

No. 730,686.

PATENTED JUNE 9, 1903.

F. H. OGDEN.
DOOR CHECK.

APPLICATION FILED AUG. 2, 1902.

NO MODEL.

Fig. 1.

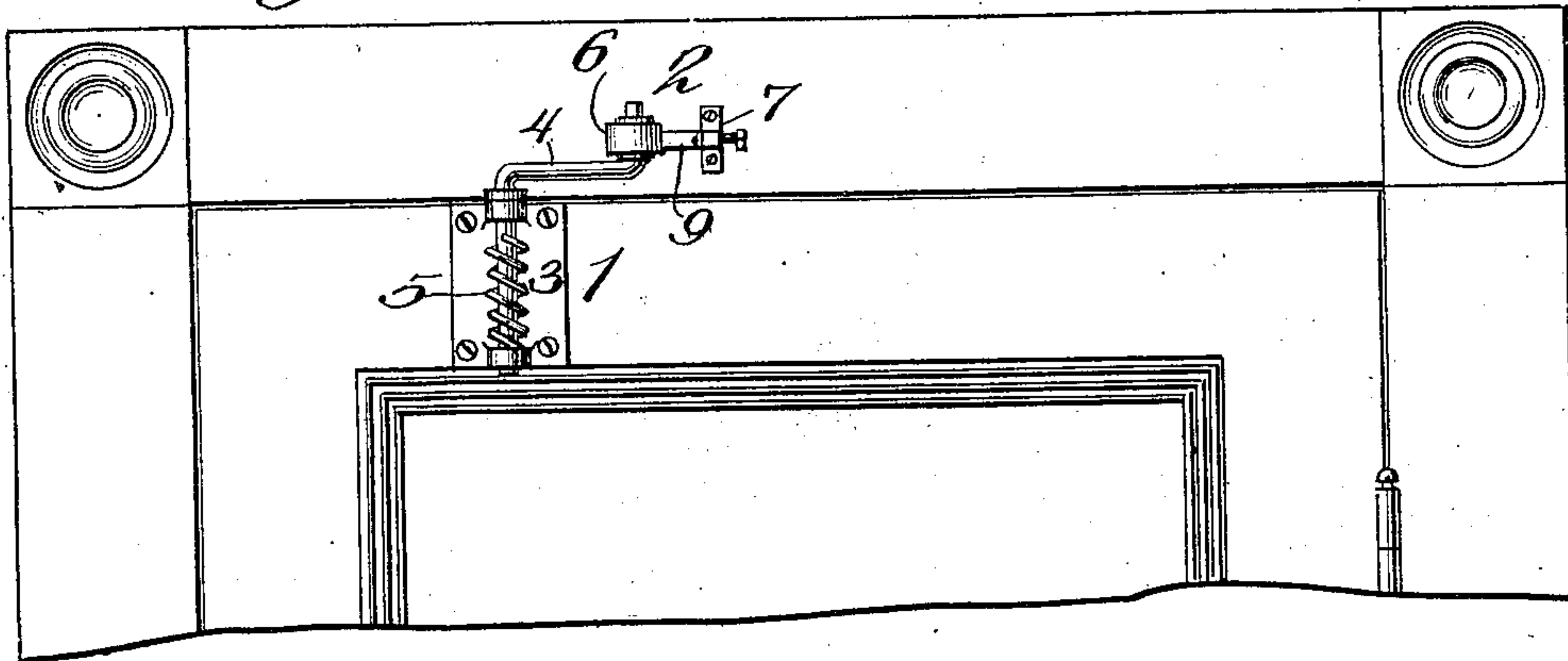


Fig. 2.

