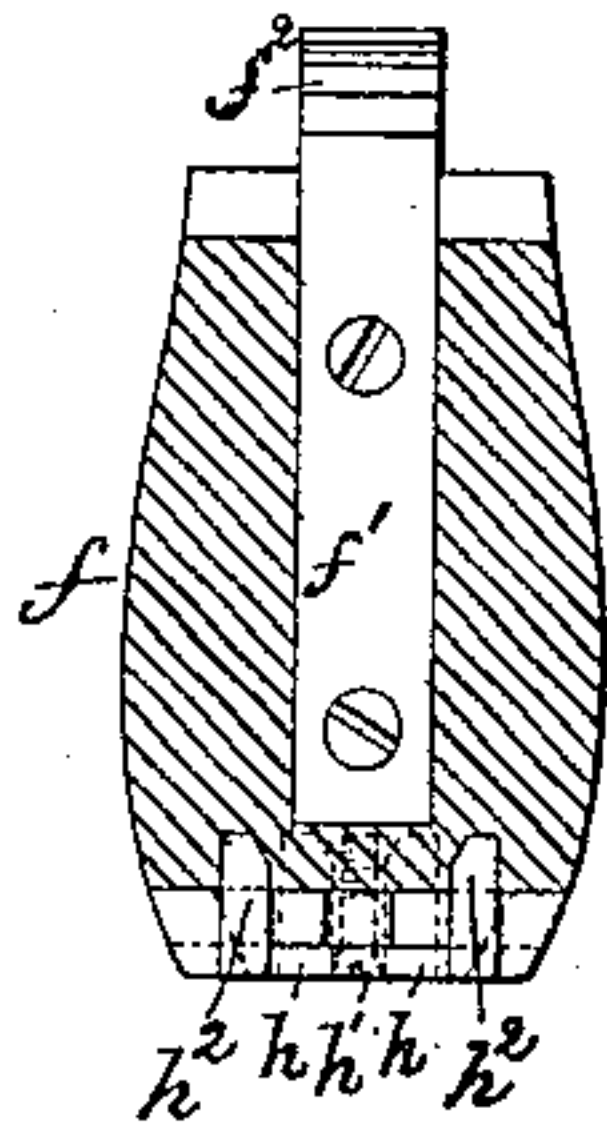


Fig:4.

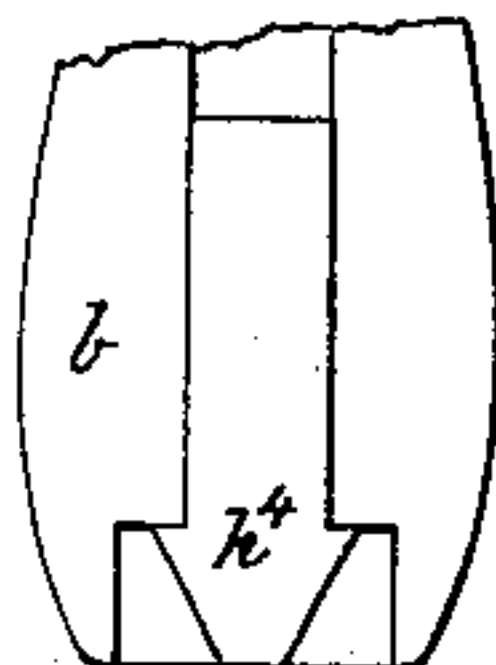


Fig:5.

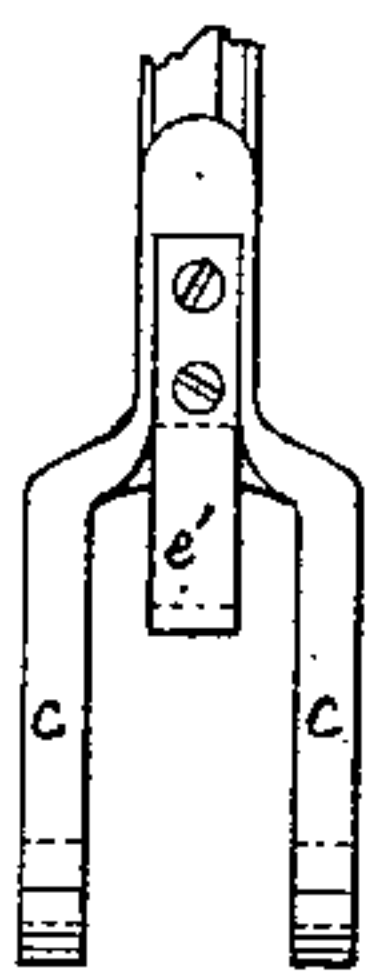
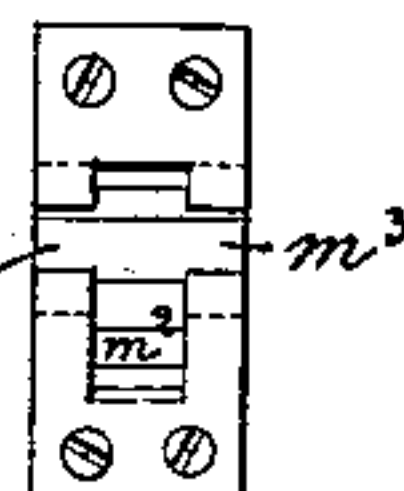
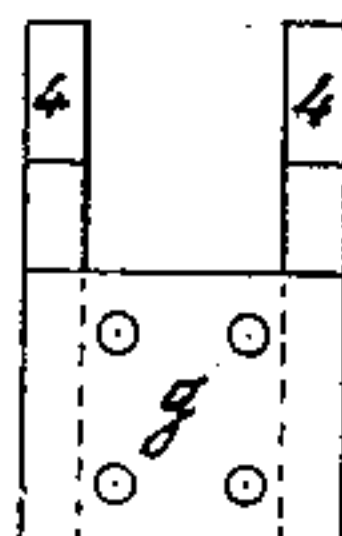
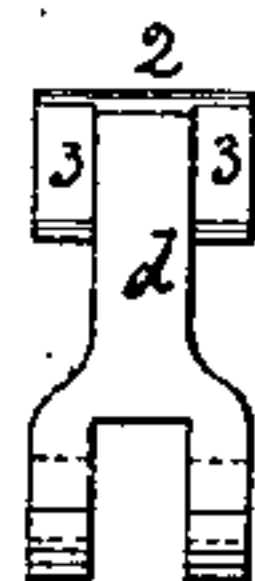


