

(No Model.)

W. H. TAYLOR.

HINGE.

No. 365,552.

Patented June 28, 1887.

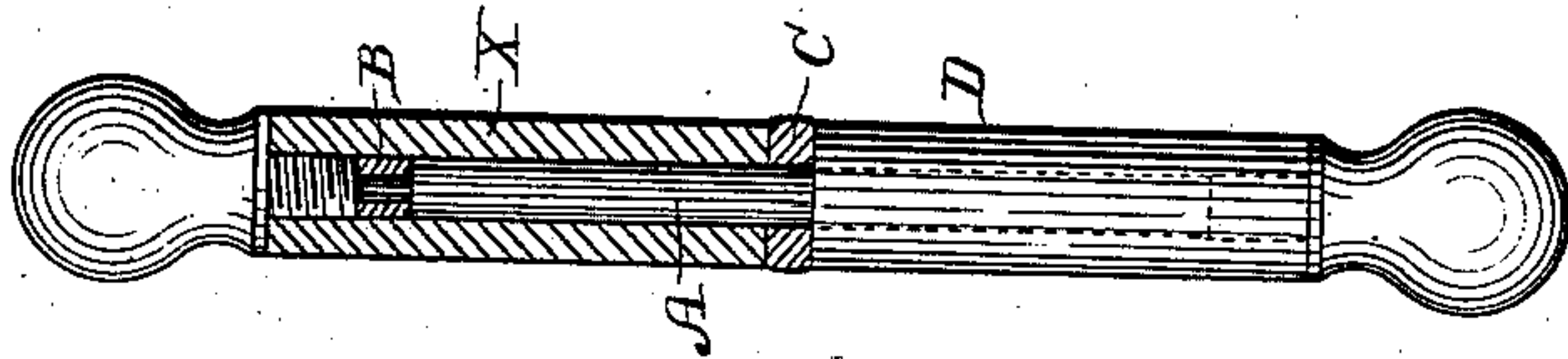


Fig. 2.

