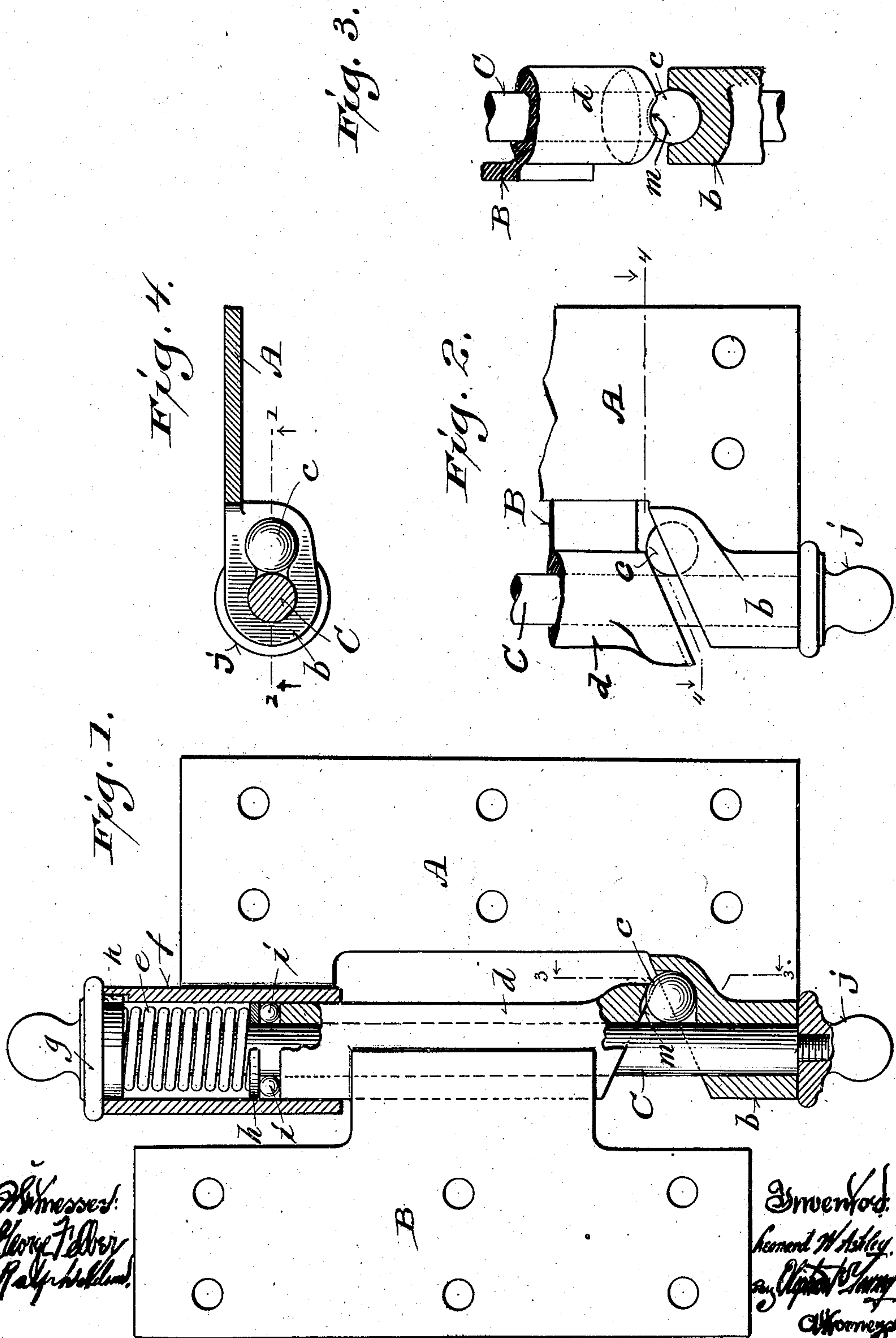


L. W. ASHLEY.
HINGE.
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911,694.

Patented Feb. 9, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

LEONARD W. ASHLEY, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO MILWAUKEE HARDWARE MANUFACTURING COMPANY, OF MILWAUKEE, WISCONSIN.

HINGE.

