

No. 887,397.

PATENTED MAY 12, 1908.

M. JOHN.  
BEARING.

APPLICATION FILED OCT. 3, 1906.

Fig. 2.

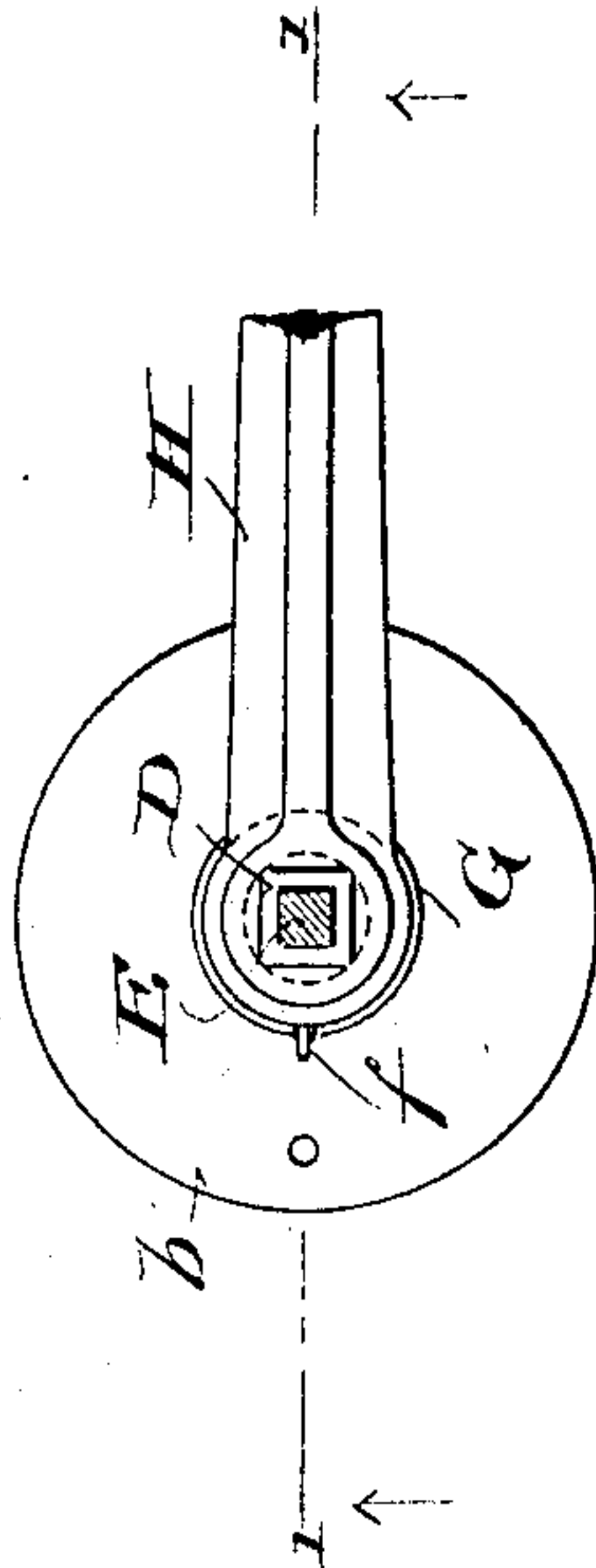
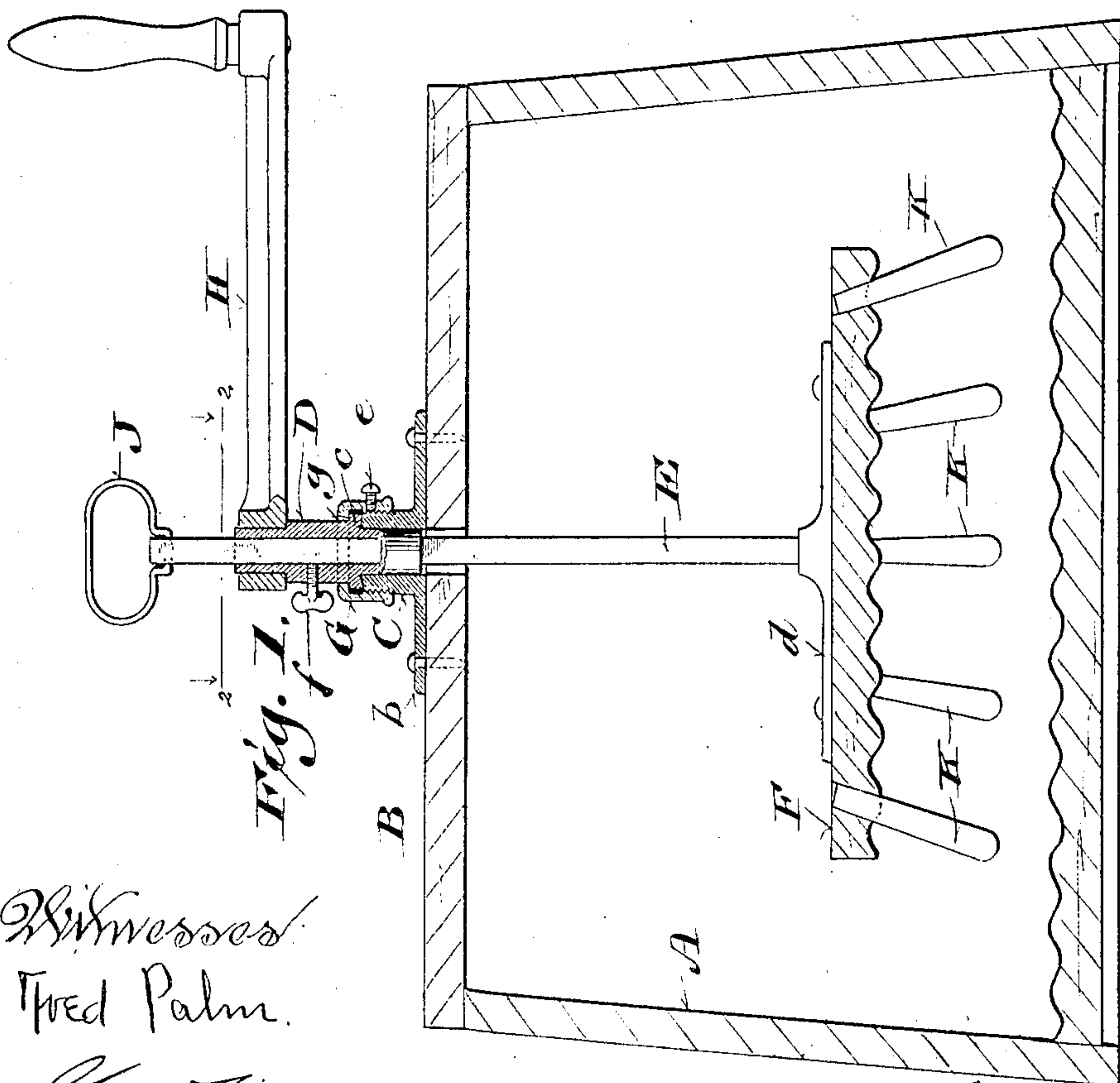
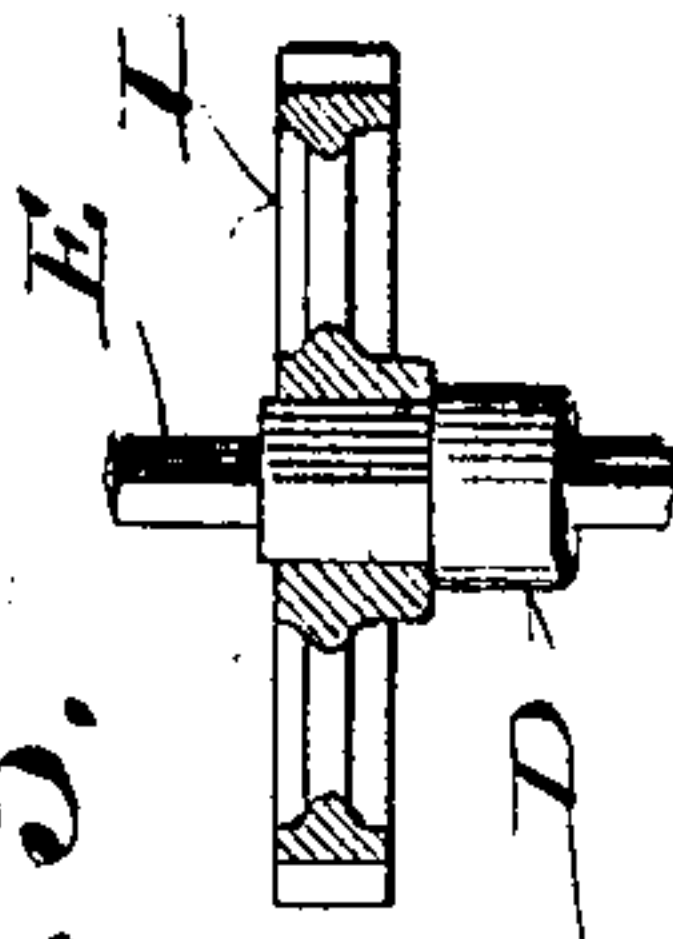


Fig. 3.



