

H. REHMANN.

GAS GENERATOR.

APPLICATION FILED MAY 8, 1907.

900,955.

Patented Oct. 13, 1908.

Fig. 1.

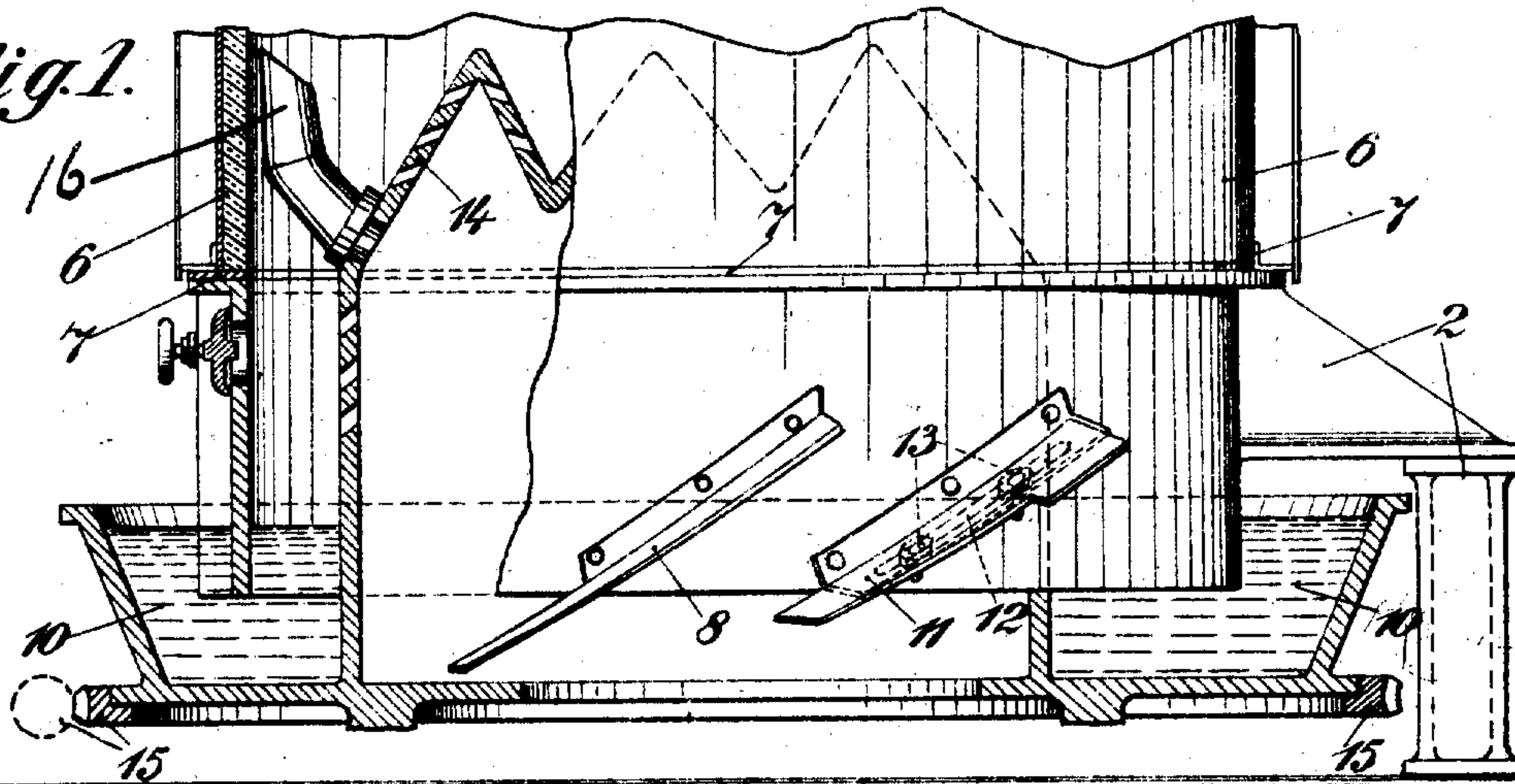


Fig. 2.

