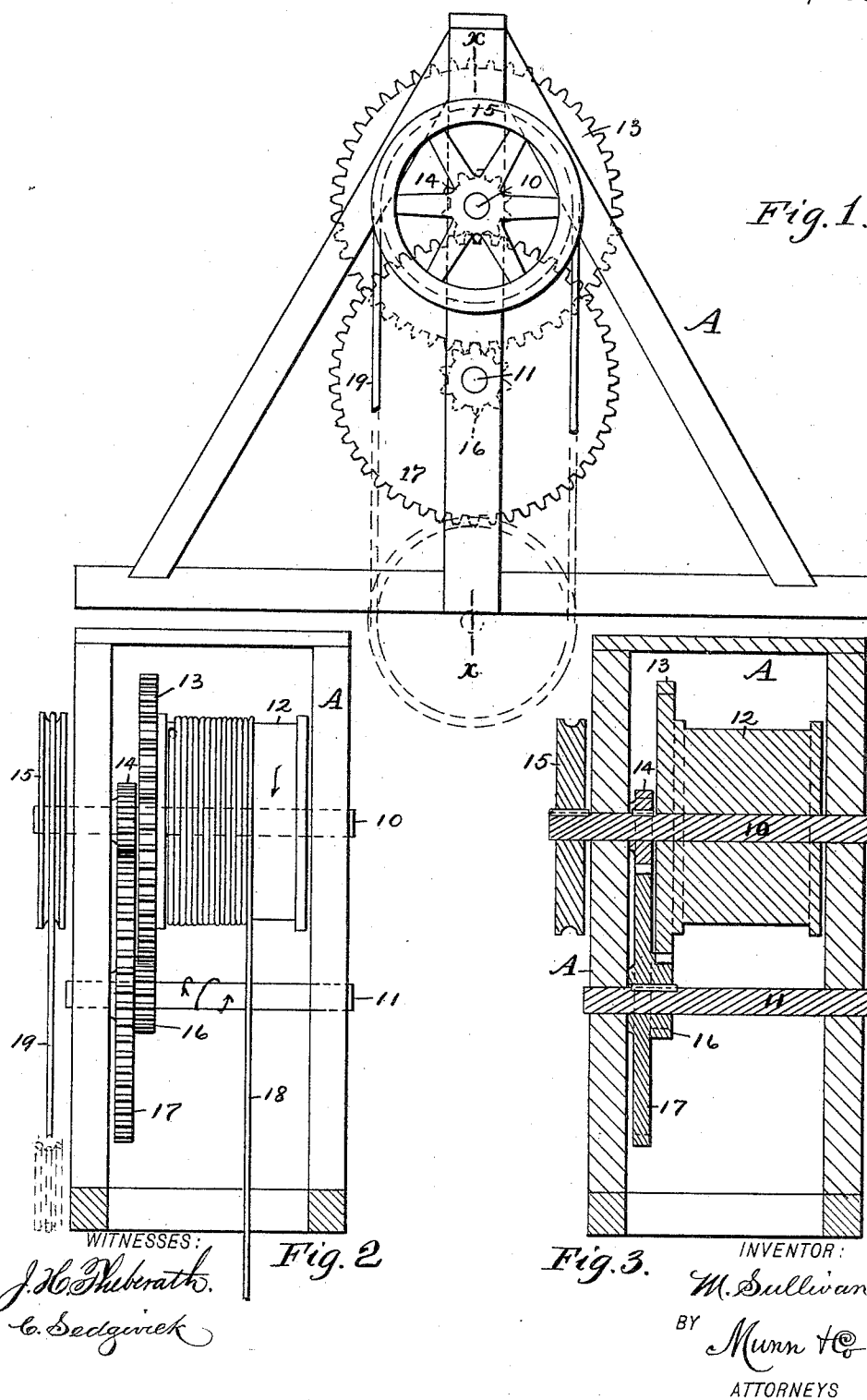


(No Model.)

M. SULLIVAN.
DUMB WAITER.

No. 464,835.

Patented Dec. 8, 1891.



UNITED STATES PATENT OFFICE.

MICHAEL SULLIVAN, OF HIGHWOOD, CONNECTICUT.

DUMB-WAITER.

SPECIFICATION forming part of Letters Patent No. 464,835, dated December 8, 1891.

Application filed January 20, 1891, Serial No. 373,428. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL SULLIVAN, of Highwood, in the county of New Haven and State of Connecticut, have invented a new and Improved Dumb-Waiter, of which the following is a full, clear, and exact description.

My invention relates to an improved lift for dumb-waiters, sashes, and other articles of like character, and has for its object to provide a simple, durable, and economic mechanism.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the device. Fig. 2 is an edge view thereof, and Fig. 3 is a central vertical section taken practically on the line *xx* of Fig. 1.

When the gearing is employed in connection with a lift for a dumb-waiter or other object, a suitable frame A is erected, in which frame two parallel shafts 10 and 11 are journaled, one below the other. Upon the upper shaft 10 a drum 12 is loosely mounted, which drum has secured to one end thereof a spur-wheel 13, of any desired diameter. In front of the spur-wheel 13 a pinion 14 is keyed or otherwise securely fastened upon the shaft 10, and upon the outer extremity of said shaft a grooved pulley 15 is preferably secured. The lower shaft has fastened thereto in any approved manner a pinion 16 and a spur-wheel

17, the pinion 16 being of equal diameter with the pinion of the upper shaft and the spur-wheel 17 being of the same diameter as the spur-wheel attached to the drum. The lower pinion 16 meshes with the spur-wheel 13 of the drum and the lower spur-wheel 17 meshes with the pinion 14 of the upper shaft. The lift-rope 18 is secured to the drum and to the dumb-waiter to be manipulated, and an endless rope or chain 19 is passed over the pulley 15 and over a similar pulley located at any desired point below the mechanism, as shown in dotted lines in Fig. 1. The drum may be revolved to raise or to lower the dumb-waiter or other object attached to the rope 18 by manipulating the rope 19 and thereby turning the upper shaft 10. The rack in this form of the apparatus forms the connection between the article to be lifted and the loose gear, and in the first-described apparatus the drum and cable form such connection.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A lift for dumb-waiters consisting in the frame, the upper transverse shaft 10, having an operating-pulley 15, a small fast gear 14, and a loose drum 12, provided with a large gear 13, loose upon the shaft, a cable extending from the drum and adapted to suspend the dumb-waiter, and a lower shaft 11, provided with a large and a small fixed gear meshing at all times respectively with the fixed and loose gears 14 13, substantially as set forth.

MICHAEL SULLIVAN.

Witnesses:

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