Witnesses:  
Fred Palm.

Geo. Felber

Invented  
Matthias John.

By Oliphant & Young,  
Attorneys.



# UNITED STATES PATENT OFFICE.

MATHIAS JOHN, OF MILWAUKEE, WISCONSIN.

## BEARING.

No. 887,397.

Specification of Letters Patent.

Patented May 12, 1908.

Application filed October 3, 1906. Serial No. 337,180.

*To all whom it may concern:*

Be it known that MATHIAS JOHN, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Bearings; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein shown, described and claimed; its object being to provide simple, economical and durable bearings especially designed for the shaft-sleeves of vertically adjustable rub-boards in washing-machines, said bearings being easy running and not liable to get out of order nor to permit the exudation therefrom of lubricating material into the tubs in which said rub-boards have their rotary movement.

Figure 1 of the accompanying drawings represents a central vertical section of a vertically adjustable rotary rub-board washing-machine embodying my improvements, the view being indicated by line 1—1 in Fig. 2, which Fig. 2, represents a plan view of a fragment of the machine partly in horizontal section on the plane indicated by line 2—2 in Fig. 1, and Fig. 3, a partly sectional view of a detail of the machine showing the substitution of a gear-wheel for a crank on the sleeve in which the rub-board shaft is vertically adjustable.

Referring by letter to the drawings, A indicates the tub of a washing-machine and B the cover for same. The cover is provided with a central aperture in register with the bore of a boss C having an annular base flange *b* fastened on said cover, by screws or other suitable means. The upper end of the boss is in beveled ground-joint engagement with the underside of an outer annular flange *c* of a sleeve D, which sleeve engages said boss and has the bore thereof engaged by a shaft E having a bottom flange *d* in connection with the rub-board F of the machine, the shaft and sleeve-bore being preferably angular. Encircling the sleeve, and screw-threaded on the boss C, is a cap G over the sleeve-flange *c*, a set-screw *e* being employed in connection with the cap to fasten the same in place. The rub-board shaft is held by a set-screw *f* in vertically adjustable connection with the sleeve thereon, and the upper end of said sleeve has angular fit in a correspond-

ing aperture of the hub of a crank H or gear-wheel I, either of which serve as a means of applying the power necessary for the rotation of the aforesaid sleeve, shaft and rub-board, said sleeve being otherwise cylindrical. To facilitate the vertical adjustment of the rub-board, the shaft of same is provided with a ring J or other suitable handle at its upper end. To permit of lubricant being readily supplied to the bearing for the sleeve D, the cap G is notched adjacent to said sleeve to provide a port *g*, as shown in Fig. 1.

The bottom of the tub and the opposing face of the rub-board are corrugated, as is customary in the art. Provision for vertical adjustment of the rub-board, to accommodate the same to more or less thickness of material in the tub to be washed is also common in the art. As some materials are preferably washed by agitation rather than by rubbing, and with other material it is preferable to have an agitation and rubbing of the same during a washing operation, the rub-board of the machine herein shown is provided with inclined wedging-sockets for the engagement of detachable tapered agitating pins K of any sufficient number and arrangement.

I claim:

1. The combination of a boss having an attaching base, a partly angular but otherwise cylindrical rotary sleeve engaging the boss and provided with an outer annular flange in ground-joint engagement with the adjacent end of said boss, a cap encircling the sleeve over the flange of same and screw-threaded on the aforesaid boss, a shaft vertically adjustable in said sleeve longitudinally of the same with which it has rotation, means for holding the shaft in adjusted position, and a power-transmission device fitted on the angular portion of the aforesaid sleeve exposed beyond said cap.

2. The combination of a boss having an attaching base, a partly angular but otherwise cylindrical rotary sleeve engaging the boss and provided with an outer annular flange in ground-joint engagement with the adjacent edge of said boss, a cap encircling the sleeve over the flange of same and screw-threaded on the aforesaid boss, a set-screw in connection with the cap to provide for fastening the same in place, a shaft adjustable in said sleeve longitudinally of the same with

which it has rotation, means for holding the shaft in adjusted position, and a power-transmission device fitted on the angular portion of the aforesaid sleeve exposed beyond said cap.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in

the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

MATHIAS JOHN.

Witnesses:

GEO. W. YOUNG,  
GEORGE FELBER.