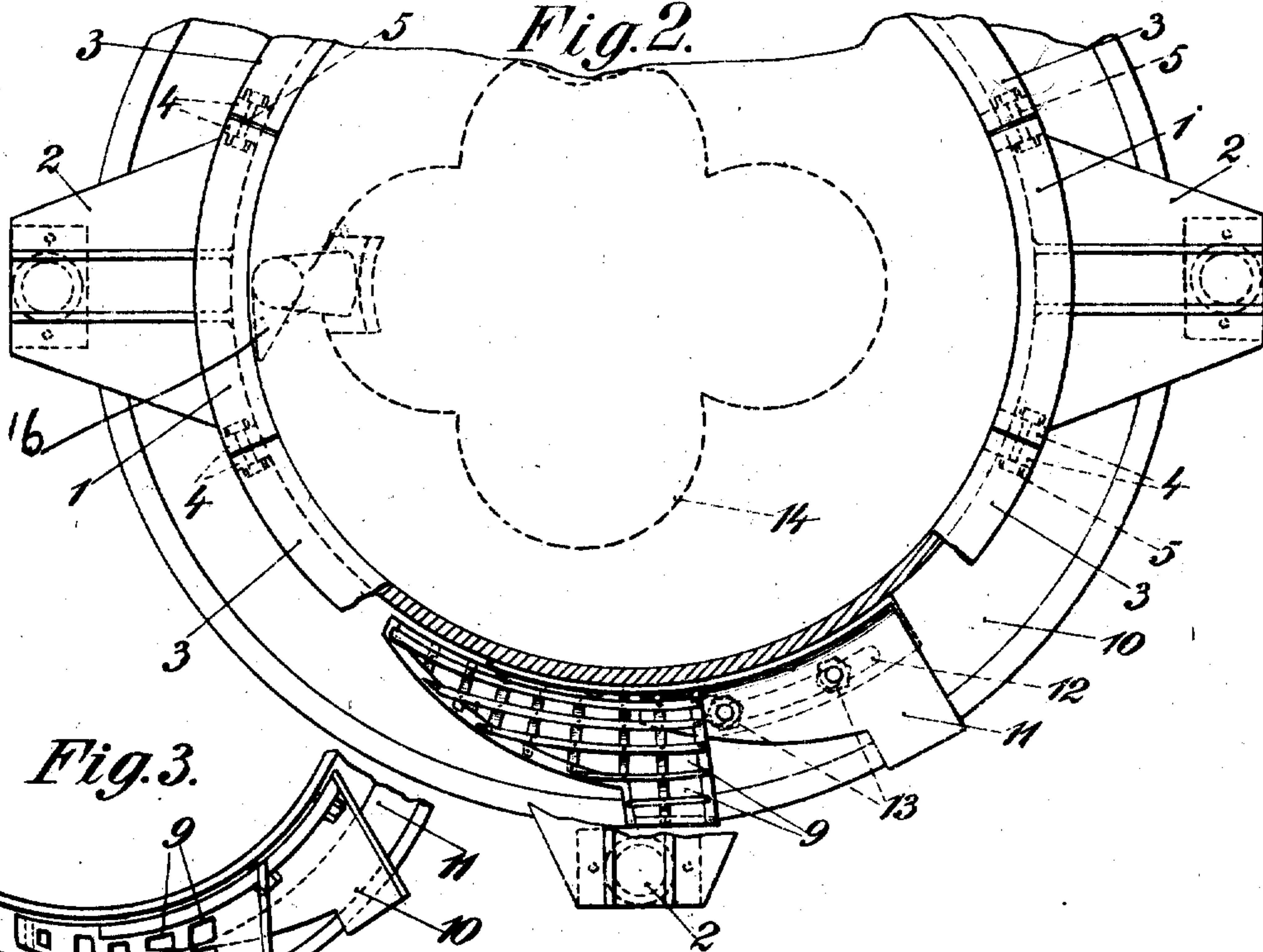
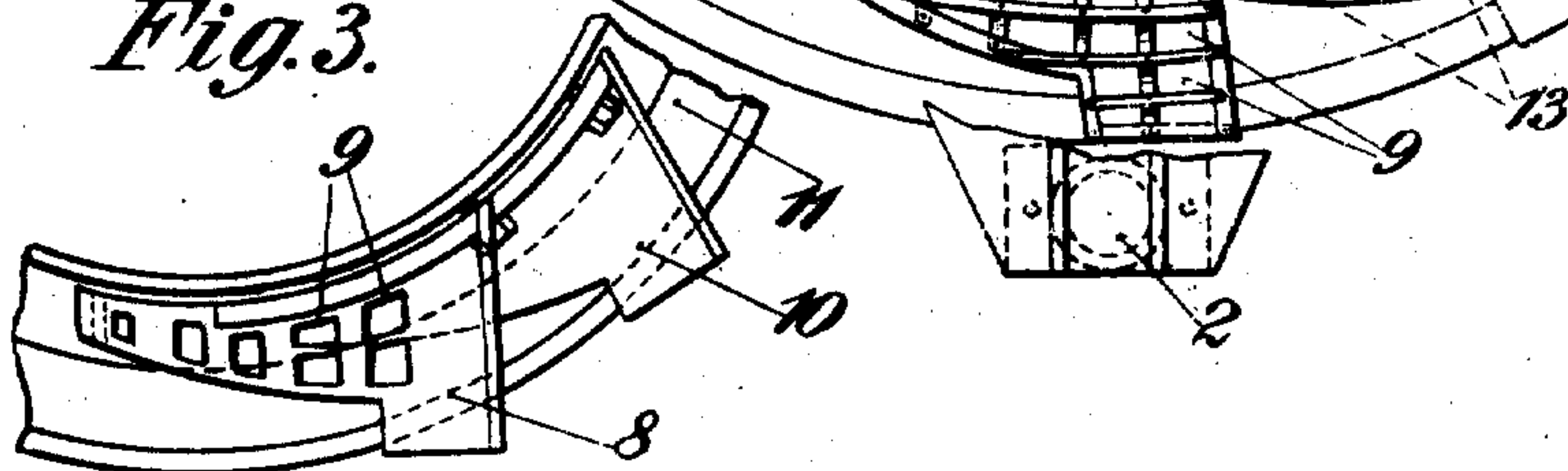


