No. 840,630. PATENTED JAN. 8, 1907.

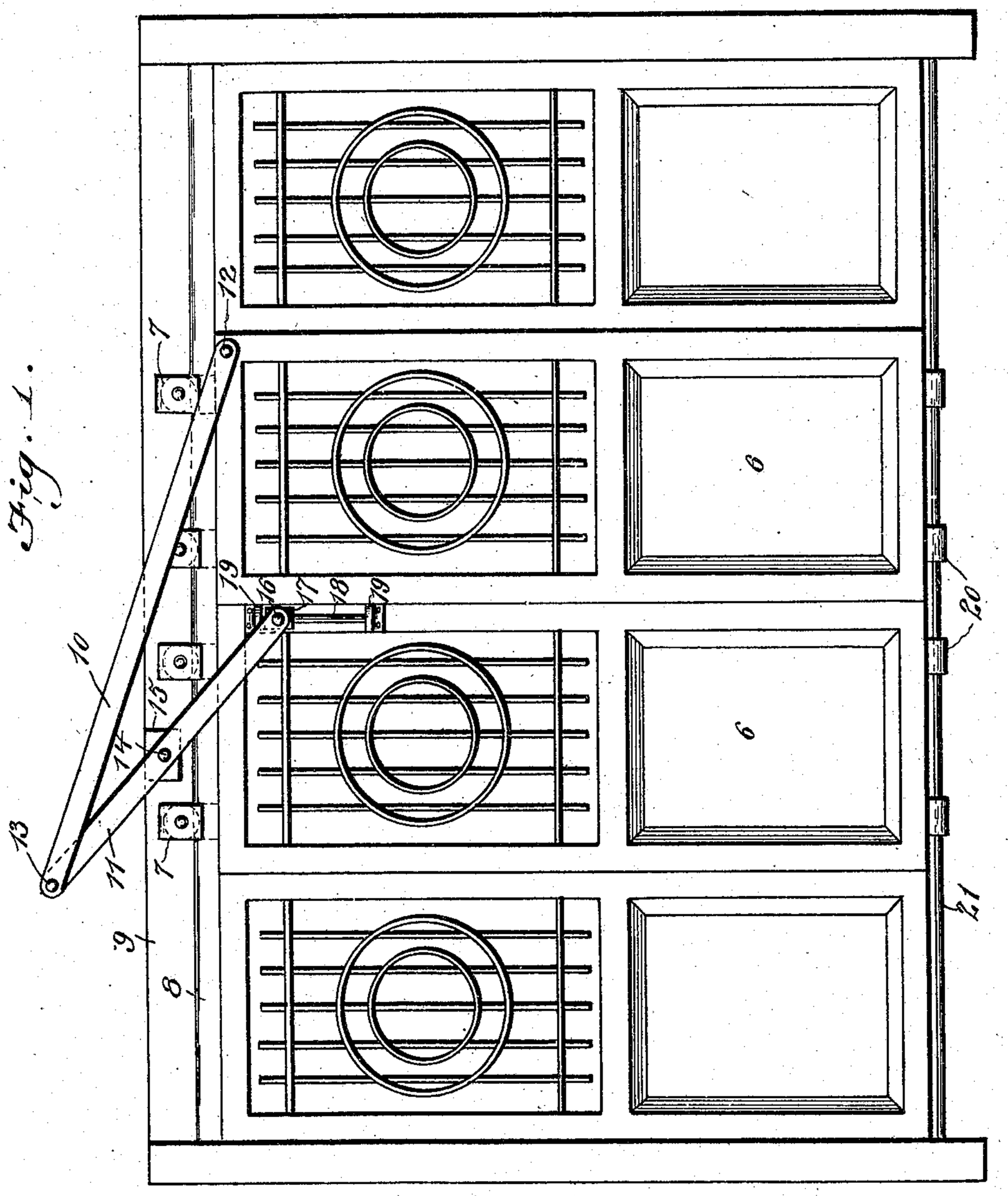
A. & W. KIRCHNER.