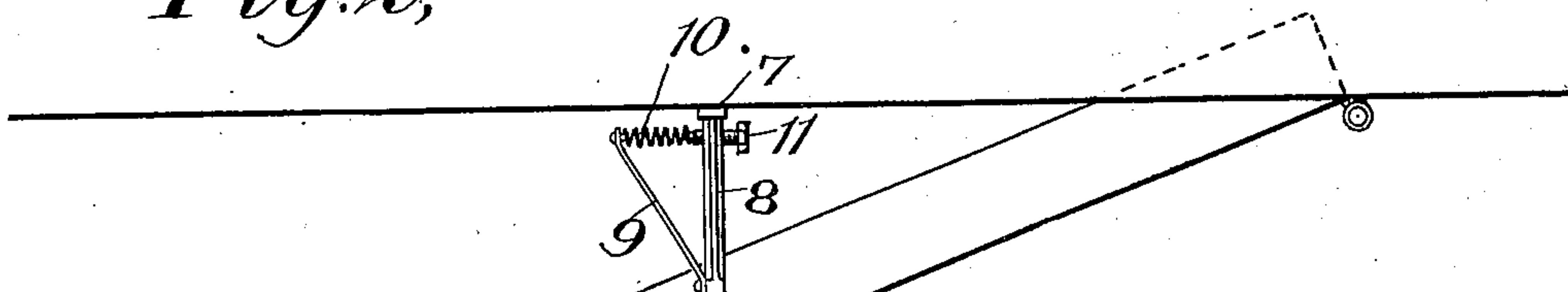


Fig. 3.

