

UNITED STATES PATENT OFFICE.

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DOOR-OPERATING MECHANISM.

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To all whom it may concern:

Be it known that I, THEODORE F. THOMPSON, a citizen of the United States of America, and resident of Fort Dodge, Webster County, Iowa, have invented a new and useful Door-Operating Mechanism, of which the following is a specification.

An object of this invention is to provide improved means for operating doors.

10 A further object of this invention is to provide improved means for opening doors, the doors being closed by springs.

My invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in my claims and illustrated by the accompanying drawing, in which—

20 Figure 1 is an exterior elevation and Figure 2 is an elevation, partly in section interiorly of an enclosure, illustrating the application of my improvements to a hog-house. Figure 3 is a cross-section on the indicated line 3—3 of Figure 1. Figure 4 is a plan, partly in section on the indicated line 4—4 of Figure 1.

25 In the construction of the device as shown the numerals 10, 11 designate door posts, 12 a front wall having a doorway between said posts of less height than the wall, 13 an end wall and 14 a roof of a structure or enclosure arbitrarily termed a hog-house. These elements are shown conventionally and may be varied at pleasure and the same or a similar structure may be employed for animals other than hogs. Doors 15, 16 are mounted in the doorway in the front wall and are hinged, preferably at their outer margins, to the front wall contiguous to the door posts 10, 11 and are adapted to swing outwardly and return to the plane of said wall. Bent levers 17, 18 are journaled on lag screws 19, 20 mounted laterally in the door posts 10, 11 and extend inwardly and downwardly and in converging planes above the doorway and the inner ends thereof are connected by a brace 21. The bent levers 17, 18 are connected to the upper portion of the wall 12 by upwardly inclined retractile coil springs 22, 23. Links 24, 25 connect the lower ends of the levers 17, 18 flexibly to the doors 15, 16. A pedal platform 26 is located within the enclosure, is hinged at its forward margin to lugs 27, 28 fixed to the bases of the posts 10, 11 and extends over and in spaced relation to the

floor of the enclosure. Hangers 29, 30 are pivoted at their upper ends to and depend from the levers 17, 18 adjacent the lag screws 19, 20 and the lower end portions of said hangers are pivoted to and support the pedal platform 26 in a plane normally substantially parallel with the floor of the enclosure. An approach platform 31 is hinged near one margin to lugs 32, 33 fixed to and outside of the wall adjacent the bases of the posts 10, 11 and extends outwardly therefrom, outside the enclosure above and free from the ground. Hangers 34, 35 are pivoted at their upper ends to the bent levers 17, 18 coincident with the pivoting of the hangers 29, 30 to said levers and depend therefrom obliquely through slots 36, 37 in the wall to the outside of the enclosure, and the lower end portions of said hangers 34, 35 are pivoted to and support the approach platform 31 normally substantially parallel with the ground. The hangers 34, 35 may serve as stops to limit opening movements of the doors 15, 16. Each hanger preferably is made in four sections *a*, *b*, *c* and *d*, and they are alike in construction. Each section *a* is pivoted to a bent lever as described and overlaps and is connected by a clamp 38 to a section *b*. By means of the clamps 38 the effective length of the hangers, and consequent elevation of the platforms 26 and 31, may be adjusted. Each section *b* is pivoted to one end of a section *c* and the latter is pivoted at its opposite end to one end of a section *d*. Each section *d* is pivoted at its lower end to one side portion of a platform 26 or 31. A cleat 39 may be placed in the doorway on one and extending between the doors 15, 16 if desired, and one door may close against said cleat.

In practical use the doors are held closed normally by the springs 22, 23 acting through the levers 17, 18 and links 24, 25, and are returned to closed positions by said springs. An animal desiring to depart from the enclosure steps on the pedal platform 26 and depresses it to the floor of the enclosure, thus causing the hangers 29, 30 to act on the levers 17, 18, which in turn act through the links 24, 25 and open the doors. The pedal platform is held down (and the doors held open) until the animal passes therefrom and, in the event said animal passes through the doorway, it would enter upon the ap-

proach platform and hold it down. The approach platform 31 being held down, acts through the hangers 34, 35, bent levers 17, 18 and links 24, 25 to hold the doors 15, 16 open until the animal passes off of the approach platform. In a similar manner the doors may be opened and held open by an animal entering first upon the approach platform with the purpose of gaining entrance to the enclosure.

I claim as my invention—

1. The combination with a wall formed with a doorway and doors hinged to said wall and adapted to swing on vertical axes relative to said doorway, of an oscillating device pivoted to said wall above said doorway, retractile springs auxiliary connecting said device and wall, hangers depending from said device, links on said device

engaging said doors, a pedal platform suspended in part by said hangers, other hangers depending from said device and extending loosely through said wall, and an approach platform suspended in part from the latter hangers.

2. In an apparatus of the class described, a door-operating device mounted for oscillation, a hinged platform and a hanger connecting said door-operating device and platform, said hanger being formed of sections arranged end to end and pivoted together, another section overlapping one of said connected sections, and a clamp adjustably connecting the overlapping sections.

Signed at Fort Dodge, in the county of Webster, and State of Iowa, this 27th day of January, 1922.

THEODORE F. THOMPSON.