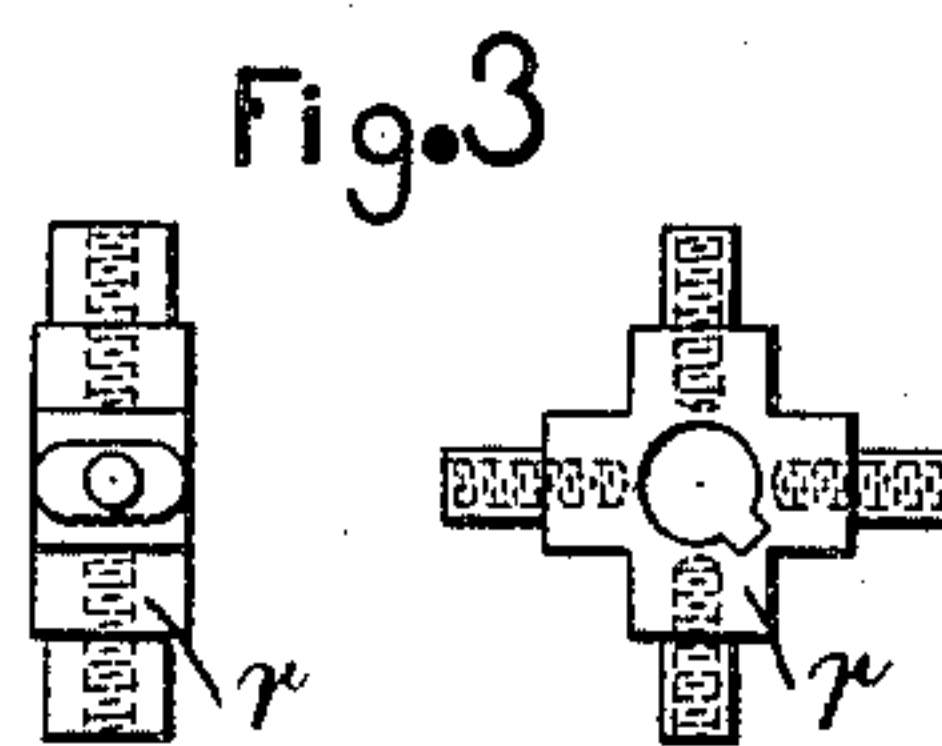
