

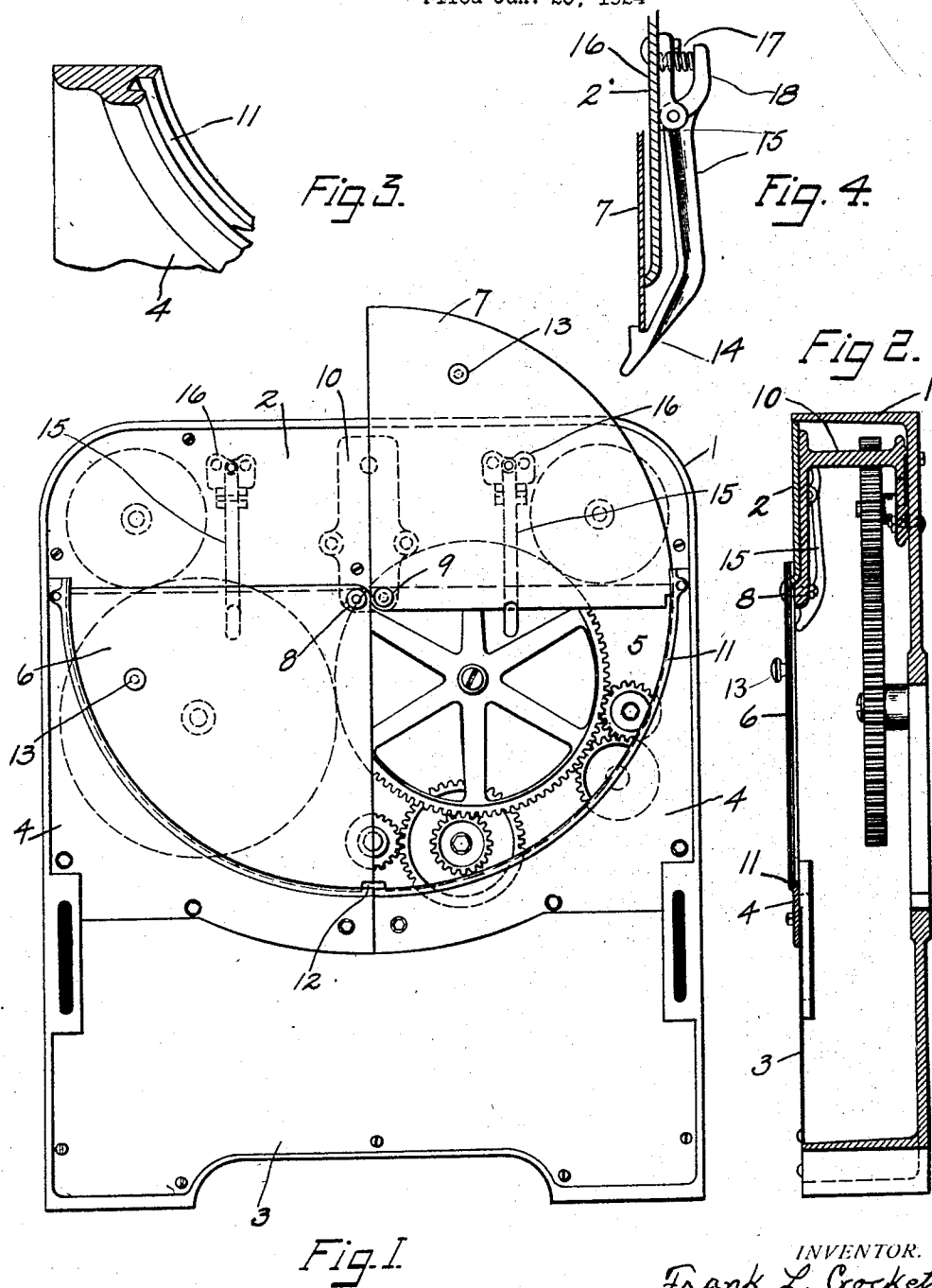
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GEAR HOUSING FOR SPINNING AND TWISTING MACHINES

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GEAR HOUSING FOR SPINNING AND TWISTING MACHINES.

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To all whom it may concern:

Be it known that I, FRANK L. CROCKETT, a citizen of the United States of America, residing at East Douglas, in the county of Worcester and Commonwealth of Massachusetts, have invented an Improvement in Gear Housings for Spinning and Twisting Machines, of which the following is a description sufficiently full, clear, and exact to enable those skilled in the art to which it appertains or with which it is most nearly connected to make and use the same.

