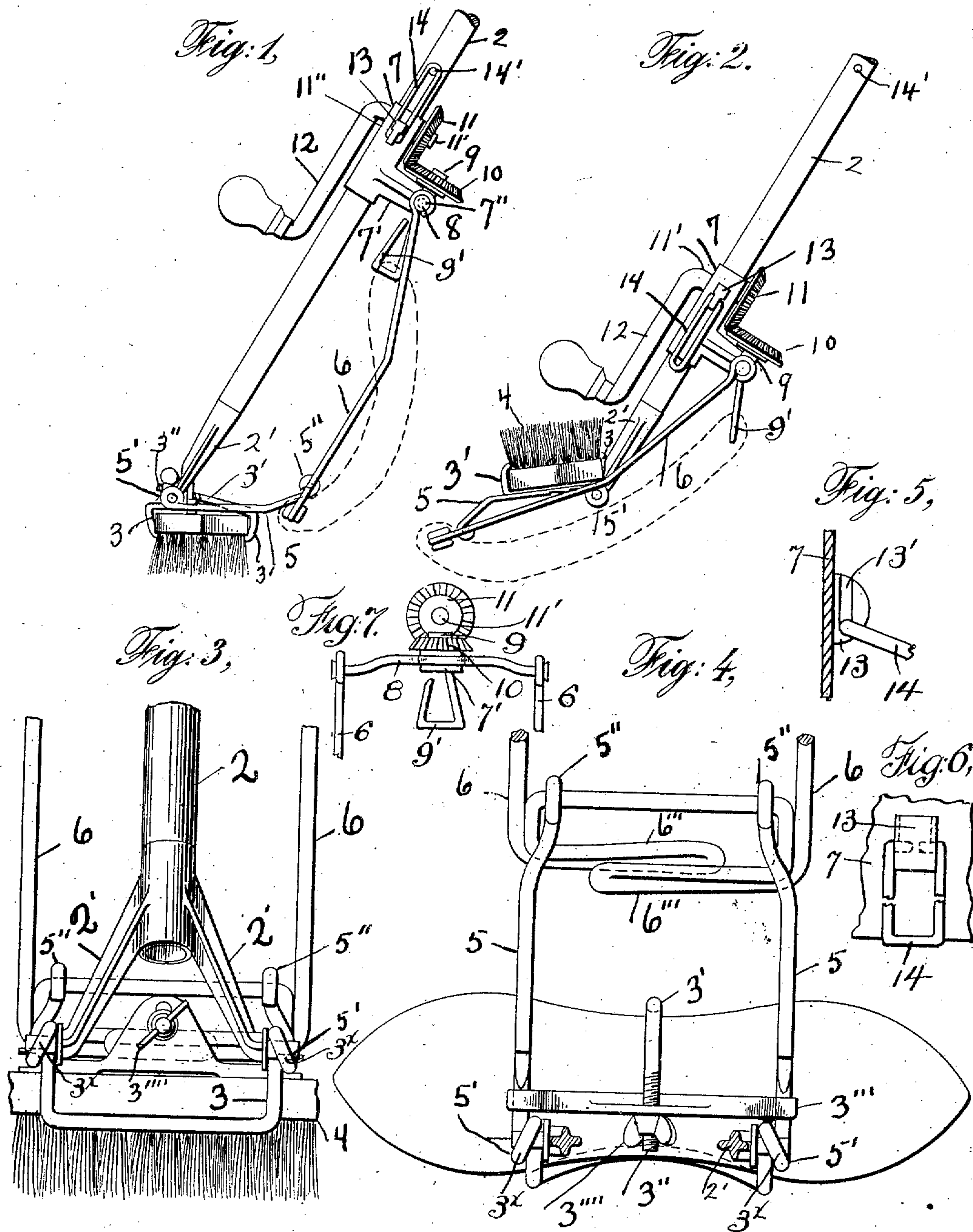


No. 877,119.

PATENTED JAN. 21, 1908.

C. J. PERRY.
COMBINED SCRUBBING BRUSH, MOP, AND WRINGER.
APPLICATION FILED JULY 26, 1906.



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CHARLES J. PERRY, OF PERTH AMBOY, NEW JERSEY.

COMBINED SCRUBBING-BRUSH, MOP, AND WRINGER.

No. 877,119.