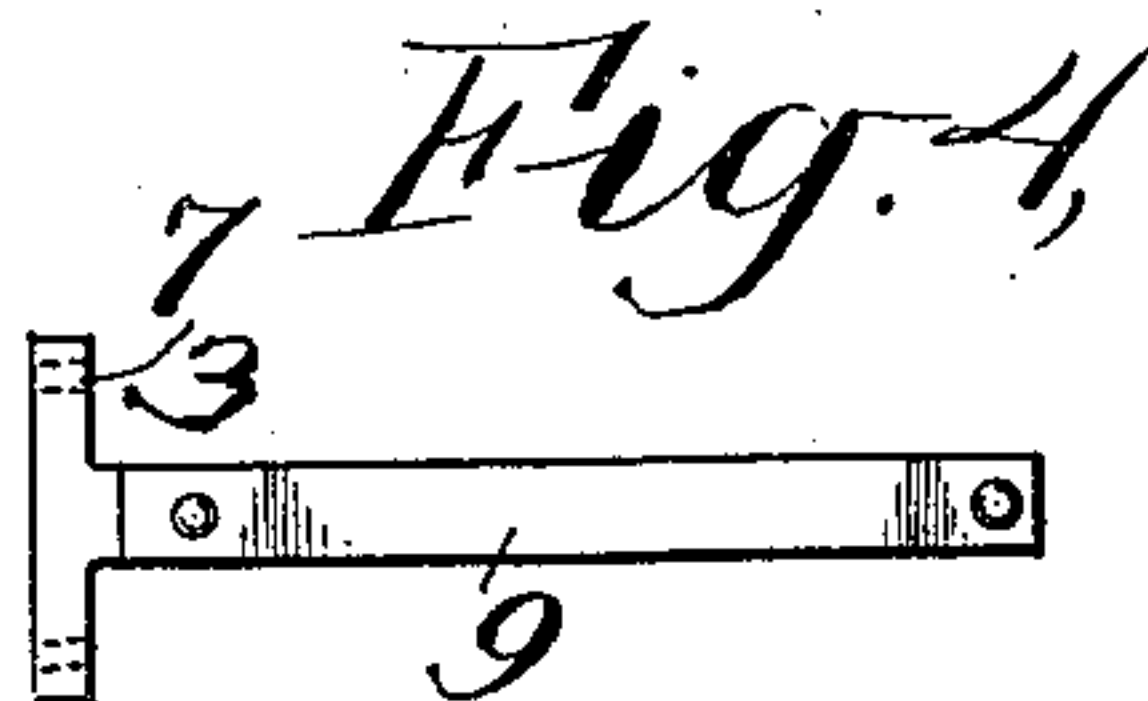
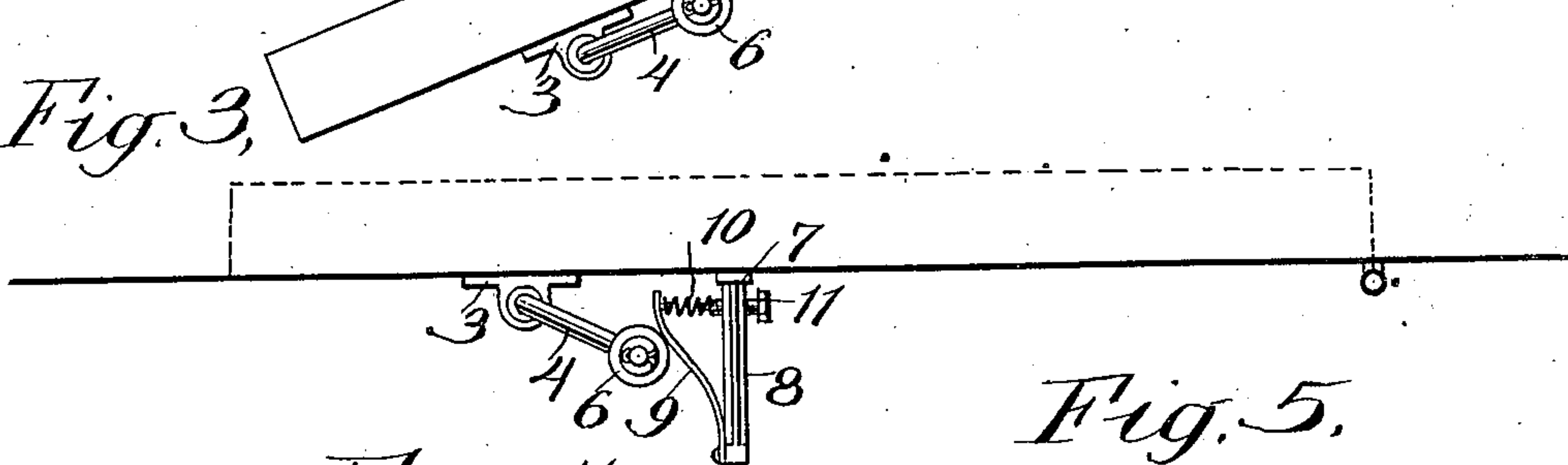
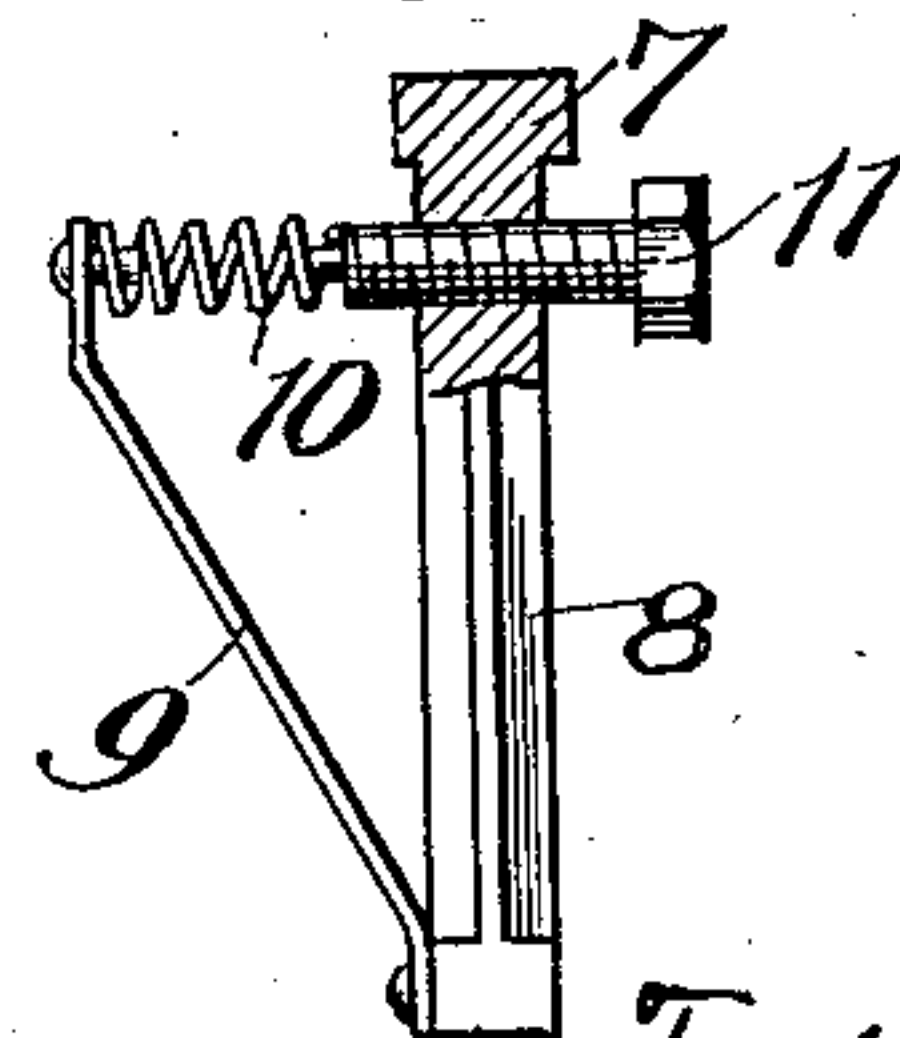


