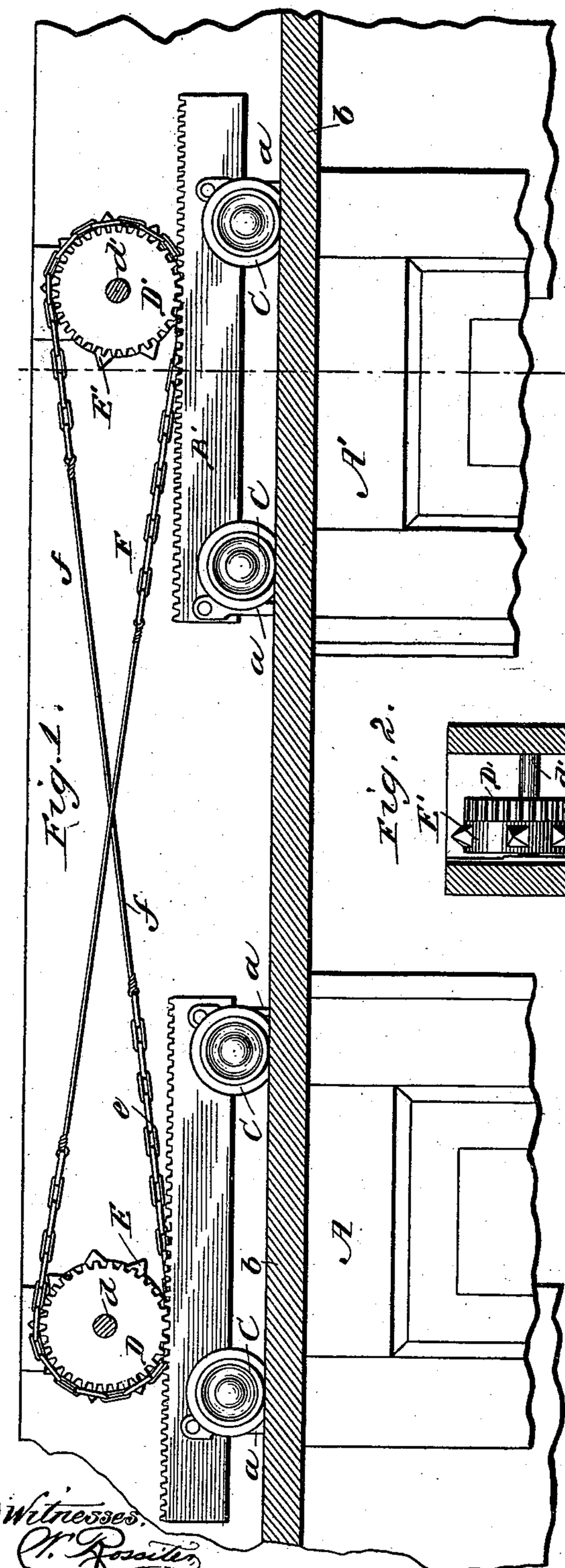
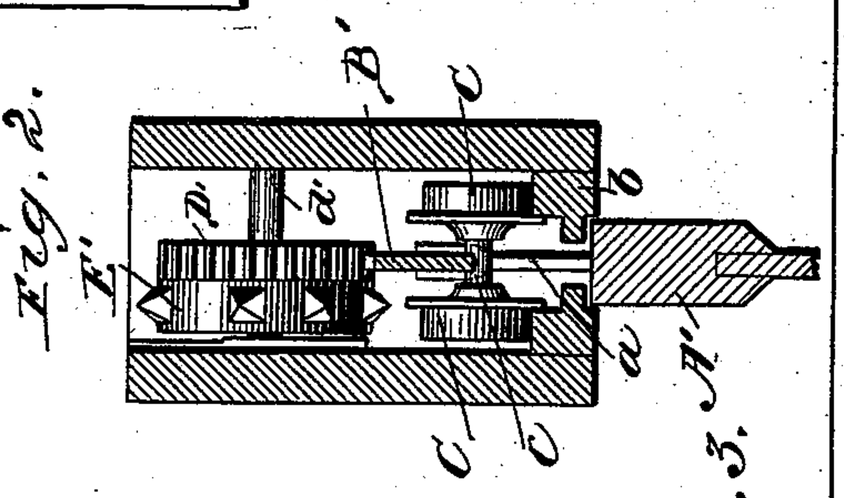
(No Model.)