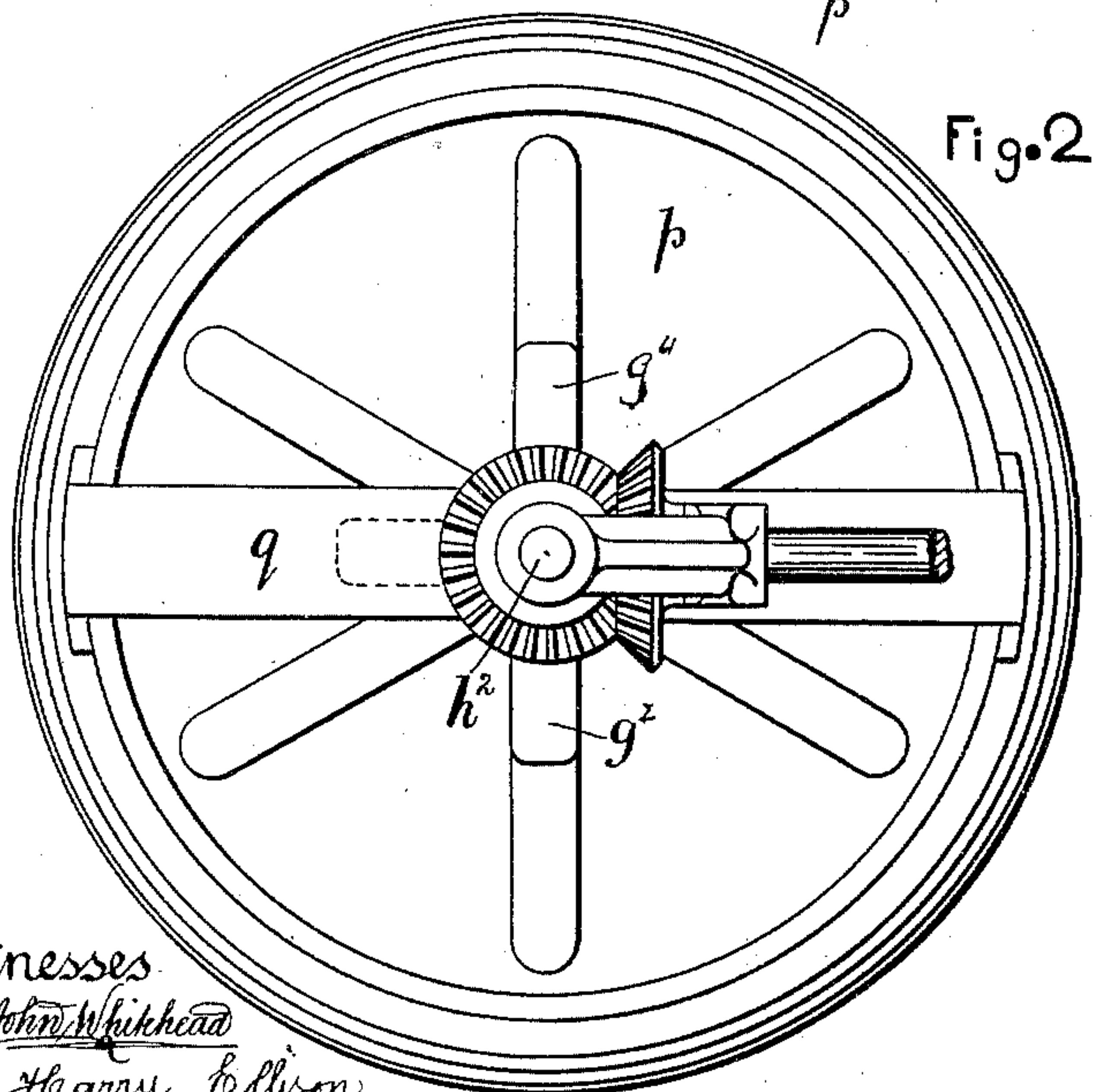
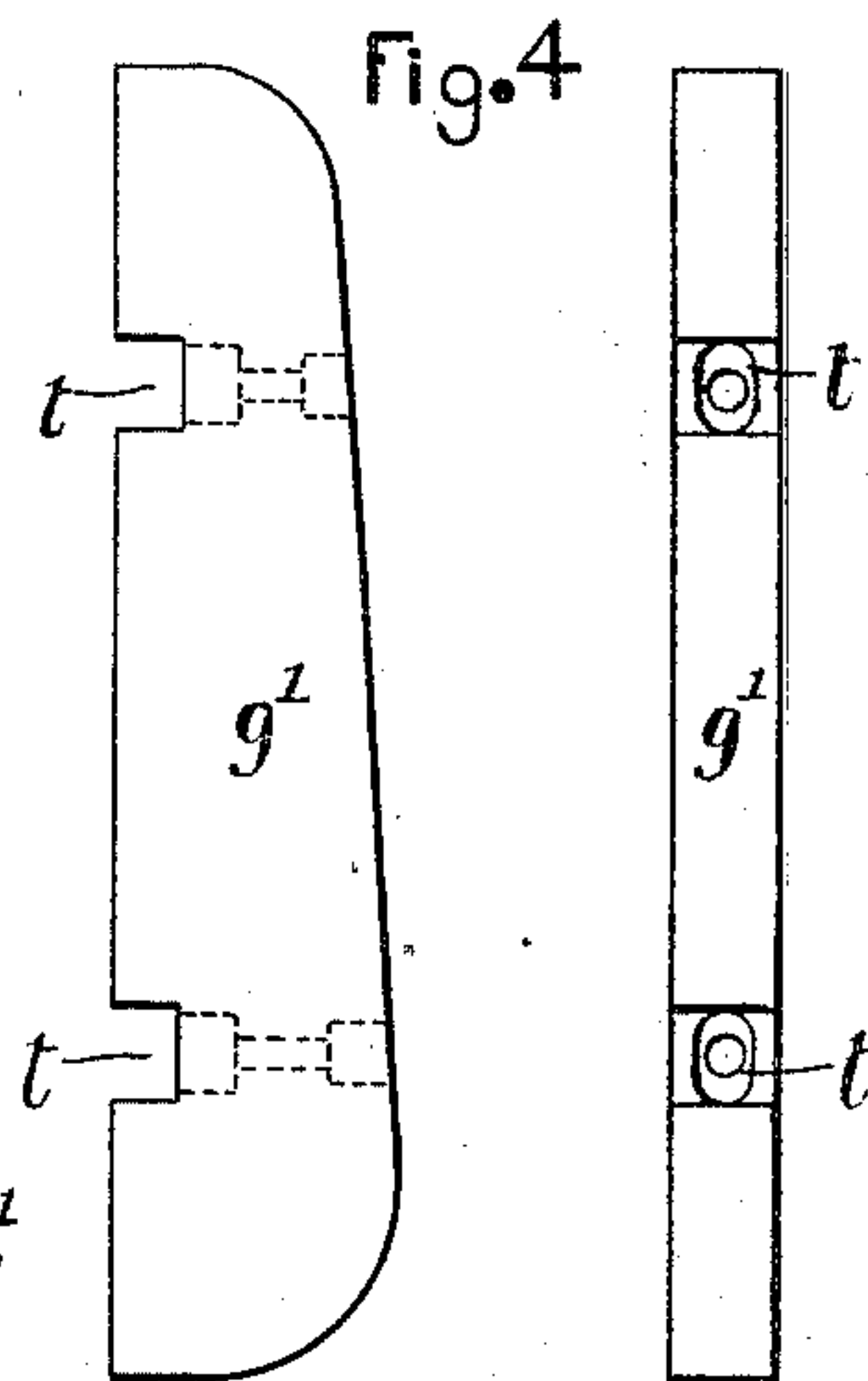
