(No Model.)

E. LANGE.

CLAMP FOR HAND POWER DUMB WAITERS AND OTHER PURPOSES.

No. 286,024. Patented Oct. 2, 1883.

Fig. 1

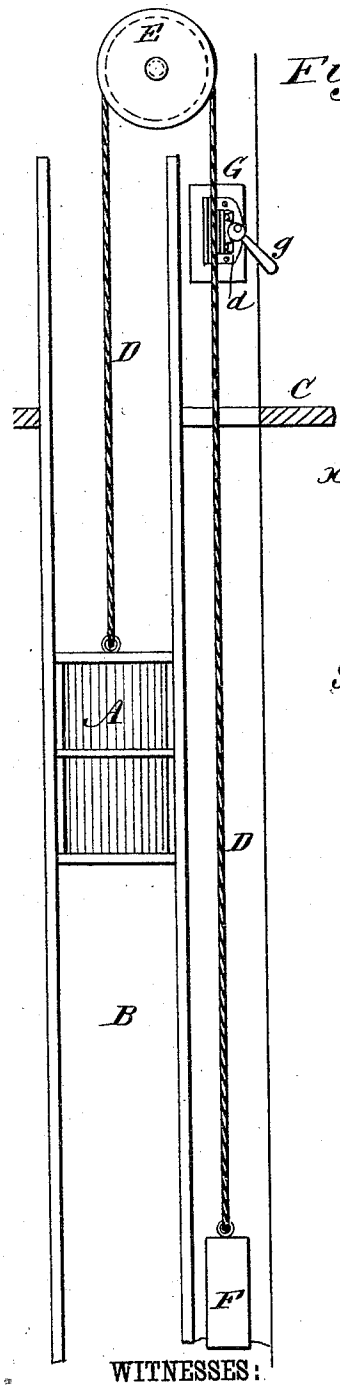


Fig. 2

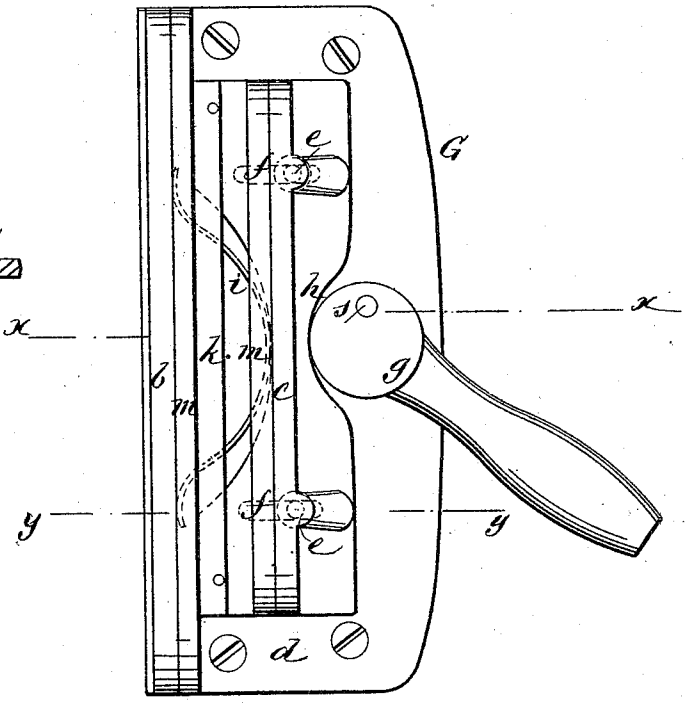


Fig. 3

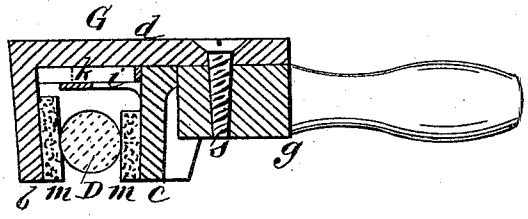
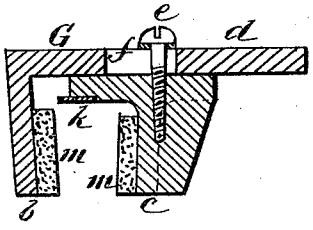


Fig. 4



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CLAMP FOR HAND-POWER DUMB-WAITERS AND OTHER PURPOSES.

SPECIFICATION forming part of Letters Patent No. 286,024, dated October 2, 1883.

Application filed June 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWARD LANGE, of Poughkeepsie, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Clamps for Hand-Power Dumb-Waiters and other Purposes, of which the following is a full, clear, and exact description.

