No. 744,015. PATENTED NOV. 10, 1903.

K. PARK.

HAND HOLE COVER.

APPLICATION FILED JULY 3, 1903.

NO MODEL.

Fig. 2.

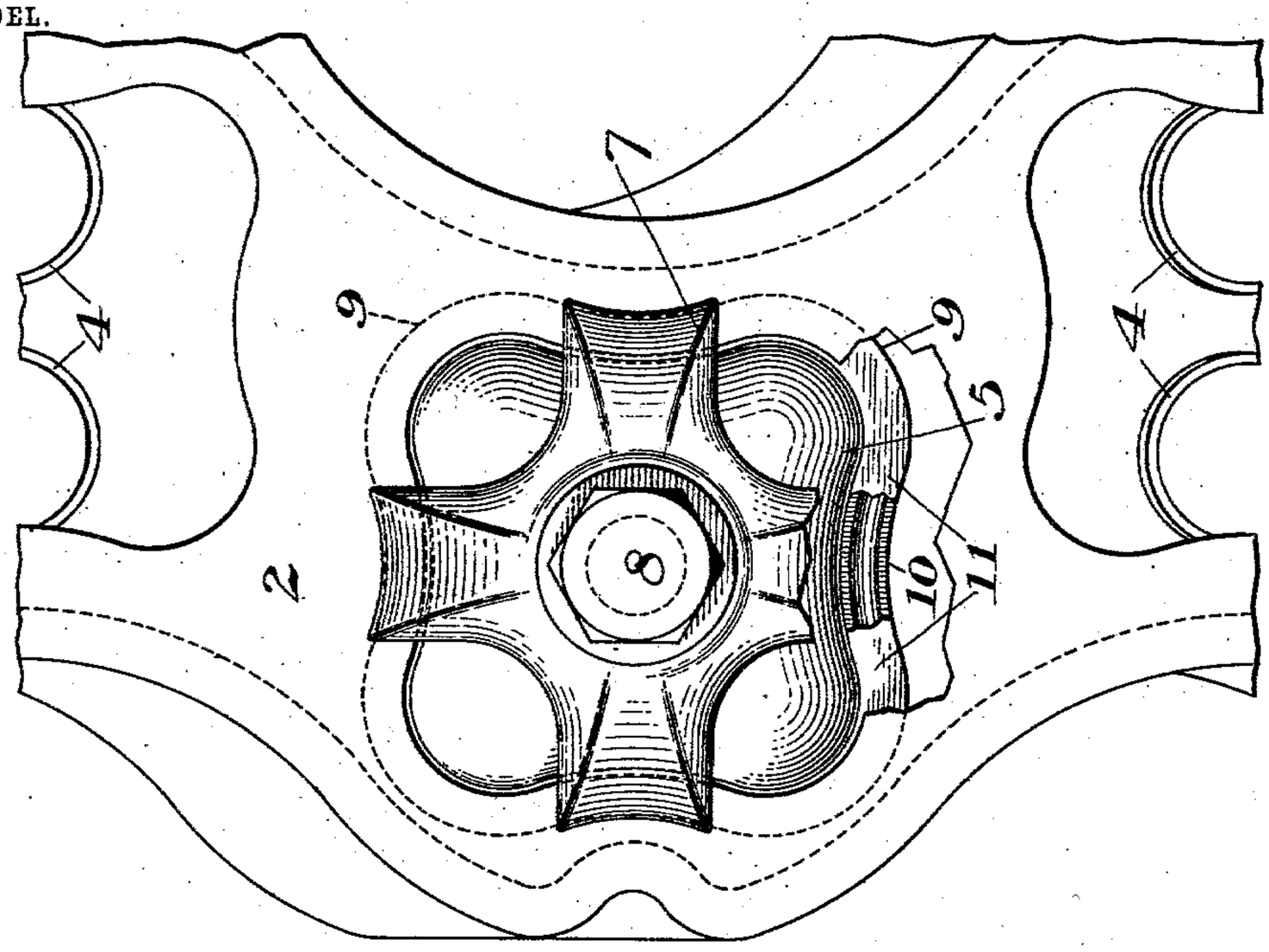

Fig. 1.

WITNESSES

J. Rowland Brown

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INVENTOR

Kennedy Park.

No. 744,015. Patented November 10, 1903.

UNITED STATES PATENT OFFICE.

KENNEDY PARK, OF MANSFIELD, OHIO, ASSIGNOR TO THE AULTMAN & TAYLOR MACHINERY COMPANY, A CORPORATION OF OHIO.

HAND-HOLE COVER.

SPECIFICATION forming part of Letters Patent No. 744,015, dated November 10, 1903.

Application filed July 3, 1903. Serial No. 164,209. (No model.)

To all whom it may concern:

Be it known that I, KENNEDY PARK, of Mansfield, Richland county, Ohio, have invented a new and useful Hand-Hole Cover, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical sectional view showing a portion of a boiler-header provided with my improved cover; and Fig. 2 is a front elevation of the same, partly broken away.

My invention relates to the hand-hole covers employed in connection with the headers of water-tube boilers; and the object of the invention is to provide a hand-hole cover or cap which will conform to the sinuous curves of the headers ordinarily used, give access to a group of tubes without necessitating the use of a special form of header, and can be inserted or removed through the hand-hole it is to cover.

In the drawings, 2 represents the outer wall of a header or manifold, and 3 the inner wall, which is shown as formed with jogs or steps to receive the water-tubes 4 4. I have shown these water-tubes as arranged in groups with a hole through the outer wall to give access to each group. This hole, which gives access to four tubes, in the case shown, is of general square or rectangular form, with the corners rounded, as shown at 9, while the sides are curved inwardly to conform to the sinuous curve of the header, as shown in Fig. 2. The cap or cover consists of a pressed-up disk or drop-forging 5, having a central bolt or stem 6, which extends through the outer spider 7 and receives the nut 8 at its outer end to draw the cap home. By this peculiar form of hand-hole and cap I am thus enabled to give access to a group of tubes, while at the same time using the ordinary sinuous header. The hand-hole when thus shaped permits the cover to be inserted or withdrawn through the opening, as the opening in its longer dimension permits the cover to be inserted, and when turned into position to coincide with the opening the cover closes the hand-hole.

The seating-face of the cap is preferably provided with a surrounding groove or recess to receive a packing-strip 11, which is preferably of soft metal. This gasket is forced against the inner face 12 of the header-wall when the cap is drawn to place, thus effectually sealing the hole. The arms of the spider preferably conform to the curved periphery of the cap, as shown in Fig. 2.

The advantages of my invention result from the peculiar inwardly-curved sides of the cap, which allow the ordinary sinuous header to be used.

I claim—

1. A hand-hole cap having inwardly-curved sides arranged to conform to an ordinary sinuous header; substantially as described.

2. A sinuous header or manifold having a hole to give access to a group of tubes, and an inside cap for the hole having inwardly-curved sides to conform to the header; substantially as described.

In testimony whereof I have hereunto set my hand.

KENNEDY PARK.

Witnesses:
J. ROWLAND BROWN,
ISAAC HARTER, Jr.