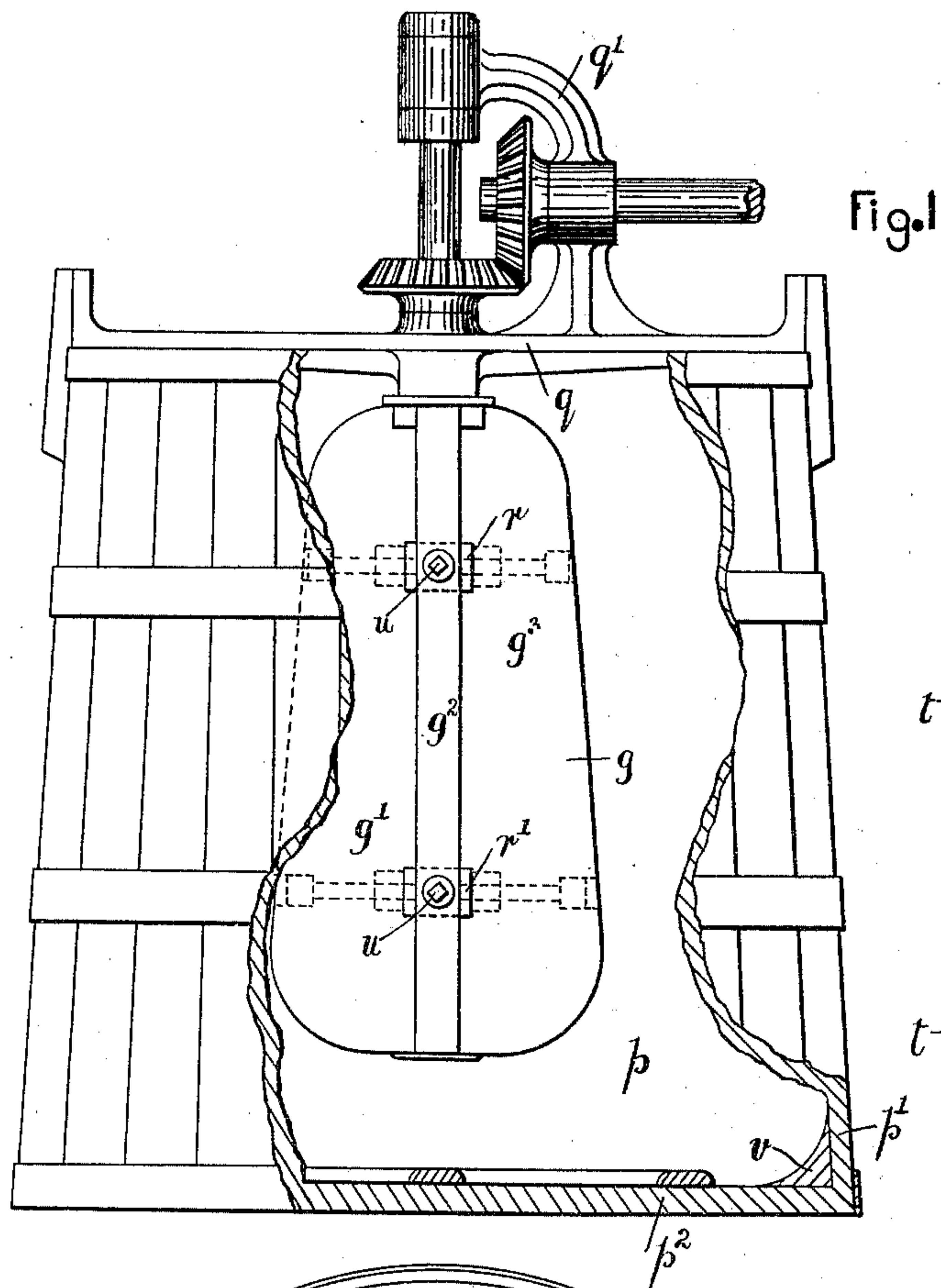


