No. 869,621. PATENTED OCT. 29, 1907.

J. J. P. CASEY.

BRICK KILN.

APPLICATION FILED MAR. 28, 1907.

2 SHEETS—SHEET 1.

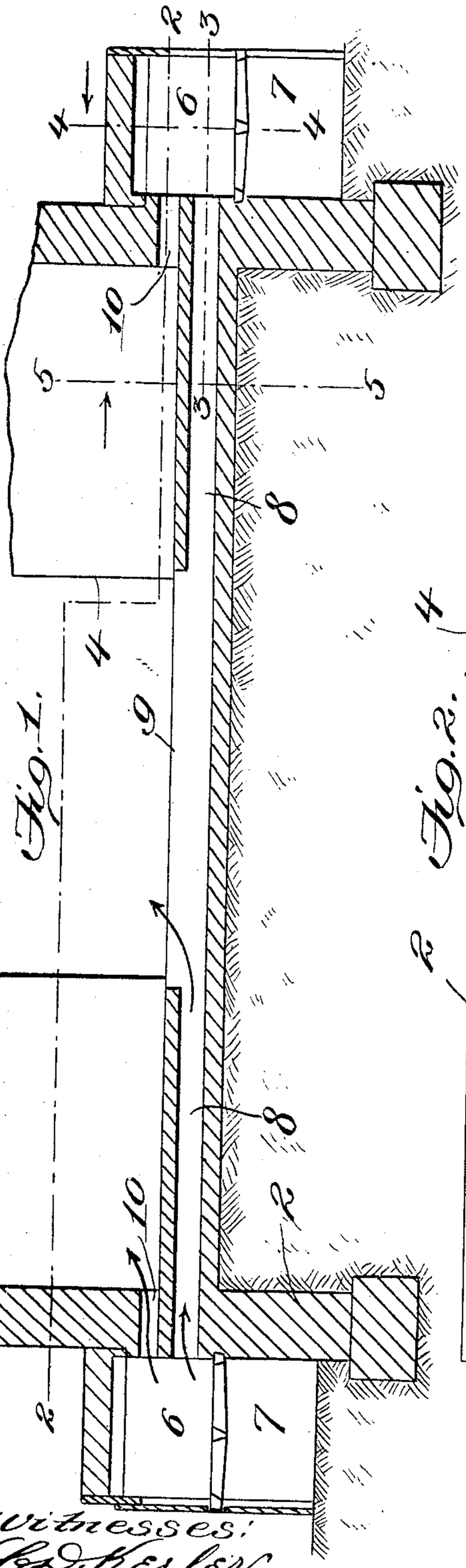

Fig. 1.