My invention has reference to spinning frames and like machines wherein the driving gearing is enclosed in a boxed end, access to the gearing being obtained through suitable openings, usually covered by panels either bodily removable from the machine or by hinged doors swinging in a plane at right angles to the frame. The removable panels are objectionable on account of the liability to damage when taken from the frame and the hinged doors when opened obstruct the working alleys at the end of the machine.

The object of my invention is to provide a construction that will be free from the objectionable features mentioned above.

The novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

A practical embodiment of my invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Referring to the drawings: Figure 1 is an end elevation of a spinning machine showing one of the end doors closed and the other open. Figure 2 is a vertical section through the center of Figure 1. Figure 3 is a perspective view of a portion of the channel or groove in which the end doors freely slide. Figure 4 is a view of the retaining latch for supporting a door in its open position.

In the drawings, the open side of the box-end 1 is closed by an upper panel 2 and a lower panel 3, in the space between which a third panel 4 is located. All of these panels are securely mounted to the box-end by screws so that the panels may be removed when desired. The top of panel 4 has a semi-circular shaped opening 5 so located

that access may be had to the change gearing within the box-end. The opening 5 is closed by two quadrant shaped doors 6 and 7 each serving as a cover for one half of the semi-circular opening 5 and are pivotally supported at their centres on studs or pivots 8 and 9 respectively. These studs are in a stationary relation with the box-end of the machine, preferably I mount them adjacent to the vertical centre line of the box-end on a yoke 10 bolted to the back of the box-end. The axis of studs are perpendicular to the plane of the end of the machine and in consequence the doors swing on their respective studs in a plane parallel to the plane of the end of the machine. The doors are so mounted on their respective studs that the inner sides of the doors will project slightly beyond the outer side of the panel 2 thus allowing sufficient clearance for the doors to swing by the panel when the former are in their open positions.

The doors are maintained in their closed position by suitable means co-operating with their peripheries, preferably I use a segmental groove 11 formed in the upper part of panel 4 in which the peripheries of the doors may freely slide. When one of the doors is opened the other might, through force of gravity, swing out of its normal closed position so as to overlap a portion of the opening normally covered by the other, to prevent this means are provided, preferably by an abutting pin or lug 12 fixed in the center of the groove 11 against which the lower corner of each door abuts.

When the operative desires to make a change in the gearing contained within the box-end he grasps the knob 13 fastened to the outside of the door and swings the door on its pivot until the edge of the door is caught by the hooked end 14 of the latch 15 which is pivoted to the bracket 16 in a fixed relation with the upper panel 2. A compression spring 17 abutting between the inside of panel 2 and the arm 18 of the latch 15 maintains the latter in contact with the movable door at all times so that when the door is raised to its full opening it is automatically caught and held until the operative releases the latch by pressure on its lower end.

While the construction herein described, and illustrated in the accompanying draw-

ings is the preferred form of my invention, it is obvious that various changes in the proportions, size and minor details of the construction may be made without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim, and desire to secure by Letters Patent, is:—

1. In a spinning or twisting machine having a box-end with change gearing therein, three stationary panels covering one side of said gearing, an opening in the middle panel giving access to the gearing, means for covering said opening projecting slightly beyond the face of the upper panel and pivotally movable in a plane parallel to the faces of the panels.

2. In a spinning or twisting machine having a box-end with change gearing therein, a plurality of stationary panels covering one side of said gearing, an opening in one of said panels giving access to said gearing, means for covering said opening pivotally movable in a plane parallel to the faces of the panels and means to maintain the covering means in an open position.

3. In a spinning or twisting machine having a box-end with change gearing therein, three stationary panels covering one side of the said gearing, a semi-circular shaped opening in the top of the middle panel giving access to the gearing, two quadrant shaped doors covering said opening, a pivot for supporting each door, a circular channel in which the doors slide and a lug or pin against which the doors abut in their closed position.

4. In a spinning or twisting machine having a box-end with change gearing therein, three stationary panels covering one side of said gearing, a semi-circular shaped opening formed in the upper part of the middle panel giving access to the gearing, two quadrant shaped doors covering said opening, pivots about which the doors revolve in a plane parallel to the faces of the panels, and a latch for each door to maintain the same in its open position.

In testimony whereof, I have signed this specification.

FRANK L. CROCKETT.