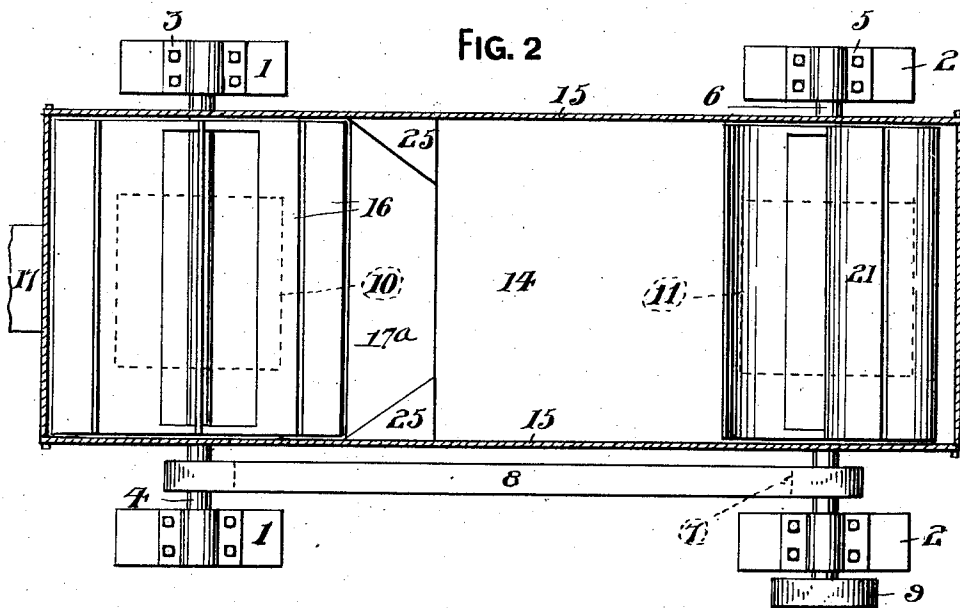
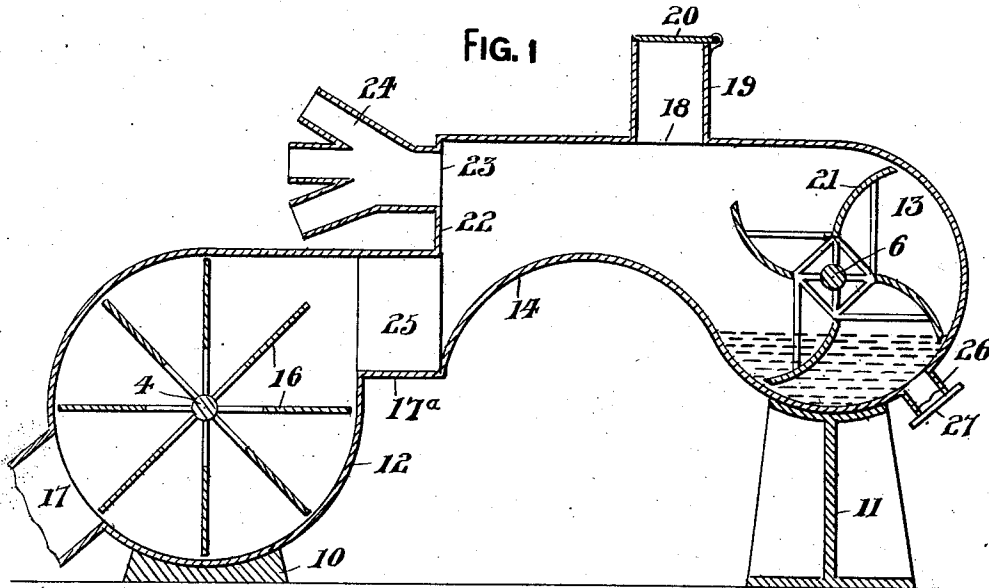


J. MARKUS.
SMOKE CONSUMER.
APPLICATION FILED AUG. 30, 1911.

1,022,857.

Patented Apr. 9, 1912.



WITNESSES

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UNITED STATES PATENT OFFICE.

JANOS MARKUS, OF FREEBURG, ILLINOIS.

SMOKE-CONSUMER.

1,022,857.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed August 30, 1911. Serial No. 646,774.

To all whom it may concern:

Be it known that I, JANOS MARKUS, a subject of the King of Hungary, residing at Freeburg, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Smoke-Consumers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to smoke consumers, and the objects of my invention are, first, to provide a novel apparatus for expeditiously and economically separating solid matter from gaseous matter; second, to provide an apparatus that permits of the solid matter being easily removed after having been separated from gaseous matter; third, to provide a smoke consumer that consists of comparatively few parts easy to assemble and inexpensive to manufacture, and fourth, to provide a smoke consuming apparatus that can be made of various sizes, the apparatus being especially designed for a small manufacturing plant.

These and such other objects as may hereinafter appear are attained by a combination of elements that will be presently described and then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a longitudinal sectional view of a smoke consuming apparatus, and Fig. 2 is a horizontal sectional view of the same.

