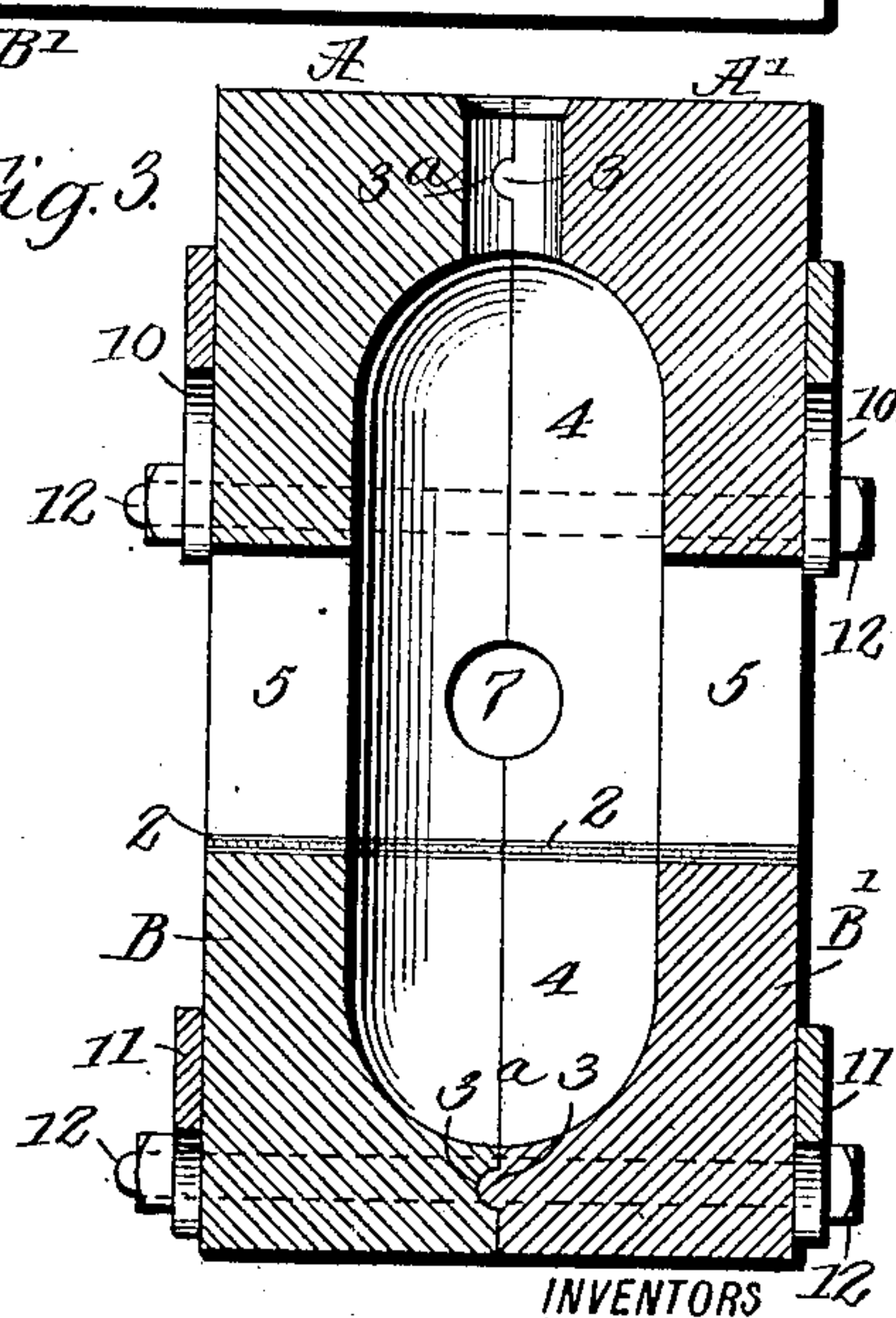
