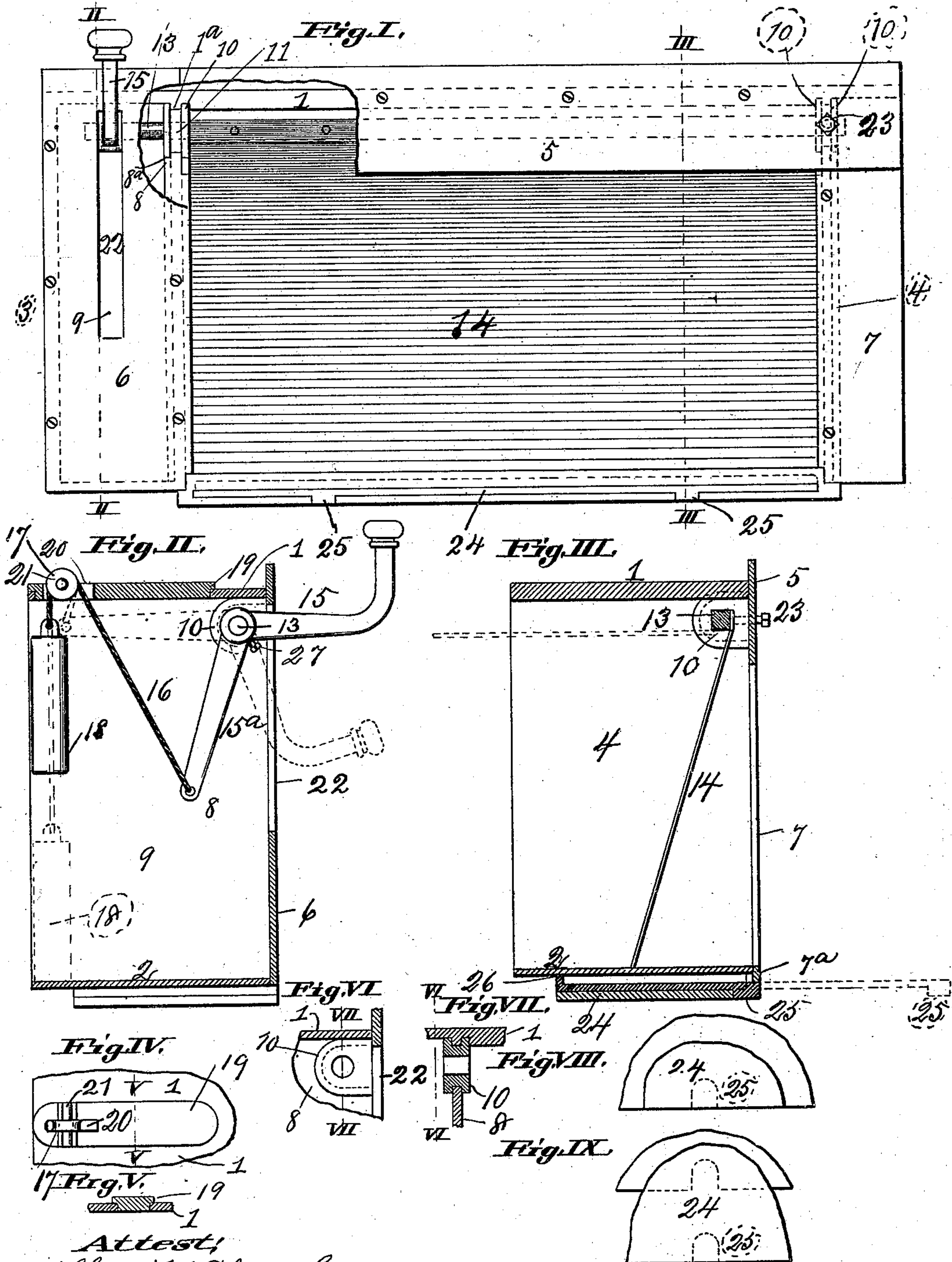


(No Model.)

E. A. C. PETERSEN.
BAKER'S OVEN DOOR.

No. 503,872.

Patented Aug. 22, 1893.



