

J. SCANLAN.
SELF CLOSING OVEN DOOR.
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1,064,861.

Patented June 17, 1913.

Fig. 1.

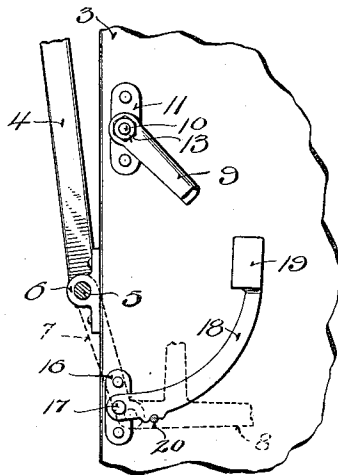
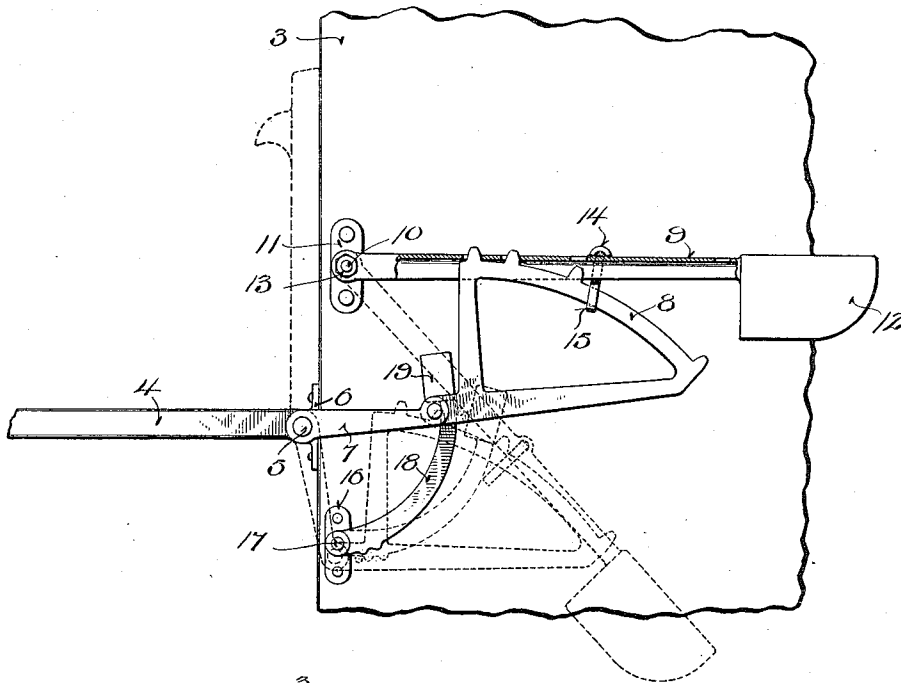


Fig. 2.

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UNITED STATES PATENT OFFICE.

JAMES SCANLAN, OF ADELL, WISCONSIN.

SELF-CLOSING OVEN-DOOR.

1,064,861.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed December 30, 1912. Serial No. 739,176.

To all whom it may concern:

Be it known that I, JAMES SCANLAN, a citizen of the United States, and resident of Adell, in the county of Sheboygan and State of Wisconsin, have invented certain new and useful Improvements in Self-Closing Oven-Doors; and I do hereby declare that the following is a full, clear, and exact description thereof.

Like in my Letters Patent No. 1,041,175, of October 15, 1912, the present invention has for its object to provide for self-closing of oven doors by a simple, economical and efficient mechanism, and without the aid of springs, provision being had for latching said doors ajar when desirable, said invention consisting in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification.

Figure 1 of the drawings represents a side elevation of mechanism according to my invention applied in connection with an oven door to automatically close the same, and by which the door may be held ajar, the mechanism being shown in full and dotted lines with the oven door likewise illustrated in relatively open and closed position. Fig. 2 of said drawings represents a side elevation of parts of said mechanism and illustrates said oven door held ajar.

Referring by numerals to the drawings, 3 indicates a stove-oven and 4 its door having journals thereof in bearings with which the stove is provided, one of these journals 5 being shown in its bearing 6, and said door is provided with the usual handle illustrated by dotted lines in Fig. 1. Fast on the door-journal 5 is a crank 7, and in pivotal connection with the inner end of the crank is a segment rack 8, that is preferably skeletonized to economize metal and lighten the same. Astraddle of the rack, and apertured to engage its teeth, is a grooved bar 9 one end of which is supported on a lateral stud 10 of a bracket 11 riveted or otherwise suitably attached to a side of the oven, and a counterweight 12 is fast on the other end of the bar. A nut 13 may be employed on the stud 10 to prevent disengagement of the bar 9 from said stud. Hung in connection with the bar 9, through an eye 14 of the same approximately midway of its length, is a guard loop 15 through which the rack 8

extends, the loop serving to prevent automatic displacement of said rack. Riveted or otherwise suitably secured to said side of the oven is another bracket 16 provided with a lateral pivot-stud 17 engaging one end of an arm 18. A counterweight 19 is provided at the other end of the arm, and the under edge of said arm is notched for engagement with a stop 20 extending laterally from the rack 8, whereby said arm has the function of a latch.

In practice, the oven door 4 is held closed by the counterweight 12 of the bar 9, but said door may be held ajar by an engagement of the rack-stop 20 with the latch-arm 18, as shown in Fig. 2. On downward swing of door 4, there is lift of the rack 8 (through the medium of the crank 7) on the counterweighted bar 9 until the parts come into the position shown by full lines in Fig. 1, said door being then full open and retained in this position by its own gravity in excess of that of the counterweight 12. Now if the door be started up, the counterweight 12 will cause the bar 9 to swing down and thus move the rack 8 and crank 7 in the same direction, whereby said door is automatically returned to closed position.

There are no parts in the assemblage above specified liable to break or get out of order, or to be affected by variations of temperature to which they are exposed, and while I have shown and described a preferred construction and arrangement of parts, the same may be varied in matters of detail without departure from the scope of my invention as herein claimed.

I claim:

1. The combination of an oven door, a crank in connection with the door, a single lifting member coupled to the crank, a pivotal counterweighted member opposing the lifting member, and a gravity latch engageable with a stop with which said lifting member is provided.

2. The combination of an oven door, a crank in connection with the door, a single lifting member coupled to the crank, a pivotal counterweighted member opposing the lifting member, and a guard loop in hinge-connection with the counterweighted member and engaged by said lifting member.

3. The combination of an oven door, a crank in connection with the door, a seg-

mental rack coupled to the crank, a pivotal counterweighted bar with which the rack-teeth engage, and a guard loop hung in connection with the bar and engaged by the
5 rack.

4. The combination of an oven door, a crank in connection with the door, a segmental rack coupled to the crank, a pivotal counterweighted bar with which the rack
10 teeth engage, and a gravity latch engageable with a stop with which the rack is provided.

5. The combination of an oven door, a crank in connection with the door, a seg-

mental rack coupled to the crank, a pivotal 15 counterweighted bar with which the rack teeth engage, a pivotal counterweighted arm, and a stop on the rack engageable with a notch provided in said arm.

In testimony that I claim the foregoing I 20 have hereunto set my hand at Adell in the county of Sheboygan and State of Wisconsin in the presence of two witnesses.

JAMES SCANLAN.

Witnesses:

PAT SCANLAN,
C. C. SKELTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
