

(No Model.)

R. O. BINGHAM.  
COMBINED BALL JOURNAL AND HINGE.

No. 479,731.

Patented July 26, 1892.

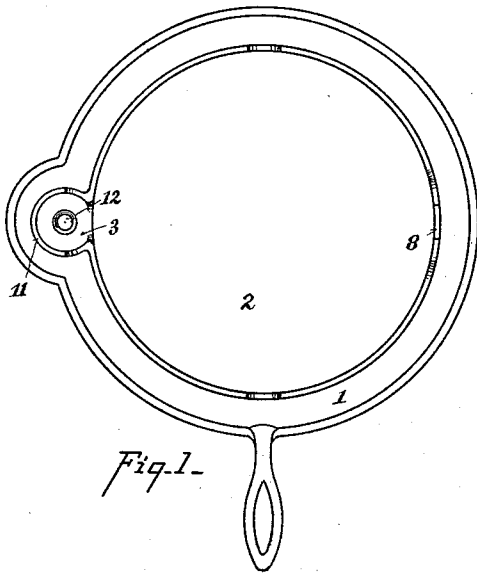


Fig. 1-

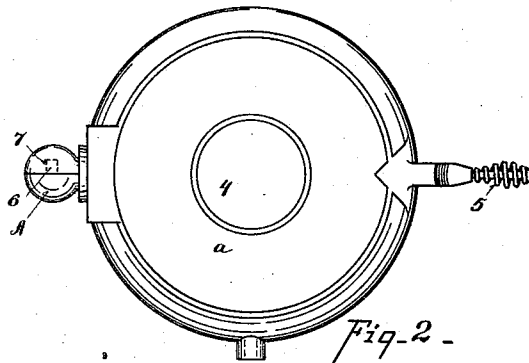


Fig. 2-

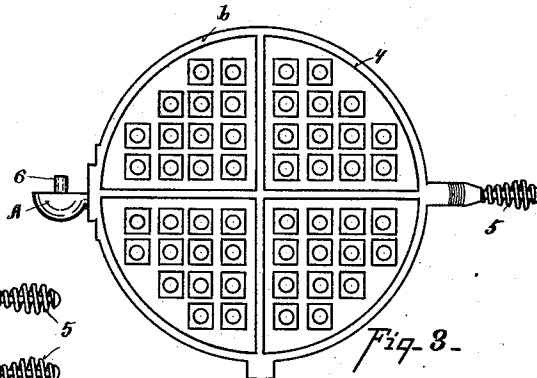


Fig. 3-

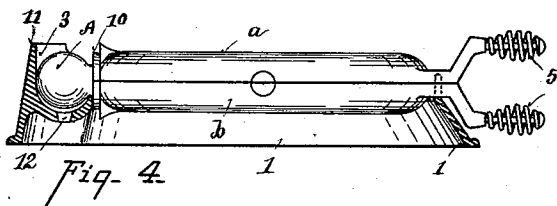


Fig. 4-

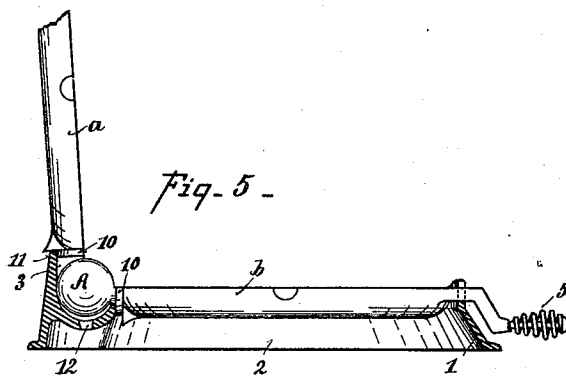


Fig. 5-

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# UNITED STATES PATENT OFFICE.

ROBERT O. BINGHAM, OF SIDNEY, OHIO, ASSIGNOR TO THE WAGNER MANUFACTURING COMPANY, OF SAME PLACE.

