No. 730,876. PATENTED JUNE 16, 1903.

E. W. CHRIST.

HINGE.

APPLICATION FILED MAR. 3, 1903.

NO MODEL.

Fig. 1.

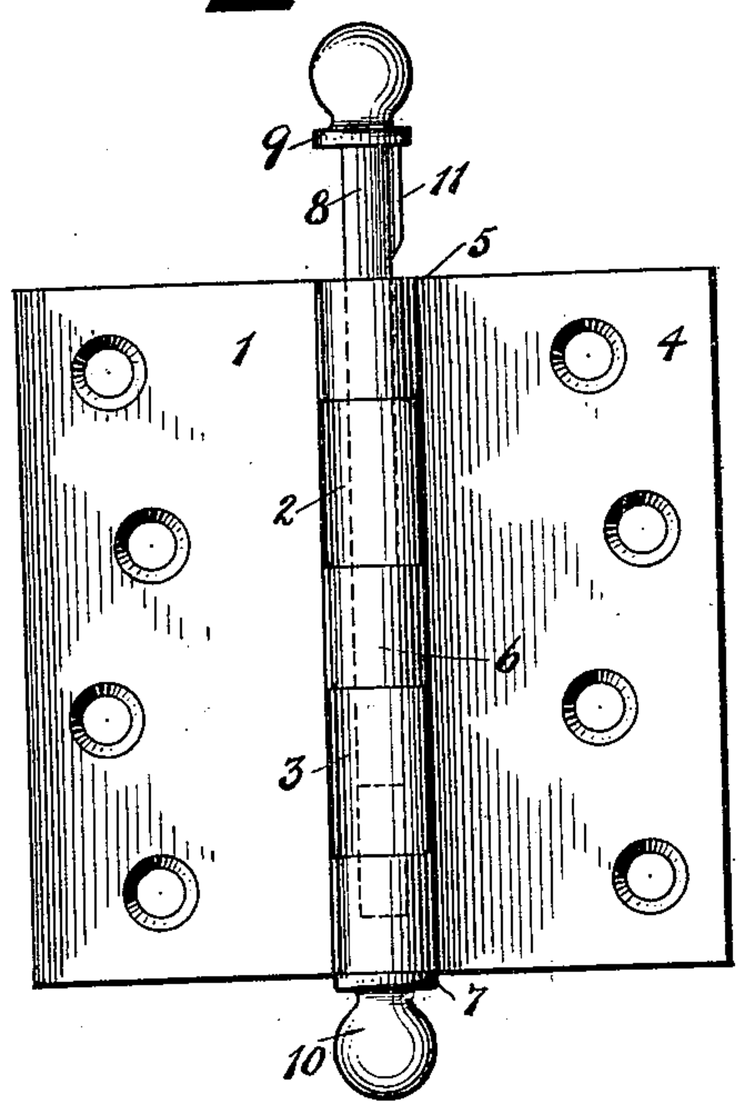

Fig. 2.

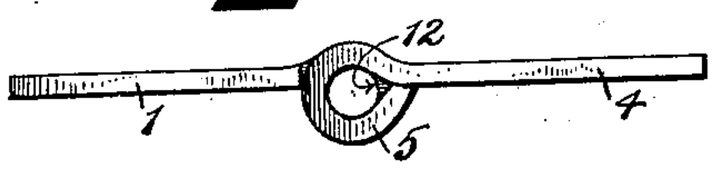

Fig. 3.

WITNESSES:

Geo. V. Rasmussen

INVENTOR

Ernest W. Christ.

BY

R. Cumlehee.

ATTORNEY

No. 730,876. Patented June 16, 1903.

UNITED STATES PATENT OFFICE.

ERNEST WILSON CHRIST, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO STANLEY WORKS, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

HINGE.

SPECIFICATION forming part of Letters Patent No. 730,876, dated June 16, 1903.

Application filed March 3, 1903. Serial No. 145,909. (No model.)

To all whom it may concern:

Be it known that I, ERNEST WILSON CHRIST, a citizen of the United States, residing at New Britain, in the county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Hinges, of which the following is a full, clear, and exact description.