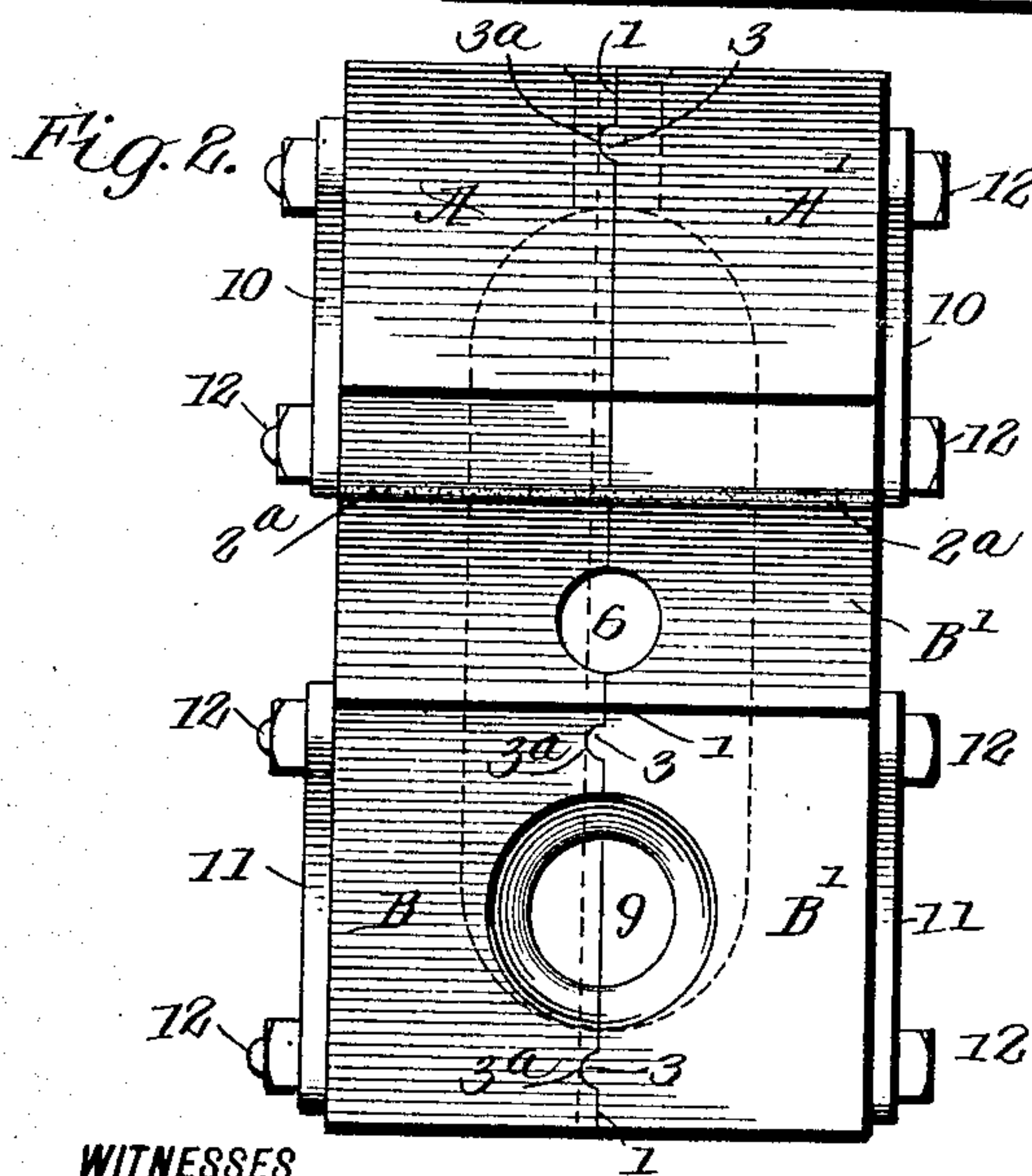