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UNITED STATES PATENT OFFICE.

EDWARD A. C. PETERSEN, OF CHICAGO, ILLINOIS.

BAKER'S-OVEN DOOR.

SPECIFICATION forming part of Letters Patent No. 503,872, dated August 22, 1893.

Application filed April 22, 1893. Serial No. 471,429. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. C. PETERSEN, of the city of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Baker's-Oven Doors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to a counter-balanced swinging door for bakers' ovens; and my invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I is a front elevation of my improved door, a small portion of the upper front plate of the door casing being broken away to show the construction at its rear. Fig. II is a vertical, transverse section, taken on line II—II, Fig. I. Fig. III is a vertical, transverse section, taken on line III—III, Fig. I. Fig. IV is a detail top view of the pulley supporting block of the door counter-balance. Fig. V is a cross section, taken on line V—V, Fig. IV. Fig. VI is a side elevation of one of the door shaft supporting boxes, a portion of said figure being taken on section line VI—VI, Fig. VII. Fig. VII is a vertical section, taken on line VII—VII, Fig. VI. Fig. VIII is a detail, top view of a portion of the shelf located beneath the door casing. Fig. IX is a similar view to Fig. VIII, except that the shelf is shown partially withdrawn.

Referring to the drawings:—1 represents the top, 2 the bottom, and 3 and 4 the sides of the door casing. Secured to the front casing are a top, front plate 5, and end front plates 6 and 7. Near the end 3 is a partition 8, leaving between the said partition and the end 3 a chamber 9. In the upper front edge of the partition 8 is a recess which receives a box 10, the said box being provided with a groove 11 that receives tongues 1^a and 8^a respectively on the top of the casing and within the recess in the edge of partition 8. At the end 4 is a similar box 10 which fits between tongues on the top 1 and the end 4. In the box 10, and having bearing therein, is a shaft 13, said shaft being square in cross section, as shown in Fig. III, for the purpose of more conveniently securing the door 14, which is carried by said shaft. The end of the shaft 13 projects into the chamber 9, and to it is secured bell crank lever arms 15, 15^a, the arm 15 of which constitutes a handle,

while to the arm 15^a is connected one end of a wire rope or chain 16, running over a pulley 17, and having attached to its opposite end a weight 18 to counter-balance the weight of the door 14. The arbor 21 of the pulley 17 has its bearings in a flanged block 19, set in the top plate of the door casing, and provided with a slot 20 to receive the said pulley 17.

22 is a slot in the front plate 6, in which the handle arm 15 of the bell-crank lever moves.

For the purpose of steadying the shaft 13, I provide a set screw 23. (See Figs. I and III.)

Beneath the door casing is a sliding shelf 24 for the purpose of receiving a baker's peel, which is limited in its inner movement by lugs 25, and its outer movement by flanges 26, coming against the bottom front plate 7^a.

To operate the door it is necessary to exert but a slight pressure to the bell-crank lever arm 15, when the weight 18 which counter-balances the weight of the door 14 will raise the arm 15^a and turn the shaft 13 opening the door at which time the bell-crank lever and weight will be in the position illustrated by dotted lines, Fig. II, and to close the door but a slight exertion is required in lifting the bell-crank lever arm 15, when the weight of the door will cause it to close.

It will be understood that the position of the counter balance arm 15 adapts it to exert an increasing leverage on the shaft 13 as the door 14 rises, and approaches a horizontal position. The lever arm being secured to the shaft by a set screw 27, may be adjusted as required to regulate the counter balancing effect of the weight 18.

I claim as my invention—

1. In a door for bakers' ovens, the combination of a shaft carrying the door, a bell-crank lever on said shaft, a counter balance weight flexibly connected to said lever, block 19, and a pulley on said block over which the flexible weight connection runs; substantially as and for the purpose set forth.

2. In combination with the frame of a baker's oven door a sliding shelf 24 adapted to be set in or out, and serving as a rest for the peel, as explained.

EDWARD A. C. PETERSEN.

In presence of—

FAYETTE J. PARTRIDGE,
L. R. WEINHEIMER.