Fig. 4.

Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK H. OGDEN, OF READING, PENNSYLVANIA.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 730,686, dated June 9, 1903.

Application filed August 2, 1902. Serial No. 118,060. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK H. OGDEN, a citizen of the United States, residing in the city of Reading, county of Berks, and State of Pennsylvania, have invented certain new and useful Improvements in Door Stops or Checks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in door stops or checks, and is intended to be used to retard doors and the like when closing, and so to prevent slamming thereof.

My invention consists in the novel construction of the check or stop.

The object of my invention is to improve and simplify the construction of door stops or checks and to make the same inexpensive in construction.

In the accompanying drawings I illustrate one form of spring stop or check embodying my invention.

In the said drawings, Figure 1 shows an elevation of the upper portion of a door and door-frame with my improved spring-stop attached thereto. Fig. 2 shows a top view of the same parts, the door being shown in a slightly open position. Fig. 3 shows a top view of the same parts, the door being closed. Fig. 4 shows a side view of the stationary members of the check. Fig. 5 shows a top view and partial section of the same.

The door check or stop herein illustrated and described consists of two parts 1 and 2, the first of which will usually be attached to the door and the other of which will usually be attached to the door-frame, though the relative positions of these parts may be reversed. The part 1 consists of a base-plate 3, adapted for attachment to the door and provided with bearings, an arm 4, pivotally mounted in said bearings of plate 3, and a spring 5. The arm 4 may carry a friction-roller 6. The part 2 consists, essentially, of a plate 7, adapted for attachment to the door-frame, an arm 8, projecting therefrom, and a bearing member 9, with which the end of the arm 4, or, if the friction-roller 6 be employed, the said roller, may make contact as the door closes. This bearing member 9 may be set

