



# UNITED STATES PATENT OFFICE.

WILLIAM H. BROTHERS, OF CLEVELAND, OHIO, ASSIGNOR TO THE COLUMBIAN HARDWARE COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

## HINGE.

No. 842,520.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed January 30, 1906. Serial No. 298,648.

*To all whom it may concern:*

Be it known that I, WILLIAM H. BROTHERS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

This invention relates to hinges, such as are generally designated "floor-hinges," although the invention is not necessarily applicable to a hinge which is applied to a floor.

The main object of the present invention is to provide means for adjusting a door which is to swing to either side so that it will set squarely in the door-frame or will set in alinement with another door if there be two doors. By reason of this adjustment the carpenter who fits the doors is saved considerable labor, as it will be unnecessary to refit the hinge. It is only necessary to adjust the parts by means of a screw-driver or the like after the door has been mounted on the hinges.

Other objects of the invention are to provide simple, convenient, and practical means for adjusting a door which swings in both directions after it has been mounted on the hinges.

In order that my invention may be fully understood, I will now describe the same with reference to the accompanying drawings, which show a suitable embodiment thereof, and in which—

Figure 1 is a side view of the improved hinge, showing also part of a door-frame and door. Fig. 2 is a side elevation of the adjusting device enlarged. Fig. 3 is an under side view or face view of the door-adjusting device. Fig. 4 is a transverse section on line 4 4, Fig. 3. Fig. 5 is a perspective view of the door-adjusting or spindle-engaging lever; and Fig. 6 is a longitudinal section on line 6 6, Fig. 2, showing the adjusting device in dotted lines out of true and in full lines true, the floor-hinge proper being shown in full lines.

Referring to the drawings, the floor-hinge proper (indicated by *a*) may be of any suitable construction provided with a spindle *b*, having, preferably, a square or non-circular end to which a door *c* is applied, so that the door will swing with said spindle as a center. It will be understood that an alined pivot is located at the opposite end of the door.

The present improvements in spring-hinges comprise a plate or bar *d*, which may be screwed or otherwise fastened to the lower edge of a door adjacent the edge to be pivoted or hinged.

The plate *d*, of any suitable shape or proportion, is formed with a longitudinal recess *e*, which extends a suitable distance and opens into an enlarged recess *g*, thus providing cheeks *f* at the sides of the recess *e* for a purpose to be hereinafter stated. On this plate or bar *d* are mounted the parts which are to provide for the proper setting or adjusting of the door after it has been hung on its hinges, such adjusting parts comprising an adjusting-lever *h* and adjusting-screws *i*. The adjusting-lever *h* has a head portion *h'* and a tail portion *h<sup>2</sup>*, the said head portion being formed with a socket *j*, which is square or otherwise formed to correspond with the end of the hinge-spindle *b*, which is to be inserted in it. Preferably the spindle *b* and the socket *j* are of irregular section to cause the said parts to turn together.

In the form of the invention shown in the accompanying drawings the adjusting-lever has a V-shaped portion *k*, the apex *k'* of which is in alinement with the tail portion *h<sup>2</sup>*. The apex *k'* forms a fulcrum which is seated in a saddle *l*, which is provided with a V-shaped recess *l'*, the sides of which are at a greater slant than the sides of the V-shaped portion *k* of the adjusting-lever. This obviates the necessity of a separate pivot and at the same time allows of a certain movement or play of the adjusting-lever to either side of its longitudinal axis. The two adjusting-screws *i* are screwed into screw-threaded perforations in the two cheek-pieces *f*, one at each side of the tailpiece *h<sup>2</sup>* of the adjusting-lever, the inner ends of said adjusting-screws opposing each other and being adapted to bear upon the opposite sides of said tailpiece. Obviously by the proper adjustment of these adjusting-screws *i* the adjusting-lever will be moved to one or the other side of the longitudinal axis of the adjusting-lever or the plate or bar *d*. By properly adjusting the adjusting-lever in the described manner the spindle *b* of the floor hinge will be turned in one or the other direction and the door set true in its frame.

Obviously various changes can be made in the construction, combination, and forma-

tion of the parts described and shown without departing from the spirit and scope of the invention.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a hinge, the combination, with the hinge - spindle, of a spindle - engaging and door-adjusting lever fulcrumed at one end, and adjusting means acting on the other end of the said lever, said spindle engaging the lever intermediate of the fulcrum and adjusting means, for substantially the purposes set forth.

2. In a hinge, the combination, with the hinge - spindle, of a spindle - engaging and door-adjusting lever having a tapered fulcrum end, a saddle having a seat or recess for said end, and adjusting means acting on the lever, for substantially the purposes set forth.

Signed at Cleveland, Ohio, this 17th day of January, 1906.

WILLIAM H. BROTHERS.

Witnesses:

THOMAS BIGGERSTAFF,  
JAMES P. McCANN.