DOOR OPENER.

APPLICATION FILED SEPT. 10, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
M. A. Schmidt
Geo. E. Dew

August Kirchner.
William Kirchner.
Inventors

By Miller & Stevens & Co.
Attorneys

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2 SHEETS—SHEET 2.

Fig. 3.

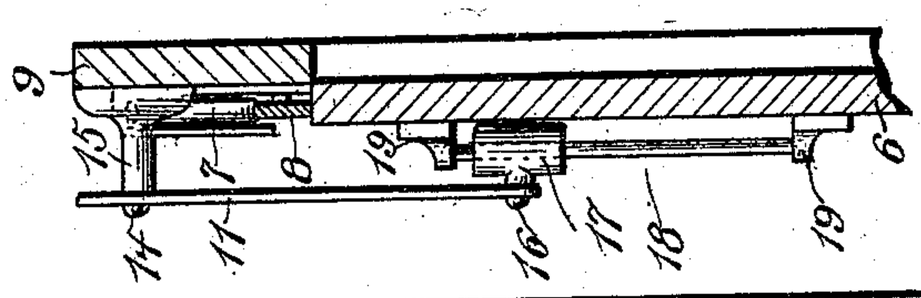
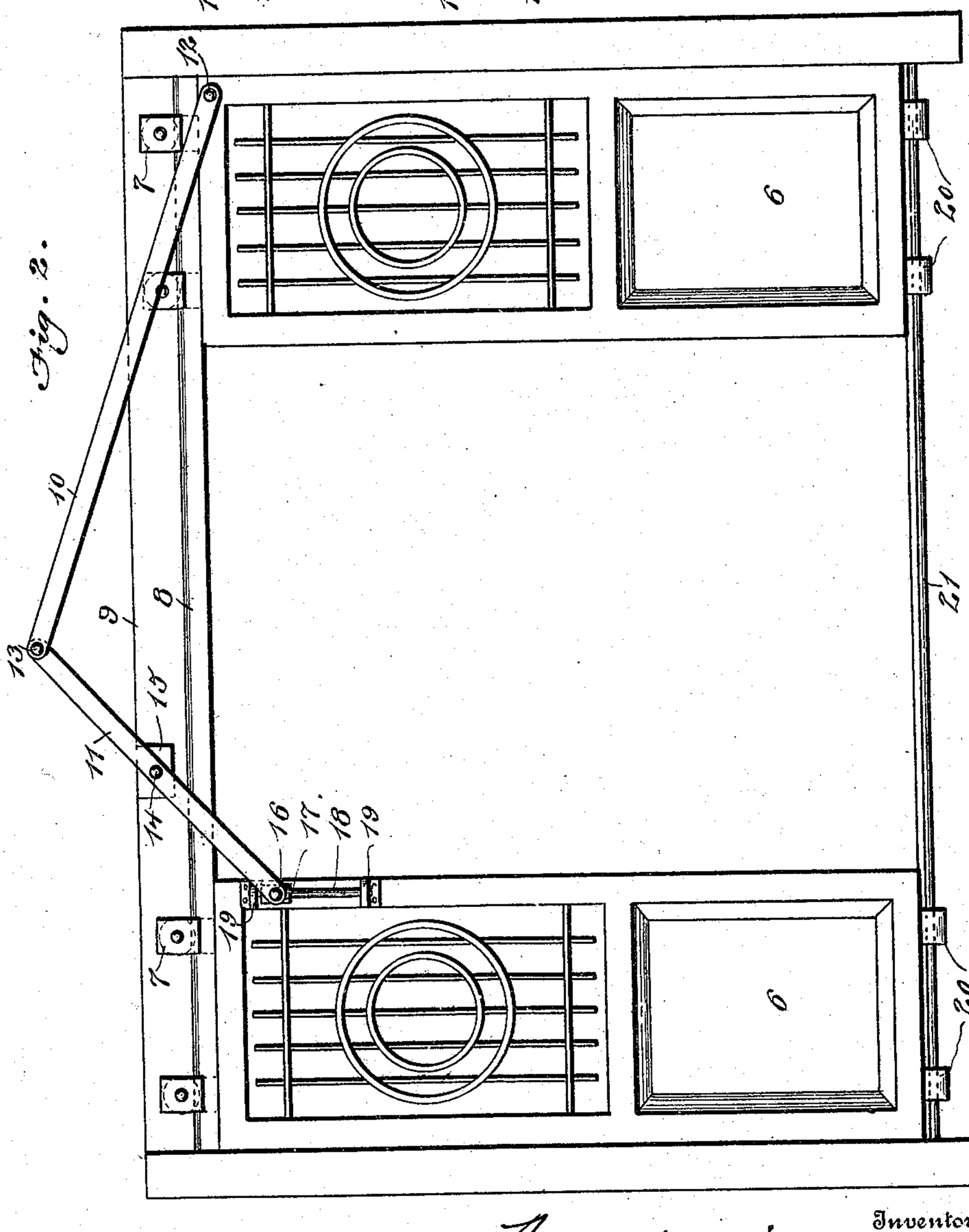