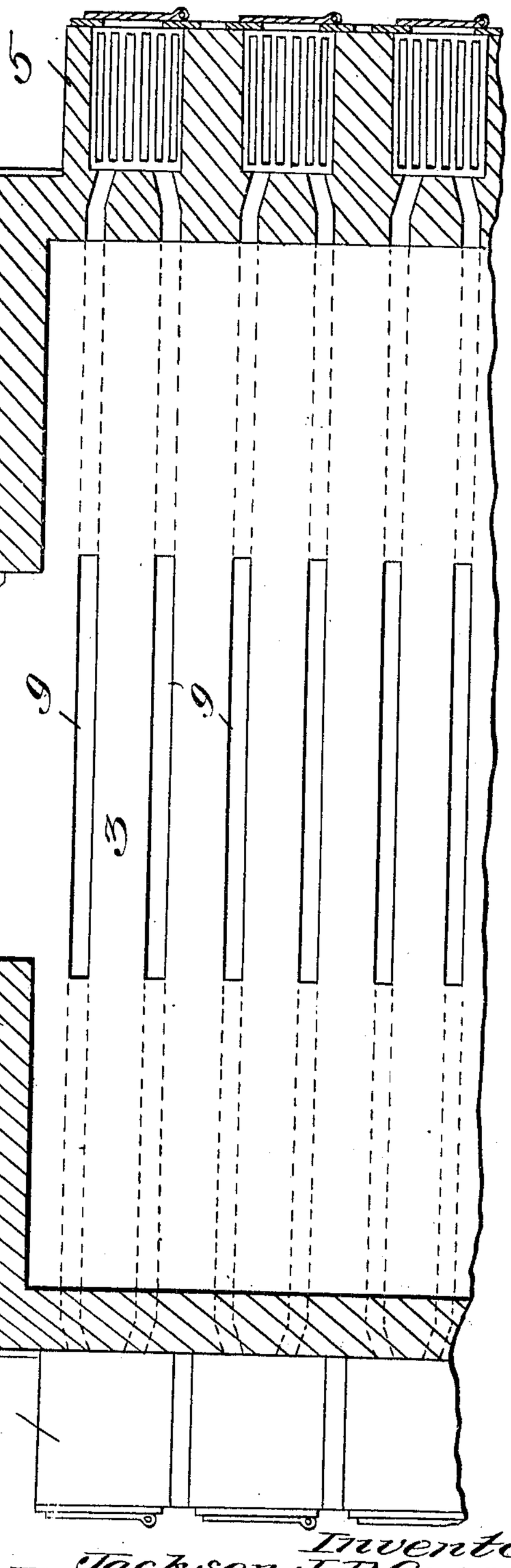

Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

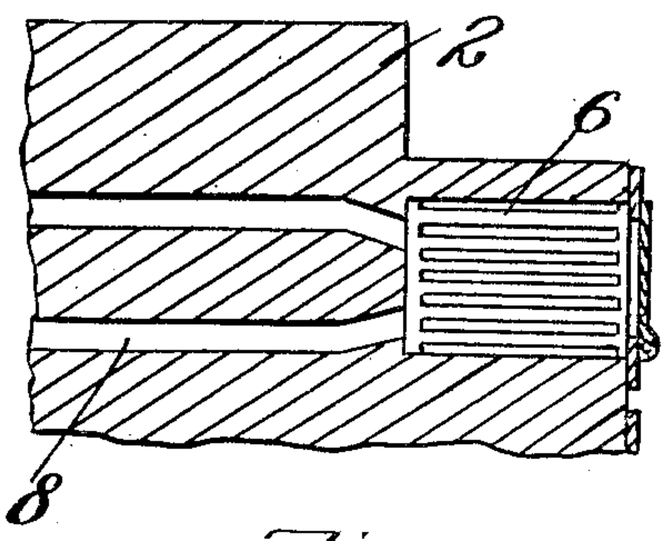


Fig. 4.