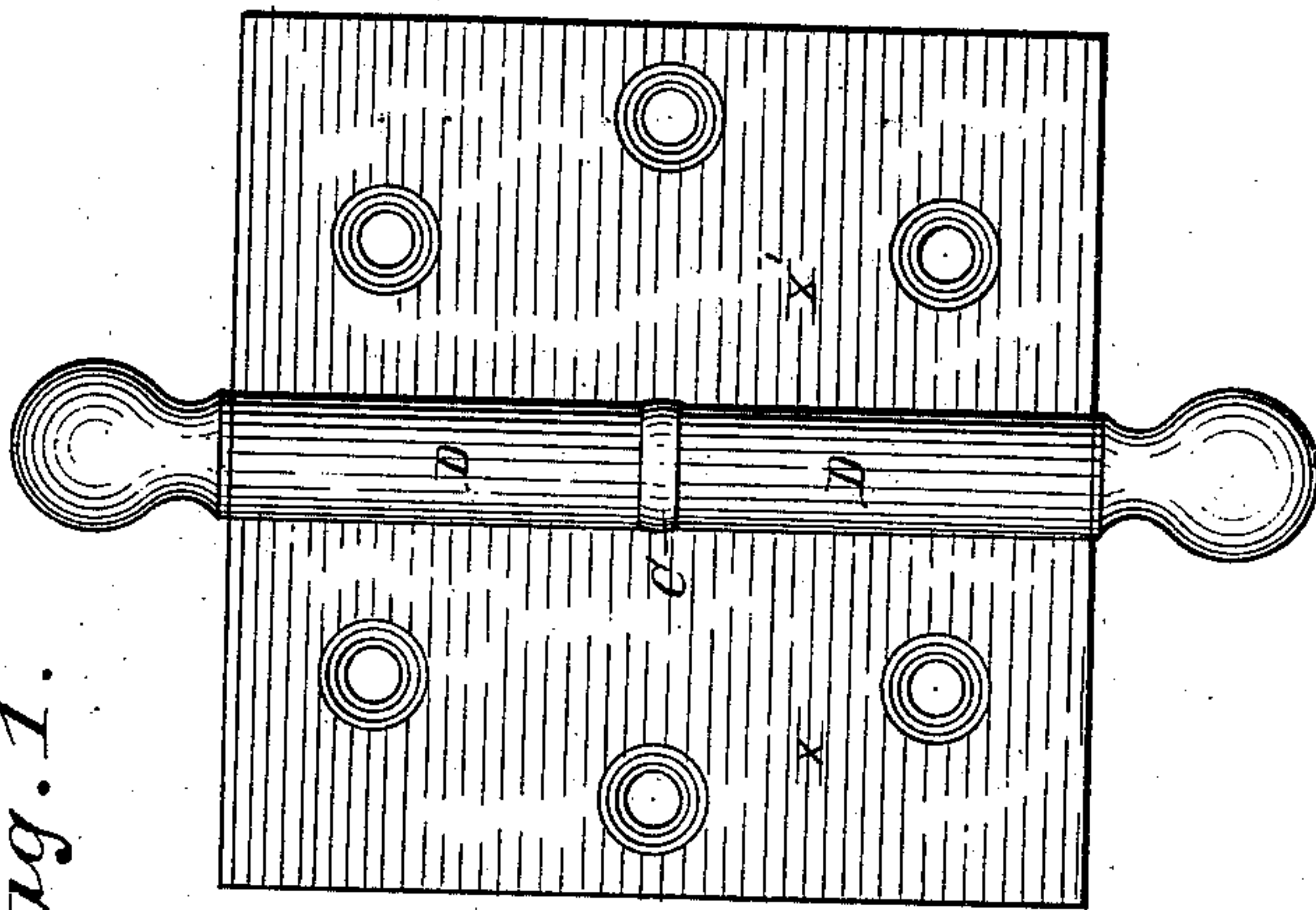


Fig. 1.

WITNESSES

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# UNITED STATES PATENT OFFICE.

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YALE & TOWNE MANUFACTURING COMPANY, OF SAME PLACE.

## HINGE.

SPECIFICATION forming part of Letters Patent No. 365,552, dated June 28, 1887.

Application filed June 21, 1886. Serial No. 205,775. (No model.)

*To all whom it may concern:*

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain  
5 new and useful Improvements in Butts or Hinges, of which the following is a specification, reference being had to the accompanying drawings, illustrating my improvements, in which—

10 Figure 1 is a view of the hinge open. Fig. 2 is a view of the hinge closed, and partly in section through the knuckle.

It is well known that the advantage of a loose-joint butt is based upon the fact that it  
15 is more convenient for attachment to the door, and for hanging and unhang- ing the door, and that its cost is less than that of a fast-joint butt of the same size and quality. In durability, however, the fast-joint butt has heretofore  
20 proved superior, by reason of the greater number of bearing-surfaces on which it carries the weight of the door.

Heretofore loose-joint butts have been constructed with a single bearing at the point of intersection of the knuckles of the two leaves. In  
25 some cases—such as iron butts—the knuckles have borne against each other, while in butts of a better quality a washer of steel or other metal has been inserted between the knuckles  
30 of the leaves to form a bearing. In either case, however, the entire weight of the door is borne by only one bearing, which, in case of severe strains, owing to heavy doors, causes the butts to crush and wear rapidly.

35 The object of my invention is, while retaining the advantages of a loose-joint butt, to increase its durability by providing an additional bearing at the end of the hinge-pin. I do this by inserting into the pin-hole of one  
40 leaf a block or step of steel or other hard metal or substance, and so adjust the parts that one leaf of the hinge will bear upon both the upper end of the hinge-pin and upon the other leaf of the washer, thus having two bearing-surfaces instead of one, as in the usual construction.  
45

In some cases it may be desirable to do away with the bearing at the intersection of the knuckles and depend upon the bearing at the  
50 end of the hinge-pin alone. The block or step which I insert in the pin-hole is prefer-

ably fixed thereto, so that it does not revolve when the upper knuckle is turned on the lower one; but this is not of the essence of the invention. It may also have a small hole through  
55 it to admit oil, if desired.

Referring to the letters upon the drawings, X X' indicate leaves of the hinge. A indicates the hinge-pin rigidly inserted in the lower knuckle of leaf X' and bearing at its  
60 upper end against the block or step B, inserted in the pin-hole or socket A' of the upper knuckle of the leaf X.

C is a steel washer surrounding the pin A, interposed between the abutting faces of the  
65 two knuckles D and D'. This washer I consider desirable generally in connection with the bearing for the end of the hinge-pin above described; but, as before stated, it may or may not be used. It might be dispensed with, for  
70 example, in light hinges not liable to sustain much weight or strain. When it is used, however, it will be seen that the weight of the door attached to the leaf X is borne jointly  
75 by the block or step B and the washer C, instead of by the latter only, as in the usual construction. This will give two bearings instead of one, which will add to the ease of operation of the door and to the life of the hinge.

Obviously the pin might be inserted in the  
80 upper knuckle and the block or step in the lower without departing from my invention.

Having described my improvements, what I claim is—

1. A loose-joint hinge constructed with two  
85 bearings, one formed by the block B and hinge-pin and the other by the two knuckles of the hinge, substantially as set forth.

2. A hinge consisting of the combination of a leaf, X', having a hinge-pin, A, a leaf, X,  
90 having a pin-hole or socket, A', a bearing-block or step, B, inserted in the pin-hole and forming a bearing for the end of the pin, and a washer, C, interposed between the leaves, substantially as set forth.  
95

In testimony whereof I have hereunto subscribed my name.

WARREN H. TAYLOR.

Witnesses:

SCHUYLER MERRITT,  
GEO. E. WHITE.