Specification of Letters Patent.

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Application filed July 26, 1906. Serial No. 327,854.

To all whom it may concern:

Be it known that I, CHARLES J. PERRY, a citizen of the United States, residing at Perth Amboy, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Combined Scrubbing-Brush, Mop, and Wringer Therefor, of which the following is a specification.

My invention relates to a combined mop and scrubbing brush on one mop staff, to means whereby either may be substituted in place of the other, and to a wringer for the mop; and more particularly to a utensil of the above described character in which the brush clasp means shall be capable of holding any ordinary scrubbing brush, in which the mechanism for changing from the mop to the brush shall be positive in its action and operable without the necessity of touching either the brush or mop with the hands, and combining with such mechanisms means whereby the mop may be wrung without touching the same.

My invention consists in the construction and arrangements of parts and certain details which will be hereinafter described and set forth definitely in the claims appended.

I have illustrated an embodiment of my invention in the accompanying drawings, wherein

Figure 1 is a side elevation, the brush being in position for use. Fig. 2 is a side elevation, the brush being upturned and the mop in position for use. Fig. 3 is a front elevation on a large scale, the mop cloth being removed. Fig. 4 is a top plan view of Fig. 3 showing certain details of the brush attaching means and of the lower mop holder. Fig. 5 is a detail showing a side view of the lug on the upper end of the sleeve and a portion of the link pivoted thereto. Fig. 6 is a front view of the lug and link shown in Fig. 5. Fig. 7 is a rear view of the mop frame yoke and its gears detached from its supporting sleeve and bracket.

Like numerals in all the figures refer to like parts.

Referring more particularly to Fig. 3, which gives a general front elevation of the instrument with the brush in use,—2 designates a mop staff of the ordinary kind having at its end a forked shank 2', the ends of the fork being outwardly turned to form bearings for the mop and brush supporting frame. This shank may be formed in any suitable manner but is preferably of cast metal. Piv-

oted upon the ends of the shank by means of eyes 5' is one member 3 of a brush holding clamp which projects forwardly and downwardly as shown in Figs. 1 and 3 around the edge of an ordinary scrubbing brush 4. Projecting rearwardly from the eyes 5' of the member 3 are oppositely disposed arms 5 5 which at their rear ends are pivoted to mop supporting links 6, 6 which in turn are connected to a sliding sleeve 7 on the mop staff 2. The other member of the brush clamp consists preferably of a hook 3' having a screw threaded shank 3'' which passes through a cross bar 3''' engaging the arms 5, 5. The projecting end of the screw threaded member is provided with a nut 3'''. By turning this nut the hook 3' is drawn against the brush and the brush clamped between the hook 3' and the other clamping member 3. Preferably the stationary portion 3 of the clamp and the arms 5, 5 are constructed of one piece of wire. The clamp portion 3 forward of the eyes is U-shaped, extends forwardly to the edge of the brush and is then bent downwardly and slightly inwardly so that its lower end projects very slightly beneath the wooden back of the brush. The arms of the U shaped portion extend rearward of the eyes 5' 5', extend a suitable distance across the back of the brush and then rearwardly and slightly upwardly and at their rear ends terminate in eyes 5'' 5'' which form the bearings for the pivotal engagement of the links 6, 6. The manner of bending the wire forming the arms 5, 5 is best shown in Fig. 4. As shown therein, the links 6, 6 are in one piece, the wire between them being so bent at its lower end where it connects with the arms 5, 5 as to form a mop attaching means.

In detail, one of said links at its lower end is bent inwardly from a point on the outside of one of the arms 5, 5 inward to a point about three quarters of the space between said arms. The wire is then returned on itself, thus forming a loop 6'', then passes through one of the hooks 5'' across and through the other of the hooks 5''. It is then again bent towards the scrubbing brush holder, then inward beyond the inwardly turned end of the loop 6'' and then it is returned on itself, thus forming a loop 6'' corresponding to the first one and is then bent rearwardly and upwardly to form the other link 6. These inwardly turned loops 6'', as will be noted in the plan view contact with

the arms 5, 5 and act as stops to prevent the brush being turned down too far and to hold it rigidly in position when the brush is pushed.