Fig:6. Fig:7. Fig:8. Fig:9.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN W. D. FIFIELD, OF NORTH BROOKFIELD, MASSACHUSETTS.

BOOT-TREE.

SPECIFICATION forming part of Letters Patent No. 246,301, dated August 30, 1881.

Application filed June 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. D. FIFIELD, of North Brookfield, county of Worcester, and State of Massachusetts, have invented a new and useful Improvement in Boot-Trees, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to boot-trees, and has for its object a novel construction thereof, whereby the parts of the tree may be readily expanded and contracted or detached, and whereby the tree may be expanded at the sole or bottom of the foot part, to tree the foot of the boot or shoe full at or opposite the joints of the toes with the foot.

Figure 1 represents, in side elevation, a boot-tree, partially in section, containing my improvements; Fig. 2, a view of the bottom or sole part of the boot-tree with its expanding device, the dotted lines showing the same contracted, as will be the case when the foot part is being inserted in or being withdrawn from the foot part of the boot or shoe; Fig. 3, a detail showing the inner face of the foot part; Fig. 4, a detail of the inner face of the back of the tree near its lower end; Fig. 5, a detail of the lower end of the draw-rod; Figs. 6 and 7, details of the levers carried by the draw-rod; Fig. 8, a view of the wedge-block; and Fig. 9 shows the socket-bearing for one of the levers of the draw-bar.

The front and back beams, a b , of the tree, and the draw-rod c , and its spring c' and collar c^2 are substantially as usual. This rod c at its lower end is forked, as shown clearly in Fig. 5, and receives a pin, a^2 , upon which the two independent levers d e are placed loosely.

The back b of the tree has fitted to it the bearing m , having a socket, m^2 , and slots m^3 , for the reception of the parts 2 and lugs 3 of the lever d . To connect or disconnect the lever-bearing, the parts 3 of the lever must coincide, when the one may be moved laterally away from the other; but when engaged, as in Fig. 1, the parts 2 3 may turn freely in the said bearing.

The normal or unexpanded condition of the connected tree is as shown in Fig. 1. In such condition the lever e is acted upon by the spring e' , (see Figs. 1 and 5,) but its rotation on the

pin a^2 is checked by the stop-pin e^2 , fixed to the front part, a , of the tree.

The foot part f of the tree has connected with its rear end a metal bar, f' , having at top a hook, f^2 .

When the rod c is moved in the direction of the arrow thereon, Fig. 1, far enough to remove the lever e from the stationary pin e^2 , the free end of the said lever, under the action of the spring e' , engages the said hook and holds the foot part snugly to the front beam, a , and at the same time the action of the lever e against f^2 causes the lower rounded end of the rod c to travel up the inclined face 4 of the wedge-block g , and the lever d , as it assumes a position more and more nearly at right angles with relation to the rod c , pushes the back part, b , of the tree away and stretches the boot.

The foot part f of the tree has connected with it, at or near its toe, as herein shown, two expanding devices, h , represented as levers pivoted to turn on the pivot h' at right angles to the bottom of the sole, the free ends h^2 of the said levers being inclined, as shown in Fig. 3, to be acted upon and swung horizontally outward close to the sole from their dotted to their full line position, Fig. 2, by the wedge-block h^4 secured to the back part b of the tree, when the said back part is inserted into the boot or shoe, the foot part having been previously introduced.

The introduction and forcing to place in the boot or shoe of the back part actuates the foot-expanding devices and causes the projections h^5 thereon, situated opposite the joints of the toes with the foot, to spread the foot-covering part of the boot or shoe and stretch or bulge it in a curve at such point. These expanding devices must be retracted or drawn in before the foot f of the tree can be removed. As the back part, b , is withdrawn, this retraction is effected by the spring h^6 .

The levers h are prevented from rising by the cross-piece h^3 .

I claim—

1. The foot f , provided with the hook-piece, and the front and back parts, a b , of the tree, combined with the draw-rod c , its lever e , to engage the hook-piece, and the independent lever d , connected with the socketed bearing

m, joined with the part *b*, substantially as described.

2. In a tree, the back part, *b*, provided with the socketed bearing *m*, slotted at *m*³, combined
5 with the draw-rod *c* and its lever *d*, having the projections 3 to enter the slots *m*³, substantially as described.

3. In a boot-tree, the foot part and movable
10 expanding devices, composed of the levers *h*, connected with the bottom of the foot part at its toe by the pivot *h'* at right angles to the bottom of the foot part, whereby the said expanding devices are adapted to be swung horizontally outward parallel with the bottom

of the foot part and expand the same during the
treeing operation, substantially as described. 15

4. In a boot-tree, the foot and its connected
expanding devices *h*, pivoted at *h'* at the toe
of the foot part, combined with the front and
back parts, *a b*, of the tree, and the wedge *h*⁴,
all substantially as shown and described. 20

In testimony whereof I have signed my name
to this specification in the presence of two
subscribing witnesses.

JOHN W. D. FIFIELD.

Witnesses:

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W. H. HOLT.