## COMBINED BALL-JOURNAL AND HINGE.

SPECIFICATION forming part of Letters Patent No. 479,731, dated July 26, 1892.

Application filed February 23, 1892. Serial No. 422,494. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT O. BINGHAM, a citizen of the United States, residing at Sidney, in the county of Shelby and State of Ohio, have invented certain new and useful Improvements in a Combined Ball-Journal and Hinge, of which the following is a specification.

My invention relates to a combined ball-journal and hinge. It is primarily adapted to hinge the two sections of a waffle-iron pan together, so that one will articulate upon the other and that both may be revolved upon the horizontal axis and either one or both sections may be moved and inclined in a vertical direction, if desired; but it may be used for journaling and hinging duplex parts of other devices which are desired to move singly or jointly upon a common base.

The various features of my invention are fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top plan view of the base or frame. Fig. 2 is a top plan view of a sectional pan. Fig. 3 is a plan view of the inside face of the pans. Fig. 4 is a sectional plan view of the base and pans in position for use. Fig. 5 is a sectional elevation showing one of the sections elevated.

1 represents the base or rim of an ordinary waffle-iron, provided with a central opening 2, in which the pans are suspended and journaled, so as to swing freely therein.

3 represents a spherical concavity which forms the bearing and support for the ball-journal.

4 represents the ordinary waffle-pan; 5, the handle thereof. Each pan *a b* is made one the counterpart of the other, and each is provided, preferably, with a semi-spherical journal A. These parts are each the counterpart of the other. One is provided with the pivot 6 and the other with the socket 7, formed in the base of the vertical face of the sections, respectively, the pivot 6 journaling in the socket 7, so that said pans can be oscillated freely upon said hinge.

8 represents a bearing opposite the circular bearing, in which journals the handles 5 of the pans. It will be seen that the two sections

are readily detachable one from the other, and when they are removed from the socket or when they are turned so that the disks of the pans are vertical, when one may be lifted off of the other, the plane ball-bearing being at an angle to the plane of the pan-faces, so that when the pans are in a horizontal position the circular socket 3 prevents them from being separated or coming apart, but when turned in proper position the uppermost pan may be readily lifted off from and out of its journal-seat. This is a very important result, as it enables the pans to be quickly taken apart, thoroughly cleaned, and put together, having no rivets to break or rust out, and it is therefore much more durable, as well as much more convenient, than waffle-pans hitherto used. It is desirable, also, to provide instrumentalities for holding the pans in an open position. (Shown in Fig. 5) This is accomplished by means of the flange 10 above the neck of the ball bearing against the vertical flange 11 of the socket 3. As each section is a duplicate of the other, each section is provided with a similar flange, so that whichever section is uppermost it may be supported in the elevated position. The stationary sectional pan forms a support in one direction and the flanges 10 11 a support in the opposite direction, holding either of said pans in an elevated or open position for the introduction of articles into said pan or for their removal therefrom.

12 represents an opening pierced through the base of the concave bearing. It is provided for two purposes, as it allows the parts to be easily cast; second, it allows the journal to be readily cleaned, allowing the sediment to pass through.

Having described my invention, what I claim is—

1. A combined hinge and journal for uniting and supporting duplex sections, as *a b*, consisting of a semi-spherical ball upon each of said sections, one of said semi-spherical balls provided with a pivot and the other of said balls having a recess to receive said pivot, substantially as described.

2. The combination of a base 1, having a concave socket-bearing 3, the sections *a b*, a semi-spherical ball formed on the section *a*,

a semi-spherical ball formed on the section *b*,  
a horizontal pivot formed on one of said semi-  
spherical balls, the other of said semi-spheri-  
cal balls having a recess to receive said pivot,  
5 a vertical flange on the base 1, and an annu-  
lar flange on each section *a b*, substantially  
as described.

In testimony whereof I have hereunto set  
my hand.

ROBERT O. BINGHAM.

Witnesses:

S. J. HATFIELD,  
WM. SHINE.