Fig. 3.



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UNITED STATES PATENT OFFICE.

HUGO REHMANN, OF MÜLHEIM-ON-THE-RUHR, GERMANY.

GAS-GENERATOR.

No. 900,955.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed May 8, 1907. Serial No. 372,627.

To all whom it may concern:

Be it known that I, HUGO REHMANN, a subject of the German Emperor, and resident of Bürgerstrasse 10, Mülheim-on-the-Ruhr, Germany, have invented certain new and useful Improvements in Lower Parts for Gas-Generators, of which the following is a specification.

The invention relates to a base or lower part for gas generators of the type in which a revolving ash and clinker basin is provided, in which the lower part of the generator wall projects. In such gas generators the automatic stirring of the combustible is carried out by means of a suitably constructed revolving grate, fastened on the basin and the automatic removal of the ash and clinkers is carried out by means of plates which are fixed on the immovable generator wall and project into the basin.

The essential features of the present invention consists in the construction of the plates for removing the ashes and clinkers, in that the quantity of residue to be removed is independent of the speed at which the basin and the grate fastened there on, revolve. Further the generator wall is so constructed, that any part of the interior of the lower part of the furnace is easily accessible. This is attained in that all or a part of the plates fixed on the outside of the generator wall are provided with holes and are made adjustable. Further the generator wall is constructed in several sections, one or more of which are arranged, so that they can be removed, the others however being fixed.

In the accompanying drawings: Figure 1 shows a view of the lower part of the gas generator, part being shown in section, Fig. 2 shows a plan of the lower part, and Fig. 3 shows a special form of construction of the plates and the holes in the same.