No. 911,694.

Specification of Letters Patent.

Patented Feb. 9, 1909.

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To all whom it may concern:

Be it known that I, LEONARD W. ASHLEY, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Hinges; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide simple, economical and efficient self-closing hinges, and it consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in claims.

Figure 1 of the drawing represents a partly sectional elevation of one of my improved hinges full open, the plane of the section being indicated by line 1—1 in Fig. 4; Fig. 2, an elevation of a fragment of the closed hinge; Fig. 3, a fragment of the open hinge partly in section as indicated by lines 3—3 in Fig. 1, and Fig. 4, a sectional view on planes indicated by lines 4—4 in Fig. 2.

Referring by letter to the drawings, A indicates the stationary or jamb-leaf, B the swinging-leaf and C the pintle of the hinge. A lower knuckle *b* of the stationary leaf is inclined at the top; and the high portion of this knuckle is provided with a socket with which an anti-friction ball *c* is engaged.

A knuckle *d* of the swinging-leaf has an inclined lower end that rides on the ball *c* with which it is kept in contact, by means of a spiral-spring *e* surrounding the pintle C within an upper knuckle *f* of the stationary leaf A, this spring being at all times under compression between the head *g* of said pintle and the upper horizontal end of the knuckle *d* aforesaid that projects into said knuckle *f*, it being preferable to interpose a washer *h* and balls *i* between said spring and partially incased knuckle. The lower end of the pintle is screw-threaded and engages a nut-knob *j* by which it is held in engagement with the aforesaid knuckle. The pintle is held against turning, by a lug *k* of its head in engagement with a recess in the upper knuckle *f* of the stationary leaf.

Owing to gravity, a door hung in connection with the swinging-leaf of the hinge will automatically close at any time it is released after opening, but to hold said door open at a predetermined distance, the inclined end

of the knuckle of said leaf is provided with a concave notch *m* for engagement with the ball on which said knuckle rides.

I claim:

1. The combination with a hinge comprising in its construction a stationary leaf having the upper end of its lower knuckle inclined and provided with a socket in the highest portion of the inclination, a swinging leaf having the lower end of its knuckle inclined and the upper end of this knuckle projected into the upper knuckle of the stationary leaf, and a pintle connecting said leaves; of a ball seated in the socket of the inclined end of the lower knuckle of the stationary leaf and having bearing-contact with the inclined end of the knuckle of the swinging leaf, and a spring under compression in the upper knuckle of said stationary leaf between a head of the pintle and the knuckle of said swinging leaf.

2. The combination with a hinge comprising in its construction a stationary leaf having the upper end of its lower knuckle inclined and provided with a socket in the highest portion of the inclination, a swinging leaf having the lower end of its knuckle inclined and provided with a concave notch at the lowest portion of the inclination, the upper end of this knuckle being projected into the upper knuckle of the stationary leaf, and a pintle connecting said leaves; a ball seated in the socket of the inclined end of the lower knuckle of the stationary leaf and having bearing-contact with the inclined end of the knuckle of the swinging leaf, and a spring under compression in the upper knuckle of said stationary leaf between a head of the pintle and the knuckle of said swinging leaf.

3. The combination with a hinge comprising in its construction a stationary leaf having the upper end of its lower knuckle inclined and provided with a socket in the highest portion of the inclination, a swinging leaf having the lower end of its knuckle inclined and the upper end of this knuckle projected into the upper knuckle of the stationary leaf, and a pintle connecting said leaves; of a ball seated in the socket of the inclined end of the lower knuckle of the stationary leaf and having bearing-contact with the inclined end of the knuckle of the swinging leaf, anti-friction balls supported

on the upper end of the knuckle of the
swinging leaf, a pintle-engaged washer sur-
mounting the anti-friction balls, and a
spring under compression in the upper
5 knuckle of said stationary leaf between a
head of the pintle and said washer.

In testimony that I claim the foregoing I

have hereunto set my hand at Milwaukee, in
the county of Milwaukee and State of Wis-
consin in the presence of two witnesses.

L. W. ASHLEY.

Witnesses:

N. E. OLIPHANT,

GEORGE FELBER.