5 The links 6, 6 are continued rearwardly and slightly upwardly to a transverse yoke 8 which is rigidly attached to the sliding sleeve 7. Preferably the sleeve 7 has a bracket 7' cast or otherwise formed upon it having in
10 its end a bearing 7'' for the shaft 9 of the rotatable holder for the end of the mop cloth. The yoke 8 consists of a cross bar attached to the projecting end of the bracket 7'. Preferably the yoke is formed on the upper face
15 of the bearing 7'' and the shaft 9 extends downwardly through the center of the yoke and through the bearing 7''. It is to be understood that the yoke is rigid with the bracket 7' and that the shaft 9 of the gear 10
20 rotates within it. The ends of the yoke 8 have pivotal engagement with the eyes formed on the upper ends of the links 6.

The upper mop holder consists of a short shaft 9 which projects through the bearing 7''
25 and at its lower end below the bearing is bent into triangular form, an opening being left on one side of the triangle for the insertion of the mop cloth. To the other end of the shaft 9 above the bearing 7'' is a bevel gear
30 10 which intermeshes with a bevel gear 11 fixed at right angles thereto. The shaft 11' of the gear 11 passes through suitable supports 11'' formed with the sleeve 7. At the end of this shaft is formed a crank 12 with a
35 handle thereon. The shaft 9 and its triangularly bent portion, and the shaft 11' and crank 12, may all be made of heavy wire of about the same diameter as that used for the links and arms before described. In order
40 to hold the sleeve up on the mop staff 2, I provide the sleeve with a lug 13 cast thereon in which is pivoted one end of a latch loop 14, the other end of which engages over a stud or pin 14' in the mop staff. Longitudinal
45 grooves 13' are formed in the sides of the lug 13 and are adapted to receive the sides of the wire loop when the same is turned upward. The wire loop will have considerable spring and the grooves hold it in position when so
50 turned upward.

The operation of my invention is as follows: When the brush is to be used, as in Fig. 1, the sleeve 7 is drawn up to its full extent upon the mop staff 2 and fastened by
55 the latch 14. This brings the mop out of the way and as the links 6, 6 draw upon the arms 5, they turn the brush holder and its attached brush so that the face of the brush is downward. When it is desired to use the
60 mop the latch 14 is disengaged and the mop staff lifted, the weight of the mop in this case drawing down the sleeve 7, the links, 6, 6 and turning the arms 5 and the brush holder upon the ends of the prongs 2', throwing the
65 brush with its bristles upward and bringing

the mop immediately beneath the brush back in position where pressure may be exerted upon it. When it is desired to wring the mop all that is necessary is to turn the crank. This through the gears will turn the
70 upper mop holder 9' whereupon the mop cloth will be twisted, wringing out the water therefrom to any required degree. The mop cloth may be easily inserted between the two inwardly extending loops 6''' and is
75 held between those loops and the transverse bar immediately below them. The other end of the mop cloth is to be passed through the opening in the triangular end 9' of the shaft 9. By unloosening the nut 3''' the
80 clamp hook 3' may be released and the brush 4 withdrawn. The brush clamping device is fitted for use with any of the brushes now upon the market. The brush may be in-
85 serted or withdrawn in an instant and the brush may be used separately, if desired, and does not have to be permanently attached to the mop. The ends of the transverse rod 3''' are bifurcated as at 3^x to engage with the
90 wire arms 5.

It is to be particularly noted that the back of the brush is turned downward upon the mop and that the bristles project upward when the brush is not in use, thus there is no danger of flattening out or breaking the
95 bristles when the mop is being used. Another special advantage of my construction lies in the fact that the mop may be thrown into operative and the brush into inoperative
100 position by merely releasing the sleeve latch and allowing the mop by its own weight to take position beneath the brush, the brush being positively turned with its face upward by reason of the connections 6, 6 between the
105 arms 5 and the sleeve 7. The sleeve 7 does not have to be held in its lowered position, the mere weight of the mop being sufficient to hold it there. The way in which the wire arms 6, 6 are bent in order to form the holder for the mop is also of advantage in manu-
110 facturing and also conduces to cheapness of construction without losing any necessary rigidity. The same advantages are incident to making the portion 3 of the brush clamp and the arm 5 in one piece.
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Having described my invention what I claim is:

1. In a combined mop and scrubbing brush, a mop staff, a scrubbing brush holder pivoted to the lower end thereof, arms pro-
120 jecting rearward from said holder, links pivoted at the ends of said arms, a sliding sleeve on said staff said sleeve having a pivotal connection to the upper ends of the links, and means for attaching the mop cloth
125 to the lower ends of the links and means for attaching the mop cloth to the sliding sleeve.
2. In a combined mop and scrubbing brush, a mop staff, a shank for attachment to the lower end thereof, a scrubbing brush
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clamp pivoted to said shank having rearwardly extending arms, links having pivotal connection to the ends of said arms, and inwardly extending adjacent portions adapted to engage one end of a mop cloth, a sliding sleeve on the mop staff provided with a yoke having pivotal engagement with the ends of the links, and means on the sleeve for engaging with the upper end of the mop cloth.

3. In a combined mop and scrubbing brush, a mop staff, a brush-holding means adapted to engage with the back of a scrubbing brush and pivoted to said mop staff, a frame having pivotal engagement at its lower end with the said brush-holding means, said frame extending rearward and having sliding engagement at one end with said mop staff, and means connected to said frame for holding the mop between the upper and lower ends of said frame.

4. In a combined mop and scrubbing brush, a mop staff, a brush-holder pivotally connected thereto, arms projecting rearward from the brush-holder having eyes at the extremities, a sleeve movable along the mop staff, and a mop supporting frame of wire having pivotal connection with the said sleeve, said frame consisting of two lateral parallel links, inwardly-turned overlapping loops at the lower ends of the links, and a cross bar above said loops formed in one piece therewith, and in extension thereof, said cross bar passing through the eyes on the ends of the brush holder arms.

5. In a combined mop and scrubbing brush, a mop staff, a bifurcated shank on the end thereof having projecting trunnions, a brush holder comprising a brush clamp element for engaging one edge of a brush back, having eyes surrounding the trunnions, and a brush clamp element for engaging the other edge of said brush back having a screw threaded shank; a perforated bar attached to the element of the brush clamp through which said shank passes, a nut for drawing the said shank through the bar and a mop frame pivotally connected to the first-named element.

6. In a combined mop and scrubbing brush, a mop staff, a scrubbing brush holder pivotally supported on the end thereof, a mop holding frame connected to the brush holder, a sliding sleeve to which the other end of said frame is connected, and a latch for holding the said sleeve in its upward position, the same consisting of a loop of resilient wire, a stud with which the end of said loop engages and means for holding said loop engaged with said stud.

7. In a combined mop and scrubbing brush, a mop staff, a scrubbing brush holder pivotally supported on the end thereof, a mop holding frame connected to the brush holder, a sliding sleeve to which the other end of said frame is connected, and a latch for holding the said sleeve in its upward position, the same comprising a lug attached to the sleeve and projecting therefrom and having grooves on each side thereof parallel to said sleeve, a loop of resilient wire having inwardly turned ends pivoted in said lug at the end of the grooves, and a stud projecting from the staff with which the other end of the loop engages.

8. In a combined mop and scrubbing brush, a mop staff, a scrubbing brush holder pivoted to the lower end thereof, arms projecting rearward from said holder, links pivoted at one end to the ends of said arms, a sliding sleeve on said staff, having pivotal engagement with the upper ends of the links, means for attaching the mop cloth to the lower ends of the links, a rotatable shaft supported on the sleeve between the ends of the links, a mop cloth engaging hook on said shaft, a bevel gear on said shaft, a bevel gear meshing therewith mounted on the sleeve, and a handle on said last named bevel gear shaft provided with a crank.

9. In a combined mop and scrubbing brush, a mop staff, a scrubbing brush holder, a sliding sleeve on said staff, a bracket on said sleeve having a vertical passage there-through forming a bearing, a transverse yoke on said bracket having projecting ends, a mop twisting shaft passing through the said vertical bearing in the bracket, a mop-engaging hook on the lower end of said shaft open on one side, a bevel gear fast on the other end of said shaft, a bevel gear mounted on said sleeve and meshing with the bevel gear on the mop twisting shaft, a crank on the shaft of the last named bevel gear, and links pivoted at their rear ends to the extended ends of the bracket yoke, and at their forward ends to the rearwardly projecting arms of the scrubbing brush holder.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this 14th day of July 1906.

CHARLES J. PERRY.

Witnesses:

FRANCIS B. WRIGHT,
JOSEPHINE A. VERNON.