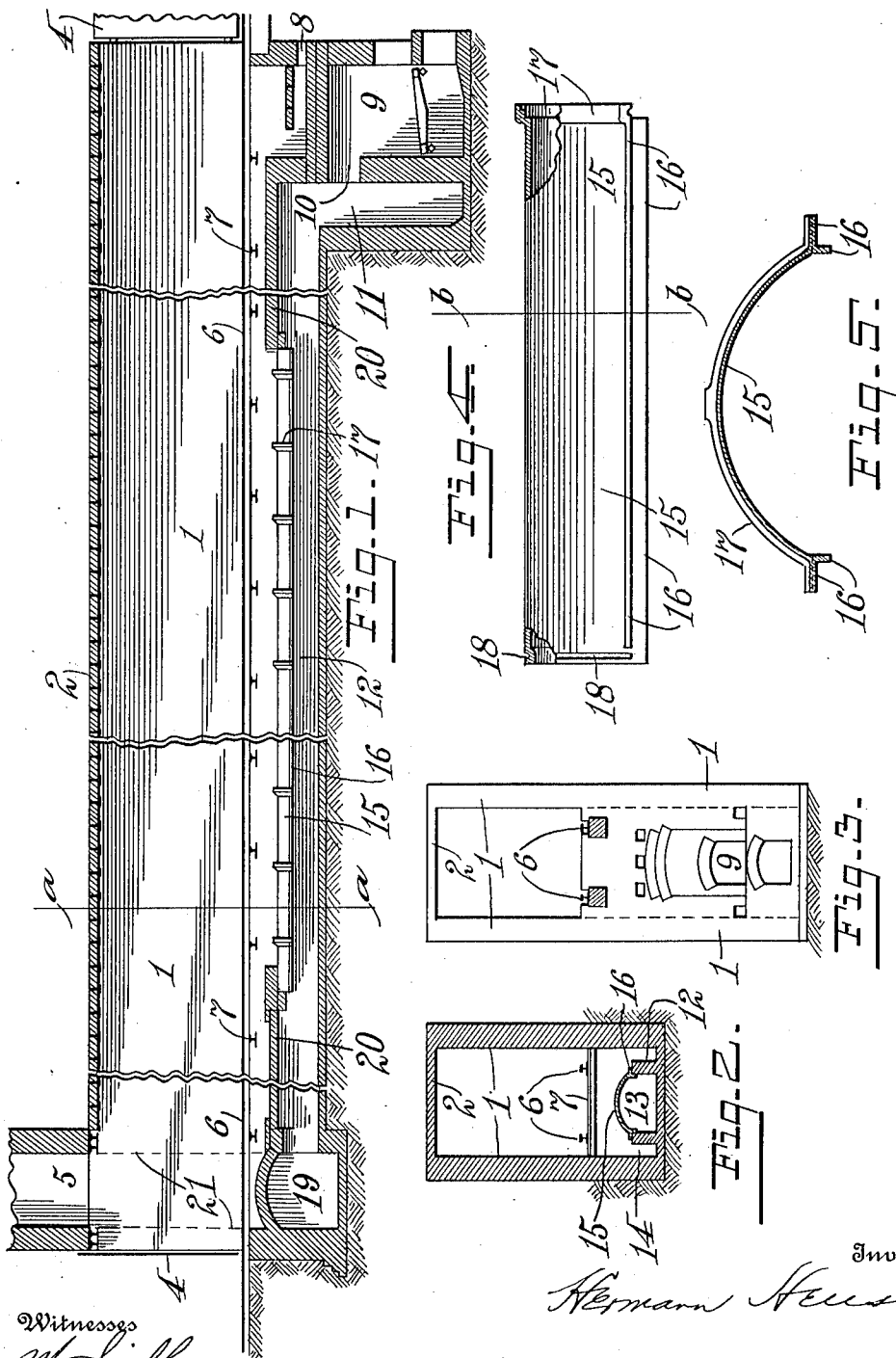


H. HEUSS.
 DRIER FOR CLAYWARE.
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1,022,082.

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Witnesses
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DRIER FOR CLAYWARE.

1,022,082.

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To all whom it may concern:

Be it known that I, HERMANN HEUSS, a citizen of the Republic of Switzerland, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Driers for Clayware; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in driers for eliminating the excessive moisture from clay ware preparatory to hardening or baking the product by the burning process.

The object of the invention is to provide a drier flue for the products of combustion, which is adapted to resist the deteriorating action of the products of combustion, and which will facilitate repairs and will effectually seal the smoke from the drying tunnel, as will hereinafter more fully appear.