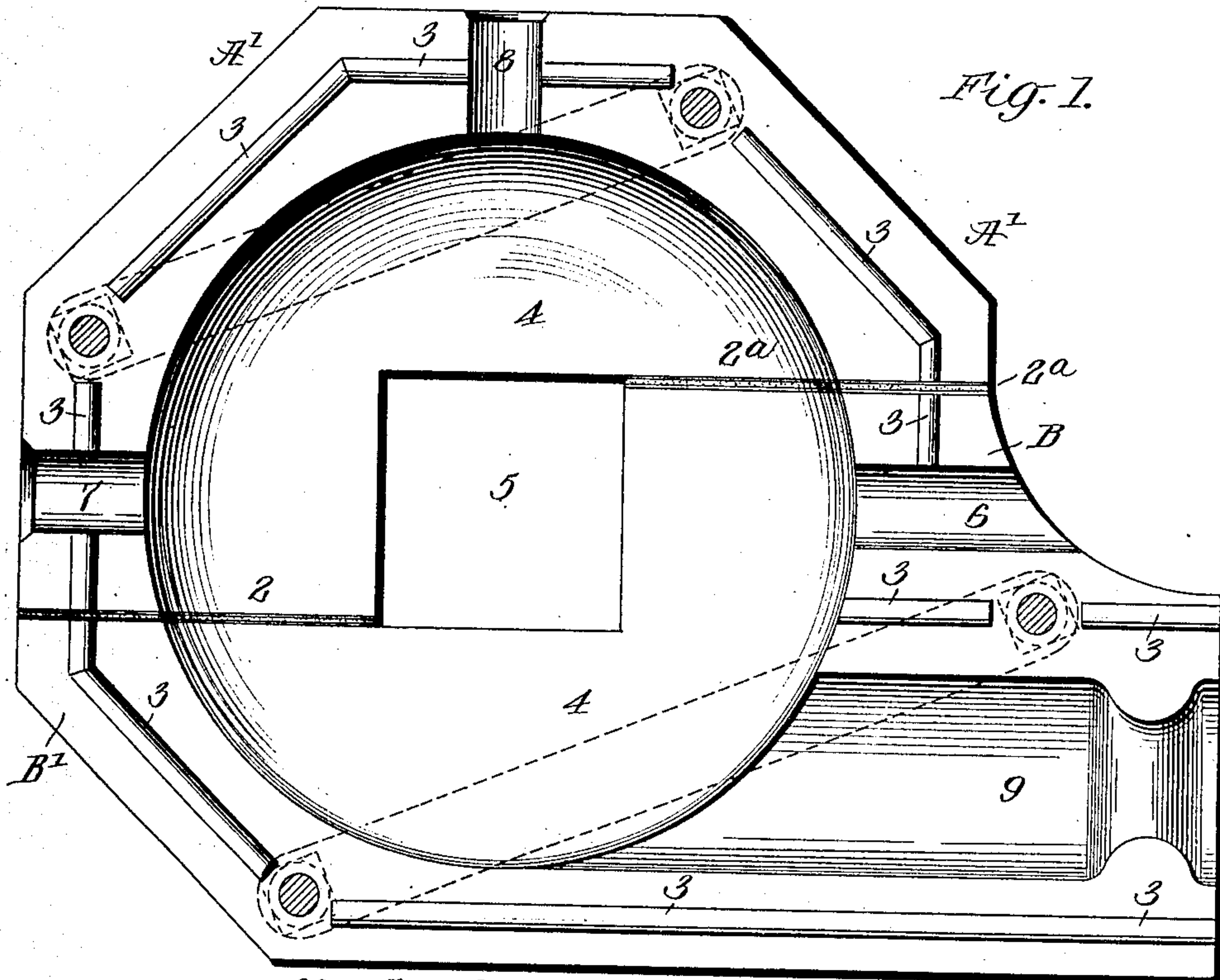