This invention relates to hinges, and particularly to an improvement in that class of hinges comprising two leaves hinged together by a pintle which freely passes through the openings formed in the hinge-knuckles in such a manner as to properly hold the leaves together. Heretofore in hinges of this character when the same have been in use a short time it is a common thing for the pintle to gradually work up from its seat and project above the hinge, so as to shorten the operative part of the pintle-bearing within the hinge-leaves and present an unsightly appearance. This has long been recognized as a serious defect, and various means have been devised whereby the pintle has been locked in place positively against working out. Such devices are termed "pintle-retainers" and require special manipulation before the pintle can be either inserted to its seat in the hinge or removed therefrom. My invention does not relate to this class, since at all times the pintle may be freely inserted or removed.

It is my object to overcome the above-recognized defects without the necessity of locking the pintle in place. This object I attain by providing means whereby the pintle is prevented from rotating relatively to one of the hinge-leaves, but without being locked in place against longitudinal movement, and I have found that by this means when the pintle is in place and seated in its proper position it will not rise or work out to any visible extent. This I have discovered in careful tests in practical use. Hence at all times it presents its entire length as a pivot upon which the hinge-knuckles may properly work and never presents the unsightly appearance of a hinge in which the pintle appears projecting considerably above the same and out of place.

In the drawings, Figure 1 is an elevation of a hinge embodying the improvement of my invention, the pintle being partly withdrawn for illustrative purposes. Fig. 2 is a plan view of a hinge with the pintle removed entirely. Fig. 3 is a cross-section of the pintle, taken at such a point as to illustrate the projection therefrom or eccentricity thereof.

1 is a hinge-leaf having knuckles 2 3. 4 is another hinge-leaf having knuckles 5 6 7. As shown, these knuckles are so arranged as to alternate and fit closely together.

8 is a pintle which passes through the opening in the knuckles to secure the two hinge-leaves together.

9 is an ornamental head on the pintle, which rests on the top of the knuckle.

10 is an ornament which may be fastened into the lower knuckle 7.

11 is a projection on the pintle, preferably in the form of a longitudinal fin, and which may be very conveniently formed by displacing a portion of the metal of the pintle, so that said projection will be in reality integral with the pintle. This projection, as shown, is formed near the upper end of the pintle and in such a position relatively to the uppermost hinge-knuckle that it will project into a longitudinal recess 12 in said knuckle. As is well known, when knuckles are being formed upon hinge-leaves made from sheet metal it is unnecessary that the inner surface should be completely cylindrical. In other words, there may be and is (in sheet-metal hinge-leaves) a longitudinal recess V-shaped in cross-section adjacent to the edge of the knuckle where it meets the leaf. It is into this recess that the projection 11 is introduced, and the projection 11 is so located upon the pintle that when the pintle is properly in place and seated the said projection will bear against the side walls of said recess. This will readily be observed by referring to the drawings. It follows that when the parts are assembled the pintle is always free to be removed, and yet because it is not allowed to have any rotary action relatively to one of the hinge-leaves I have found that it will not in use rise or work up in the manner above alluded to.

In order that there may be no danger of

shearing off the projection in case any considerable resistance is offered to any turning moment incidental to the operation of the hinge, I prefer that the projection 11 shall be in the form of a longitudinal fin or rib having considerable area. This device and simple expedient should not be confused with that class of devices referred to called "pintle-retainers." It does not depend upon any locking of the pintle in place for the accomplishing of the desired end.

What I claim is—

A hinge comprising a pair of sheet-metal leaves, each provided with a knuckle, a pintle-passage through said knuckles and an internal longitudinal groove adjacent to the pintle-passage in one of said knuckles and formed between the edge of the knuckle and the adjacent portion of the leaf, a pintle having a projection thereon extending into said groove when said parts are assembled, said projection being in the form of a single fin arranged longitudinally of said pintle.

Signed at New Britain, Connecticut, this 28th day of February, 1903.

ERNEST WILSON CHRIST.

Witnesses:
E. A. MOORE,
GEO. P. HART.