Referring to the accompanying drawings which illustrate said improvements, Figure 1 is a longitudinal vertical sectional elevation of a drier constructed according to my invention, with intermediate portions broken away; Fig. 2 is a section on the line *a a* of Fig. 1; Fig. 3 is an elevation of the furnace end of the drier; Fig. 4 is a side elevation of one of the metallic radiators; and Fig. 5 is a section on the line *b b* of Fig. 4.

Throughout the specification and drawings, similar reference characters indicate corresponding parts.

Referring more particularly to the drawings, 1 represents the side walls and 2 the top of a drier tunnel which receives the clay ware to be subjected to the drying process. While only one tunnel is shown in the drawings, it will be understood that a plurality may be arranged in parallel relation. Each end of the said tunnel is provided with a door 4, and one end communicates with a stack 5. The bottom of said tunnel is provided with a track 6 mounted on cross rails 7, forming ties. The semi-plastic clay ware to be treated or dried is conveyed to the interior of the tunnel on trucks (not shown)

which run on the tracks 6. It will be understood, that after the tunnels have received their full capacity of such clay ware, the doors 4 are closed to prevent the escape of the heated air afterward applied to the clay product.

The end of the drier opposite the stack 5 is provided with air openings 8 below the doors 4 and which allow air from the exterior to enter the tunnel and to circulate through the clay ware, the said air afterward passing out through the stack 5. To elevate the temperature of this air to expel the excessive moisture in the clay, there is mounted beneath the track 6 a radiating flue 13 which communicates with a furnace 9, and which is constructed as follows: Mounted below the end of the tunnel opposite the stack 5 and beneath the opening 8 is the furnace 9 which communicates through an opening 10 with a back chamber 11. The upper terminal of the chamber 11 communicates with the longitudinal radiating flue 13, before referred to, extending approximately the entire length of the tunnel beneath the track 6. The sides 12 of the flue 13 are constructed of brick, which lie a sufficient distance from the sides 1 of the tunnel to provide space 14 to allow the circulating air to receive the radiating heat. The top 20 of the extreme ends of the flue may also be constructed of brick as is shown in the drawings. The intermediate portion of the top of the flue 13 is constructed of a plurality of metallic radiating arches or shells 15 which may be semi-circular in form and the edges of which rest upon the inner top edges of the sides 12 of the flue 13. The edges of the said shells 15 may be provided with flanges 16 which hold the said shells in position on the side walls 12. One end of each of said shells 15 is provided with a bell flange 17 which overlaps the abutting edge of the next shell to provide a continuous top inclosure for the flue. The edges of said shells not provided with the flanges 17, are provided with peripheral grooves 18 adapted to receive a cement, thereby sealing the joints and preventing the products of combustion escaping into the tunnel and damaging the clay ware by coming in contact therewith. The shells 15 are of suitable length and weight to allow the same to be conveniently handled; and are preferably made of a metal, such as cast iron, which is

capable of resisting the deteriorating actions of sulfuric acid or other destructive agents in the products of combustion. The end of the flue 13 opposite the furnace 9 communicates with a lateral or cross flue 19 which in turn communicates with the stack 5 through a flue 21 on the side of the drier, see dotted lines Fig. 1.

In a drier thus constructed, the air which expels the moisture in the clay, enters the tunnel through the openings 8 in one end thereof, and coming in contact with the flue 13, the temperature of the air will be elevated to a sufficient degree to expel the excessive moisture in the clay ware. The air eventually passes out through the stack 5, thereby maintaining a constant circulation. The circulating air will receive most of its heat from the metallic shells 15, but will also receive some heat from the brick portions of the flue. The circulating air will also be initially heated from the top and sides of the furnace 9 as the air enters the tunnel through the openings 8 around the furnace 9.

As the metallic portions of the flue are

made of members which are easily handled, the flue may be disassembled to facilitate cleaning.

I claim:

In a drier for clay ware, a drying tunnel, a radiating flue extending longitudinally below said tunnel and consisting of side walls, a sectional top closure for said flue comprising a plurality of arched radiating plates, having longitudinal marginal flanges extending at right angles and engaging the inner sides and tops of said flue walls, the ends of said plates overlapping and the inner portions of said overlapped ends being provided with peripheral grooves for the reception of a cementitious material, whereby said sectional top closure is sealed throughout its length and the products of combustion are prevented from entering the drying tunnel.

In testimony whereof I affix my signature, in presence of two witnesses.

HERMANN HEUSS.

Witnesses:

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