A smoke consuming apparatus in accordance with this invention comprises two sets of standards 1 and 2, the standards 1 having the upper ends thereof provided with bearings 3 for a transverse revoluble shaft 4. The standards 2 have the upper ends provided with bearings 5 for a transverse revoluble shaft 6. The shafts 4 and 6 are provided with belt wheels 7 and passing over these wheels is an endless belt 8. The shaft 6 has a large wheel 9 adapted to be driven by a suitable source of power, whereby the shafts 4 and 6 can be operated in unison.

Arranged between the standards 1 is a foundation block 10 and arranged between the standards 2 is a pedestal 11. The block 10 and the pedestal 11 are adapted to support an irregularly-shaped body portion, comprising a fan drum 12, a liquid drum 13, and a longitudinally extending casing constituting a connecting portion 14. This casing is made of sheet metal with detachable side walls 15 which are provided with apertures

to receive the shafts 4 and 6. The casing is arranged whereby the shafts 4 and 5 will be concentric of the drums 12 and 13, and mounted upon the shaft 4 within the drum 12 is a suction fan or wheel 16. The drum 12 has a radially disposed inlet flue 17 and the suction fan is adapted to draw smoke and gases from said flue into the drum 12 and force the smoke and gases into the connecting portion 14 of the casing. The drum 12 is formed at its top with a tangentially disposed outlet 17^a.

The top of the connecting portion 14 has an inlet opening 18 for water or other liquid, said opening being surrounded by a housing 19 normally closed by a hinged lid 20. Water or other liquid is placed in said opening into the drum 13 and this water is agitated and thrown upwardly into the connecting portion 14 by a water wheel 21 mounted upon the shaft 6. The connecting portion 14 has a vertical wall 22 provided with an opening 23 in communication with distributing flues 24, and which also communicate with the outlet 17^a; arranged within the outlet 17^a of the drum 12 are triangular-shaped vertical deflectors 25, these deflectors causing the smoke and gases within the drum 12 to be discharged centrally into the connecting portion 14. The water thrown into the smoke and gases is adapted to separate solid matter, as cinders, the solid matter being precipitated into the bottom of the drum 13 from whence it can be removed through a discharge opening 26 that is normally closed by a cover 27. The gases escape through the distributing flues 24 and in some instances can be used for fuel purposes.

It is thought that the operation and utility of the smoke consumer will be apparent without further description, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements thereof are susceptible to such changes as fall within the scope of the appended claims.

What I claim is:—

1. A smoke consumer comprising a suction drum having a radially disposed inlet and a tangentially disposed outlet, a liquid drum arranged opposite the suction drum, a longitudinally extending casing constituting a connecting portion and opening at one end into the liquid drum and having the lower portion of its other end communicat-

ing with said outlet, a wheel revolubly mounted in said liquid drum for discharging liquid into the smoke within said casing, a plurality of distributing flues communicating with that end of the casing into which opens said outlet, a fan revolubly mounted in said suction drum, and means whereby said fan and wheel are operated in unison.

2. A smoke consumer comprising a suction drum having a radially disposed inlet and a tangentially disposed outlet, a liquid drum arranged opposite the suction drum, a longitudinally extending casing constituting a connecting portion and opening at one end into the liquid drum and having the lower portion of its outer end communicating with said outlet, a wheel revolubly mounted in said liquid drum for discharging liquid into the smoke within said casing, a plurality of distributing flues communicating with that end of the casing into which opens said outlet, a fan revolubly mounted in said suction drum, means whereby said fan and wheel are operated in unison, and triangular-shaped vertical deflectors mounted in said outlet.

3. A smoke consumer comprising a suction drum having a radially disposed inlet and a tangentially disposed outlet, a liquid drum arranged opposite said suction drum, a longitudinally extending casing constituting a connecting portion and opening at one end into the liquid drum and having the lower portion of its other end communicating with

said outlet, a wheel revolubly mounted in said liquid drum for discharging liquid into the smoke within said casing, a plurality of distributing flues communicating with that end of the casing into which opens said outlet, a fan revolubly mounted in said suction drum, means whereby said fan and wheel are operated in unison, triangular-shaped vertical deflectors mounted in said outlet, and means for facilitating the removal of solid matter from said liquid drum.

4. A smoke consumer comprising a suction drum having a radially disposed inlet and a tangentially disposed outlet, a liquid drum arranged opposite the suction drum, a longitudinally extending casing constituting a connecting portion and opening at one end into the liquid drum and having the lower portion of its other end communicating with said outlet, a wheel revolubly mounted in said liquid drum for discharging liquid into the smoke within said casing, a plurality of distributing flues communicating with that end of the casing into which opens said outlet, a fan revolubly mounted in said suction drum, means whereby said fan and wheel are operated in unison, the bottom of said casing being arcuate in longitudinal section.

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

JANOS MARKUS.

Witnesses:

JOSEPH C. BECKER,
JOSEPH LINDER, Jr.