This invention is more particularly designed to be used as a clamp or holdfast for hand-power dumb-waiter elevators or devices worked by a rope having an attached counter-balance. In dumb-waiters of this description it is customary to use a clamp capable of adjustment for holding onto the rope or tackle by which the dumb-waiter is raised and lowered, when the waiter is loaded to an extent that its weight does not overcome the counter-balance attached to the rope. An ordinary clamp for this purpose heretofore in use consists of one stationary jaw and a cam-lever between which the rope is held. When a clamp of this description is used, the frequent application of the cam to the same part of the rope reduces the size of the rope, and often occasions considerable damage by the breaking of the rope and falling of the waiter.

My invention consists in a clamp of novel construction, whereby the waiter may be held securely at any of the floors of a building, or at any point in its travel, without injury to the rope, as hereinafter fully described, and pointed out in the claims.

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

Figure 1 represents a sectional elevation of a dumb-waiter shaft of a building in part with a hand-power dumb-waiter and my improved clamp applied. Fig. 2 is a face view of the clamp upon a larger scale; and Figs. 3 and 4, transverse sections thereof on the line *x x* and *y y*, respectively.

A in the drawings indicates a dumb-waiter, which may be of any suitable construction, and which is here shown as arranged for movement up and down a shaft, B, in a building, one of the floors of which is indicated by C.

D is the rope by which the waiter is manipulated, and which is represented as passing round a pulley, E, above, and as having the waiter A attached to its one end and a counter-balance, F, at the opposite end.

G is the clamp or holdfast for grip on the rope when it is required to secure the dumb-waiter in any given position. This clamp consists, substantially, of a combination of a cam-lever and parallel cushioned jaws, together with a spring for releasing the one jaw, which is movable when the cam-lever is relieved from pressure on it. The jaws *b c* of this clamp are of a straight elongated construction, and are arranged in line of the rope D, which passes in between them. The one, *b*, of these jaws is stationary and projects from a bed-piece, *d*, by which the clamp is secured in place within easy reach of the hand of the operator. The other jaw, *c*, is adjustable toward and from the stationary jaw *b*, and is fitted to slide upon or over the face of the bed-piece *d*, to which it is held with freedom to slide without restraint at its ends by means of pins or screws *e e*, provided with suitable washers, and fitted to pass through slots *f f* in the bed-piece *d*, near its top and bottom. The screws and slots also serve to limit the releasing-stroke of the movable jaw. The jaw *c* is closed against or on the rope by a cam-lever, *g*, pivoted to the bed-piece at *s* in rear of said jaw, and within a hollow, *h*, in the back edge of the bottom of the jaw, in which the cam may be arranged to work.

A spring, *i*, which may be of bowed or leaf form, is arranged between the jaws *b c*, and so that the same exerts a backward or releasing pressure on the movable jaw *c* to free it from hold on the rope when the cam-lever is turned to release it from gripping the rope. This spring bears upon the center portion of the movable jaw *c* within a cavity in the forward margin of its bottom, or otherwise, and may be held in place by a strap, *k*, secured to the front of said bottom or base. The movable jaw, not being restrained at its ends, is free to adjust itself to any inequalities of the rope, and to exert a gradual bite or hold upon it; but as the clamp is a friction one the holding-surfaces of its jaws *b c* are fitted or provided with cushions *m m*, of leather, rubber, or other suitable soft and flexible material which will hold gradually but firmly on the rope without in-

jury to it. This cushioning of the clamp is an important feature of it. The other parts of the clamp may be made of metal.

To prevent the rope D from being jerked or pressed out in a facial direction from between the jaws *b c*, said jaws may be set slightly converging facially, as shown in Figs. 3 and 4.

By means of this clamp the necessary grip or power is obtained without fracturing the rope, and the spring instantly releases the rope when the pressure is removed.

I do not abandon or dedicate to the public any patentable feature set forth herein and not hereinafter claimed, but reserve the right to claim the same either in a reissue of any patent that may be granted upon this application or in other applications for Letters Patent that I may make.

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

1. In a hand-power dumb-waiter, the combination, with the waiter A, the rope D, by which it is manipulated, and the counter-balance F, of the clamp G, having one stationary and one movable parallel cushioned jaw, a cam-lever for forcing inward the movable jaw and a spring for returning it to its normal position, essentially as shown and described.

2. The combination of the bed-piece *d*, having slots *f f*, the stationary jaw *b*, with its cushion *m*, the movable jaw *c*, with its cushion *m*, the screws or pins *e e*, the cam-lever *g*, and the spring *i*, all constructed and arranged for operation in relation with each other substantially as specified.

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Witnesses:
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