The bottom of the generator wall is conveniently made of cast iron, and of cylindrical form. It consists of the rigid or fixed segments 1, which are provided with bracket feet 2 in the nature of flying buttresses, and the removable segments 3. The segments 3 are connected in any suitable way with the segments 1. For instance, all segments may be provided with lateral flanges 4, which can be held together by means of bolts 5. The bracket feet 2 serve for bearing the whole of the generator wall. Every two rigid segments 1 are connected at the top

by means of a carrier, which serves for supporting the wall of the generator 6 in case one of the segments 3 is taken away. In the form of construction shown a ring 7 is arranged for this purpose, which lies over all segments 1 and 3.

8 is the plate, which is fastened on the outside of the generator wall for removing the larger clinkers and coarser ashes. This plate is provided with holes 9, so that the smaller clinkers and ashes can fall through, and remain in the revolving basin 10. If their removal is desirable or necessary then the second plate 11 is provided. This plate has no holes and can be adjusted in height by means of the slot 12 and the bolts 13, so that it may project any desirable depth in the ash basin 10. This plate can also be removed, when this should be necessary for any reason.

According to Fig. 2 the plate 8 may be constructed in lattice form. But it can also as shown in Fig. 3 be constructed in the form of a grate. The holes 9 can moreover be made larger or smaller according to the cinders, and adapted to the same.

The basin or tray 10, which bears the grate 14 constructed in suitable manner, is driven by the usual cog mechanism 15, or by any suitable device. On the grate 14, a lateral projection 16 in the form of a scraper may be preferably arranged for the purpose to prevent the settling of the slag or clinker on the wall of the generator 6.

The ash and clinker basin can in the well-known way be made to serve as a water seal.

By taking away one or more of the segments 3, access may easily be gained to the interior mechanism of the generator, without it being necessary as previously was the case to provide man-holes in the wall of the generator or to dismount the upper part of the same.

By means of the plate 8 the larger clinkers, cinders and coarser pieces of ash are taken out from the bottom of the tray 10, without too much of the ashes being removed. When too much residue is removed the burning material, from which the gas is being produced, and the fresh combustible fall down too quickly, so that an insufficient yield is produced. The removal of the fine ash takes place as required by means of the plate 11.

By employing a whole plate for removing

the dross as was usual hitherto, the basin and with it the grate had to be rotated very slowly, since otherwise too much dross would be removed. This caused an insufficient stirring of the combustible, so that this drawback is also removed by the construction of the new lower part.

I claim:

1. In a lower part for gas generators consisting of single fixed segments, removable segments of said wall, a bracket foot on each fixed segment, means for binding the removable segments to the fixed segments, a rotatable ash and clinker tray the bottom of said wall projecting into said tray, means for automatically removing the residue from the combustible, a grate fixed rigidly on said tray, said grate projecting into the interior of the generator, and means for rotating said tray and with it the grate, substantially as set forth.

2. In a lower part for gas generators, the combination of a cylindrical wall, consisting of single fixed segments, removable segments of said wall, a bracket foot on each fixed segment, means for binding the removable segments to the fixed segments, a rotatable ash and clinker tray, said generator wall projecting into said tray, an oblique plate fixed on the outer circumference of the said wall, said plate being provided with holes, a second oblique plate, said second plate being adjustable and removable on the

outer circumference of the said wall, a grate rigidly fixed on said rotatable tray, said grate projecting into the interior of the generator, and means for rotating said tray and with it the grate, substantially as set forth.

3. In a lower part for gas generators the combination of a cylindrical wall, said cylindrical wall consisting of fixed segments and removable segments, means for supporting the wall of the generator when the removable segments are taken away, a bracket foot on each fixed segment, means for binding the removable segments to the fixed segments, a rotatable ash and clinker tray, said generator wall projecting into said tray, an oblique plate fixed on the outer circumference of the said wall, said plate being provided with holes, a second oblique plate, said second plate being adjustably and removably attached to the outer circumference of said wall, a grate fixed rigidly on said tray, said grate projecting into the interior of the generator, and means for rotating said tray and with it the grate, substantially as set forth.

In testimony whereof I have hereunto signed my name this 29th day of April 1907, in the presence of two subscribing witnesses.

HUGO REHMANN.

Witnesses:

M. ENGELS,

ALFRED POHLMAYER.