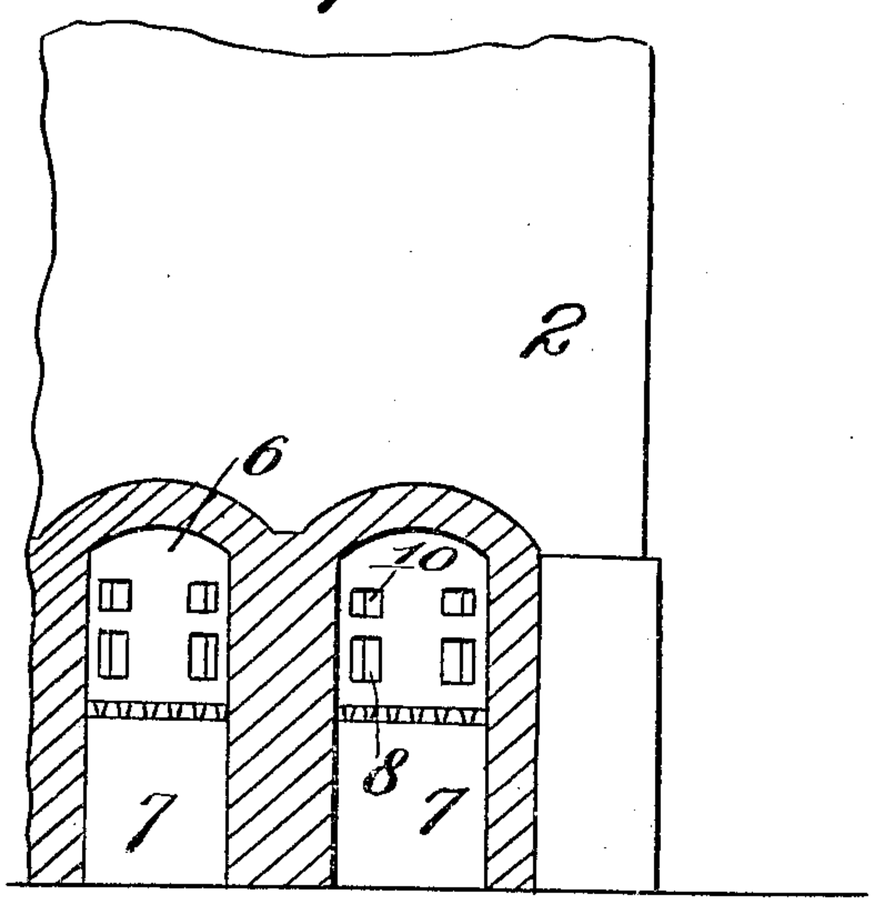


Fig. 5.

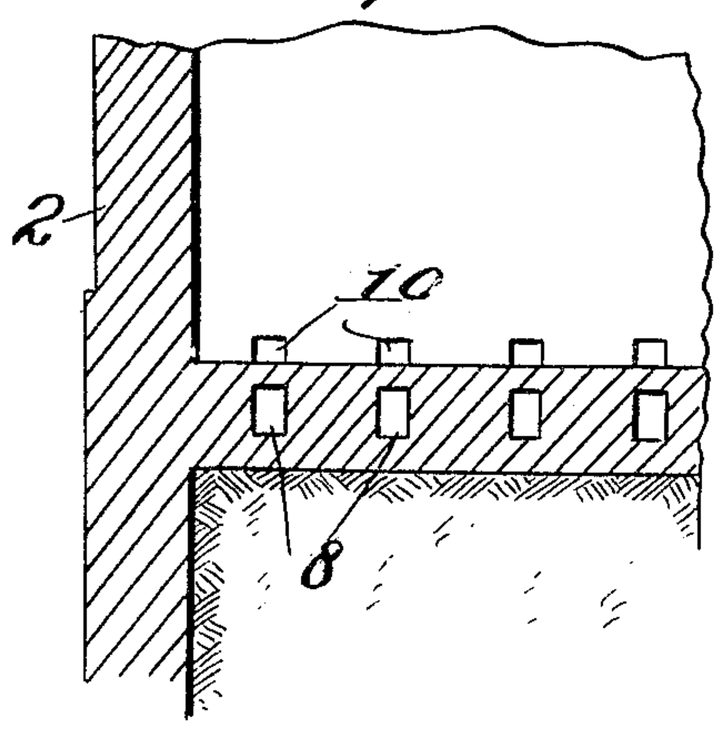
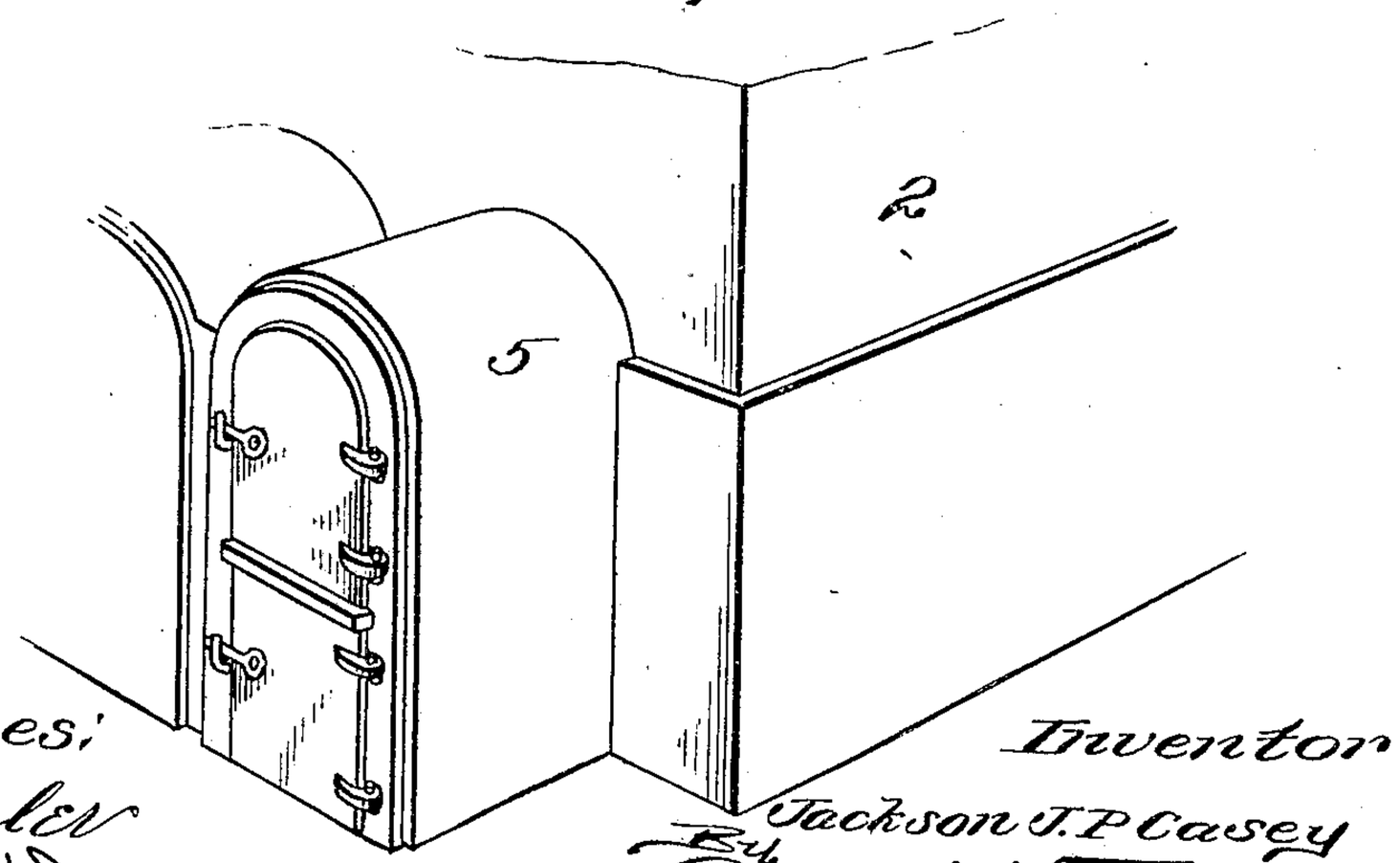