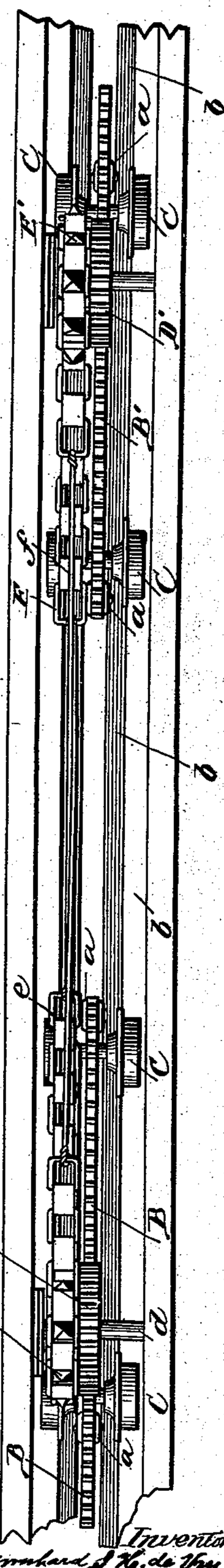
B. I. H. DE VRY & J. SCHREIBER.

DEVICE FOR SIMULTANEOUSLY MOVING DOUBLE DOORS.

No. 376,946. Patented Jan. 24, 1888.







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UNITED STATES PATENT OFFICE.

BERNHARD I. H. DE VRY AND JOHN SCHREIBER, OF CHICAGO, ILLINOIS.

DEVICE FOR SIMULTANEOUSLY MOVING DOUBLE DOORS.

SPECIFICATION forming part of Letters Patent No. 376,946, dated January 24, 1888.

Application filed January 11, 1887. Serial No. 224,073. (No model.)

To all whom it may concern:

Be it known that we, BERNHARD I. H. DE VRY and JOHN SCHREIBER, subjects of the Emperor of Germany, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Devices for Simultaneous Movement of Double Doors, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has for its object to provide a device for double or two-wing sliding doors by which the movement imparted to one door will be transmitted to the other door, to move simultaneously therewith either for closing or opening; and it principally consists in the attachment of sprocket-wheels—one for each door-wing—and of a cross link-belt stretched over the two wheels for transmitting the movement from one to the other; also, in suitable connections of such sprocket-wheels with either sliding door-wings, and in the novel combinations of parts for bringing about the desired result, all as will be more fully hereinafter described, and specifically claimed.

In the accompanying drawings, Figure 1 represents an elevation of the upper portion of sliding doors with our device attached; Fig. 2, a vertical cross-section on line 2 2 in Fig. 1, and Fig. 3 a plan of the same.

Corresponding letters in the several figures of the drawings designate like parts.

A and A′ denote two sliding doors suspended each to a rack-bar, B B′, by two hangers, *a*, those rack-bars B B′ resting upon shafts *c* of flanged wheels C, that ride upon rails *b*. Above each rack-bar B B′ is pivotally secured in the door-frame a shaft, *d d′*, each having mounted a gear-wheel, D D′, the teeth of which mesh with the teeth of the rack-bar B B′, and a sprocket-wheel, E E′, and over both sprocket-wheels, E E′, is stretched an endless belt, F, composed partly of chain-links *e*, meshing with the teeth of such sprocket-wheels, and of rods *f*, connecting these chains. This endless belt is placed crosswise, for the purpose that the movement of one wheel in one direction will rotate the other wheel in the opposite direction. The length of each chain-link portion of the endless belt is proportional with the motion of sprocket-wheels E for the extreme distance of reciprocation of the door, while the connecting-rods *f*, being always on a straight-line pull, will more readily pass each other with crossing.

The sliding of one door, A, in either direction will impart a rotating motion to gear-wheel D and sprocket-wheel E, which movement by endless belt F will be transmitted to sprocket-wheel E′ and gear-wheel D′ in a reverse direction, which latter will move the rack bar B′, with the door A′ suspended thereto, and vice versa, so that both doors will be moved simultaneously either toward or away from each other.

What we claim is—

1. In a device for moving sliding doors, the combination, with the rack-bars secured to a moving part of the doors, of gear-wheels meshing into said rack-bars, and sprocket-wheels mounted on the same shaft with the gear-wheels and connected to turn or rotate together, and a cross belt or chain engaging the sprocket-wheels, substantially as and for the purpose set forth.

2. In a device for moving sliding doors, the combination, with the traveler-frames and rack-bars secured thereto, of the gear-wheels and sprocket-wheels mounted and connected together on the same shaft, and a cross-belt composed of the rods *f* and the links *e*, the latter engaging the said sprocket-wheels, as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

BERNHARD I. H. DE VRY.
JOHN SCHREIBER.

Witnesses:
WM. H. LOTZ,
OTTO LUBKERT.