J. W. RUSSELL & T. E. NEYLON.
OIL AND GAS FURNACE.
APPLICATION FILED NOV. 14, 1908.

916,787.

Patented Mar. 30, 1909.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN WILLIAM RUSSELL AND THOMAS EDWARD NEYLON, OF RENOV, PENNSYLVANIA.

OIL AND GAS FURNACE.

No. 916,787.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed November 14, 1908. Serial No. 462,614.

To all whom it may concern:

Be it known that we, JOHN W. RUSSELL and THOMAS E. NEYLON, citizens of the United States, residing at Renovo, in the county of Clinton, State of Pennsylvania, have invented an Improvement in Oil and Gas Furnaces, of which the following is a specification.

Our invention is a furnace adapted for using oil or gas as a fuel for heating bars, frames, or other parts of iron construction, and particularly for welding engine frames.

The chief object we have in view is the production of a furnace distinguished by strength, durability, and economy of construction, and in which refuse oil may be burned with efficient result.

In the accompanying drawing, Figure 1 is an elevation of one-half of the furnace, (inside view). Fig. 2 is an end view of the furnace. Fig. 3 is a transverse vertical section.

The body of the furnace is made of fire-clay or a mixture of fire-clay and foundry core sand, the same being duly molded into the required form, which may be reinforced with metal bars or other iron forms embedded in the material.

The furnace is formed of four parts A, B, A', B', which are molded separately in large forms provided for the purpose, and then cemented together and reinforced by metal bars and cross bolts.

The upper parts A, A', are practically duplicates, and the lower parts B, B', are the same. Both the upper and lower parts are cemented and united in the vertical plane 1, and the upper parts A, A', are cemented and united with the lower ones B, B', on the horizontal lines 2 and 2^a; see Figs. 1 and 2. To assist in preventing vertical movement of parts A, B, on the corresponding parts B, B', they are provided with corresponding ribs 3 and 3^a, whose construction and arrangement are apparent from the drawing. The furnace is provided interiorly with a large circular chamber 4 having rectangular and coinci-

dent side openings 5, for introduction of the bars or frames to be heated and welded. This chamber 4 is provided with a peep-hole 6 and exit openings 7, 8, while 9 indicates the combustion port where gas, or oil to be vaporized, is to be introduced by suitable means. The sides of the furnace are parallel, as shown in Figs. 2 and 3, and the base of the furnace in which the flue or port 9 is formed is extended somewhat, as indicated in Fig. 1. The sides of the furnace are reinforced by flat metal bars 10 and 11, the same being applied in an inclined position to the upper parts A, A', and the lower parts B, B', their ends being connected by transverse screw bolts 12 which pass through, and thus assist in rigidly connecting, the opposite parts of the furnace.

By this construction and combination of parts we produce the parts of the furnace cheaply and they may be quickly secured together.

What we claim is:

1. The improved furnace formed of moldable fire-resisting material, and composed of separate parts or sections whose vertical and horizontal inner surfaces are cemented together, the vertical joint being formed in part of ribs and corresponding sockets on the respective opposed parts, and cross bolts securing such parts together, substantially as described.

2. The improved furnace formed of moldable fire-resisting material and composed of upper parts or sections A, A', and lower parts or sections B, B', the opposing parts being practically duplicate in construction, and the inner vertical and horizontal sides of the four parts being cemented together, and the furnace being provided interiorly with a large circular chamber having coincident side openings and combustion and exit ports, substantially as described.

JOHN WILLIAM RUSSELL.
THOMAS EDWARD NEYLON.

Witnesses:

JOHN U. SHAFFER,
FRANK L. KEPLER.

It is hereby certified that in Letters Patent No. 916,787, granted March 30, 1909, upon the application of John William Russell and Thomas Edward Neylon, of Renovo, Pennsylvania, for an improvement in "Oil and Gas Furnaces," an error appears in the printed specification requiring correction, as follows: In line 74, the word "separate" should read *separable*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 8th day of June, A. D., 1909.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.