at such angle that as the door continues to swing toward the closed position after the arm 4 or its roller 6 has made contact with said bearing member the said arm will be swung about its pivot against the tension of the spring 5, which latter therefore tends to resist the closing of the door, and consequently to retard it in closing and prevent slamming. Preferably the bearing member 9 is also a yielding member. To this end it may be secured to the arm 8 at one end only, its other end being engaged by a compression-spring 10, the opposite end of which bears against a screw 11, carried by arm 8. By means of this screw, therefore, the tension of the spring 10 may be varied and adjusted at will. Preferably, also, bearing member 8 is itself a flat spring. When this is the case, it will assume a bowed form when the arm 4 or its friction-roller presses against it. It will be seen, therefore, that this apparatus comprises three springs, all coöperating to cushion the closing of the door and to prevent it from slamming. The co-operation of a number of springs in this manner is desirable, since it is difficult to make a single spring sufficiently strong and flexible to cushion doors efficiently without making the whole device unduly large. However, I do not limit myself to the employment of all of the springs, since one or more may be omitted and the device still remain operative.

In the operation of this device when the door is being closed the arm 4 or the roller 6 thereof encounters the bearing member 9 and flexes the same, at the same time winding up spring 5 and compressing spring 10, the door being cushioned thereby to such an extent that slamming will be prevented or greatly reduced.

It is obvious that my device is susceptible to many variations and modifications in construction and arrangement of the parts, and I do not limit myself to the particular details of construction and arrangements herein illustrated and described.

What I claim is—

1. In a door-check, the combination of two coacting members adapted for attachment to a door and to a door-frame respectively, one comprising a bracket arranged to project substantially at right angles to the door, or door-

frame, to which it is attached, and having a yielding spring-bearing member connected to its outer end and normally arranged at an angle with respect thereto, the other of said members comprising a pivotally - mounted arm arranged to encounter said bearing member during the closing of the door and to move the same against the spring action of said bearing member, and a second spring opposing motion of said arm due to contact of the arm with said bearing member during the closing of the door.

2. In a door-check, the combination of two coacting members adapted for attachment to a door and to a door-frame respectively, one comprising a bracket arranged to project substantially at right angles to the door, or door-frame, to which it is attached, and having a flexible yielding spring-bearing member connected to its outer end and normally arranged at an angle with respect thereto, the other of said members comprising a pivotally-mounted arm arranged to encounter said bearing member during the closing of the door and to move the same against the spring action thereof, as the door closes, and a spring-opposing motion of said arm due to contact with said bearing member during the closing of the door.

3. In a door-check, the combination of two coacting members adapted for attachment to a door and to a door-frame respectively, one comprising a bracket arranged to project substantially at right angles to the door, or door-frame, to which it is attached, and having a flexible yielding spring-bearing member connected to its outer end and normally arranged at an angle with respect thereto, and a spiral spring interposed between the free end of said bearing member and the bracket, coacting with said bearing member; the other of said two coacting members comprising means adapted to engage said spring-bearing mem-

ber during the closing of the door and to move the same against the spring action thereof as the door closes.

4. In a door-check, the combination of two coacting members adapted for attachment to a door and to a door-frame respectively, one comprising a spring-bearing member, the other comprising a bearing-plate and an L-shaped crank comprising a single piece of metal formed into L shape and having a bearing in said bearing-plate, said crank adapted to engage said bearing member and press the same backward during the closing of the door, and a spiral spring surrounding the axial portion of said crank and resisting motion thereof due to contact with the bearing member during the closing of the door.

5. In a door-check, the combination of two coacting members adapted for attachment to a door and to a door-frame respectively, one comprising a bracket arranged to project substantially at right angles to the door, or door-frame, to which it is attached, and having a yielding spring-bearing member connected to its outer end and normally arranged at an angle with respect thereto, the other comprising a bearing-plate and an L-shaped crank comprising a single piece of metal formed into L shape and having a bearing in said bearing-plate, said crank adapted to engage said bearing member and press the same backward during the closing of the door, and a spiral spring surrounding the journal portion of said crank and resisting motion thereof due to contact with the bearing member during the closing of the door.

In testimony whereof I affix my signature in the presence of two witnesses.

FREDERICK H. OGDEN.

Witnesses:

S. Y. REIGNER,
ELMER W. DECK.