Fig. 2.



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Attorneys

UNITED STATES PATENT OFFICE.

AUGUST KIRCHNER AND WILLIAM KIRCHNER, OF CLEVELAND, OHIO.

DOOR-OPENER.

No. 840,630. Specification of Letters Patent. Patented Jan. 8, 1907.

Application filed September 10, 1906. Serial No. 334,005.

To all whom it may concern:

Be it known that we, AUGUST KIRCHNER and WILLIAM KIRCHNER, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Door-Openers, of which the following is a specification.

This invention is a device for opening and closing double sliding doors, and it is particularly adapted for use on an elevator, since the device is so made as to occupy little room and may be disposed mainly above the top of the door-frame, where it is out of the way and not apt to be tampered with or to interfere with persons using the door.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation with the doors closed. Fig. 2 is a similar view with the doors open. Fig. 3 is a detail in vertical section.

Referring specifically to the drawings, 6 indicates the double sliding doors of an elevator-shaft hung upon rollers 7, which travel upon a track 8 on the top frame 9 of the doorway in the usual manner. The bottoms of the doors are guided and retained by means of sleeves 20, which are secured to the bottom edge of the doors and slide on a rod 21, secured at its end to the side posts of the door-frame.

The opening and closing device consists of a connecting-rod 10 and a lever 11. The former is pivotally connected at one end, as at 12, to the rear upper corner of one of the doors and is pivotally connected at its other end, as at 13, to the upper end of the lever 11, which is fulcrumed at 14 on a bracket 15, projecting outwardly from the top bar 9. The lower end of the lever 11 is pivotally connected at 16 to a sleeve 17, which is slidable up and down on a rod 18, secured at its ends in two fixtures 19, attached to the upper part of the front stile or bar of the other door.

When either door is opened or closed, the lever and its connections cause a corresponding movement of the other door, whereby both doors are simultaneously operated. The levers and connecting devices are mainly disposed in the space above the door, where they are not apt to catch the fingers or clothes of the occupants of the elevator or of persons waiting at the door who may thoughtlessly put their fingers through the same.

The device can be applied to existing doors without special difficulty, and the operation of the device has little tendency to lift the doors and make the hangers jump the track; but in any event this action is prevented by the lower guides 20 and 21.

We claim—

The combination with a door-casing and double sliding doors therein, of a lever fulcrumed above one of the doors, a vertical rod fixed to said door and having a sleeve thereon connected to the lower end of said lever, and a connecting-rod directly connected between the upper end of said lever and the other door.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

AUGUST KIRCHNER.
WILLIAM KIRCHNER.

Witnesses:
JOHN A. BOMMHARDT,
SHIRLEY J. BOMMHARDT.