Fig. 6.



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UNITED STATES PATENT OFFICE.

JACKSON J. P. CASEY, OF CHATTAHOOCHEE, GEORGIA.

BRICK-KILN.

No. 869,621. Specification of Letters Patent. Patented Oct. 29, 1907.

Application filed March 28, 1907. Serial No. 365,050.

To all whom it may concern:

Be it known that I, JACKSON J. P. CASEY, a citizen of the United States, residing at Chattahoochee, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Brick-Kilns, of which the following is a specification.

This invention relates to brick kilns. I employ this term as a convenient one, as a kiln involving my invention may be employed with advantage for burning, heating, or drying articles other than brick. It will, therefore, be obvious that I employ the latter designation in a broad sense.

One of the primary objects of the invention is to provide a simple and effective means for uniformly heating the green brick. The kiln has as usual a brick-receiving chamber, and this chamber may be of any desirable character. In connection with the said brick-receiving chamber I provide a combustion chamber and flues leading from the combustion chamber into the brick-receiving chamber and of different lengths. In the present case one flue is situated above the other flue and one of said flues delivers hot air into a side of the brick-receiving chamber and the other flue hot air substantially to the central portion of the said brick-receiving chamber. As a matter of fact, I prefer to employ a series of these long flues and a similar number of short flues, each flue preferably being connected with a furnace forming part of the kiln. In the present instance I provide two furnaces, and the opposite ends of the longer flues are connected with the two furnaces and have outlets between their ends situated approximately centrally of the said brick-receiving chamber.