(No Model.)

S. BARRETT.
WASHING MACHINE.

No. 468,477.

Patented Feb. 9, 1892.



Witnesses
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Harry Ellison

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UNITED STATES PATENT OFFICE.

SAMUEL BARRETT, OF KEIGHLEY, ENGLAND.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 468,477, dated February 9, 1892.

Application filed April 21, 1891. Serial No. 389,809. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BARRETT, a subject of the Queen of Great Britain, residing at Keighley, in the county of York, England, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification.

My invention relates to improvements in washing-machines wherein a vertical shaft having lateral wings is made to rotate in a wash-tub, its rotary motion, after continuing for a certain number of revolutions in one direction, being reversed to travel for a like number of revolutions in the opposite direction, the said rotary motion being derived from a revolving shaft driven by any prime motor; and the object of my improvement is to enhance the efficiency and durability of the rotary agitator that operates within the wash-tub by a peculiarity in its construction and the method in which it is mounted. This object I attain by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a washing-machine made in accordance with my invention, one portion of the wash-tub being shown in section in order that the agitator which operates within it might be seen. Fig. 2 is a top view of parts shown by Fig. 1. Figs. 3 and 4 are drawings in detail of parts herein-after described.

Like letters of reference indicate like parts throughout the several views.

The agitator g is mounted, in accordance with this invention, to rotate within the wash-tub p without being in contact with the bottom of the same, so that it is impossible for it to damage any of the articles being washed or agitated by cutting them by contact with any part of the tub p . The agitator g is sup-

ported by the cross-piece q , and is further maintained by the arm q' , and in the construction of this agitator g I employ hubs r r' , (see Fig. 3,) which I attach rigidly, as by keying same, to the shaft h^2 and wings g' g^2 g^3 g^4 , each wing being formed as shown by the detail drawing Fig. 4. The hubs r are tapped (shown in broken lines, Fig. 3) for screws u , that pass through the wings g' g^2 g^3 g^4 , and the wings g' g^2 g^3 g^4 are notched and socketed at t (see Fig. 4) to span these hubs r r' , so that when said wings are placed in position and attached to the hubs r by the screws u the whole forms a firm and rigid agitator, and the wings g' g^2 g^3 g^4 are detachable, so that at any time any one of them that may be worn or otherwise damaged may be displaced by a perfect one. The angle formed by the meeting of the side p' of the tub p with its bottom part p^2 I fill with a hollowed piece v , (see Fig. 1,) which prevents the accumulation of dirt, and so adds to the efficiency of the machine.

I claim—

In the construction of an agitator for a washing-machine, the combination of detachable wings g' , g^2 , g^3 , and g^4 , notched and recessed as described, hubs r , having wings or projecting pieces to fit into notches and openings made in the said wings g' , g^2 , g^3 , and g^4 , the said hubs being also formed to be keyed to a shaft, as the axial shaft h^2 , screws u for attaching the wings g' , g^2 , g^3 , and g^4 to the hubs r , and a shaft h^2 , upon which the hubs r are mounted, substantially as specified, and for the purposes set forth.

SAMUEL BARRETT.

Witnesses:

SAMUEL HEY,

JOHN WHITEHEAD.