In the drawings accompanying and forming part of this specification I show in detail one advantageous form of embodiment of the invention which, to enable those skilled in the art to practice the same, will be fully set forth in the following description, while the novelty of the invention will be included in the claims succeeding said description.

Referring to said drawings: Figure 1 is a vertical sectional elevation of a kiln including my invention. Fig. 2 is a horizontal sectional top plan view, the section being taken on the line 2—2, Fig. 1. Fig. 3 is a horizontal sectional top plan view, the section being on the line 3—3, Fig. 1. Figs. 4 and 5 are cross sectional elevations on the lines 4—4 and 5—5, respectively, of Fig. 1 and looking in the direction of the arrows in said Fig. 1. Fig. 6 is a detail view in perspective of one corner of the kiln.

Like characters refer to like parts throughout the several figures.

The kiln shown is denoted in a general way by 2, and it contains a brick-receiving chamber as 3 in which the bricks to be burned, heated, or otherwise treated are laid, stacked or otherwise positioned. I form, as usual, in one end wall of the kiln an opening as 4 by way of which the bricks can be introduced into the kiln or removed therefrom.

While the necessary heat may be supplied to the chamber 3 in any desirable way, I have shown for this purpose two furnaces which, in the present case, are of duplicate construction and each of which will be designated by the numeral 5. These furnaces 5 form a part of the kiln and those parts of the same and those parts of the interior of the brick-receiving chamber 3 which are exposed to the fire of the furnace are protected by some suitable fire resisting material, such as fire-brick, which is mentioned simply as an illustration. I have alluded to the fact that two furnaces are shown; this number, of course, is not essential, although I can obtain desirable effects by employing the two; that is to say, I insure a high degree of efficiency. In like manner the furnaces may be of any desirable construction, each in the present case being of sectional form and each section being made up of a fire-box or combustion chamber as 6 under which is positioned an ash pit as 7. There is really, therefore, at each side of the kiln a battery of furnaces, the latter being, as will be apparent, situated opposite each other. I form in the floor of the brick-receiving chamber 3 one or more flues as 8. I show quite a number of these flues, although the number is a matter of no great consequence, as it is possible that one might be employed. The ends of the flues 8, it will be seen, open into the combustion chambers or fire-boxes of the furnaces 5, there being shown two of such flues 8 as extending from each fire-box or combustion chamber 6. The flues 8, therefore, extend the complete width of the kiln chamber 3 or from one side thereof to the other, and I use the term "side" in a generic sense, for it is conceivable that the flues in question might extend from the ends of the kiln chamber, which would be the same thing. The flues 8 have slots or outlets as 9 extending therefrom, as shown clearly in Figs. 1 and 2, said slots being situated substantially centrally of and approximately equal in width with the respective flues and providing for the escape of hot air from the flues into the interior of the chamber 3 and practically centrally thereof.

In addition to the series of long flues as 8 to which I have referred, I prefer to employ a series of short flues as 10, there being two of each of these short flues extending from each fire-box or combustion chamber 6. Said short flues are located above the long flues 8 and are formed in the side walls of the kiln and extend only to the interior thereof or open into the chamber 3. The longer flues, therefore, provide for the supply of hot air into the central portion of the chamber 3, while the short flues 10 furnish hot air to the sides of said cham-

ber, by reason of which the brick in the kiln can be uniformly and equally heated.

What I claim is:

A kiln of the class described having a brick-receiving chamber, furnaces at opposite sides of the brick-receiving chamber, having combustion chambers, flues formed directly in the base of said brick-receiving chamber and connecting the combustion chambers of the respective furnaces and each having a single outlet substantially centrally between its ends, opening into the interior of the brick-receiving chamber, the width of the outlets being substantially the same as that of the respective flues, and a second set of flues located above the first mentioned flues and extending from the combustion chambers into the sides of said brick-receiving chamber.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JACKSON J. P. CASEY.

Witnesses:

J. O. MILLER,

MARION HAREEN.