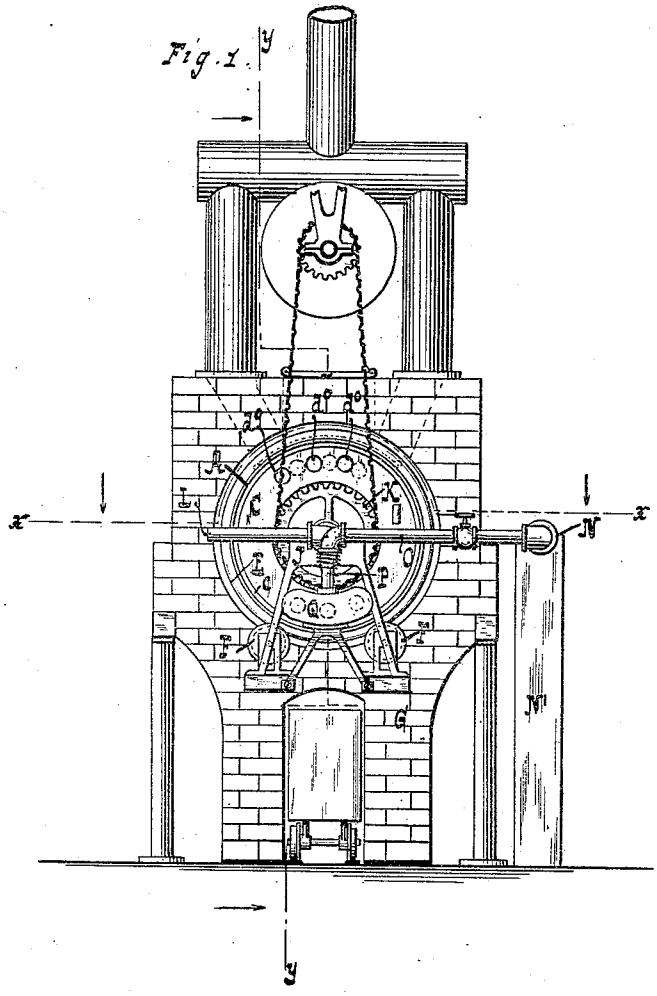
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R. V. F. DE GUINON.

APPARATUS FOR TREATING CHARCOAL.

No. 429,682. Patented June 10, 1890.

Fig. 1.



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Eduard Wolff.

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Fig. 2.

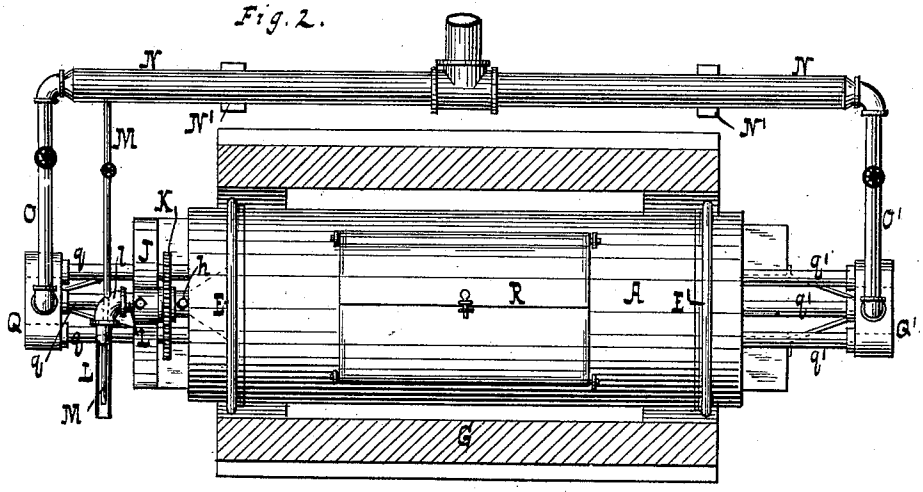


Fig. 3.

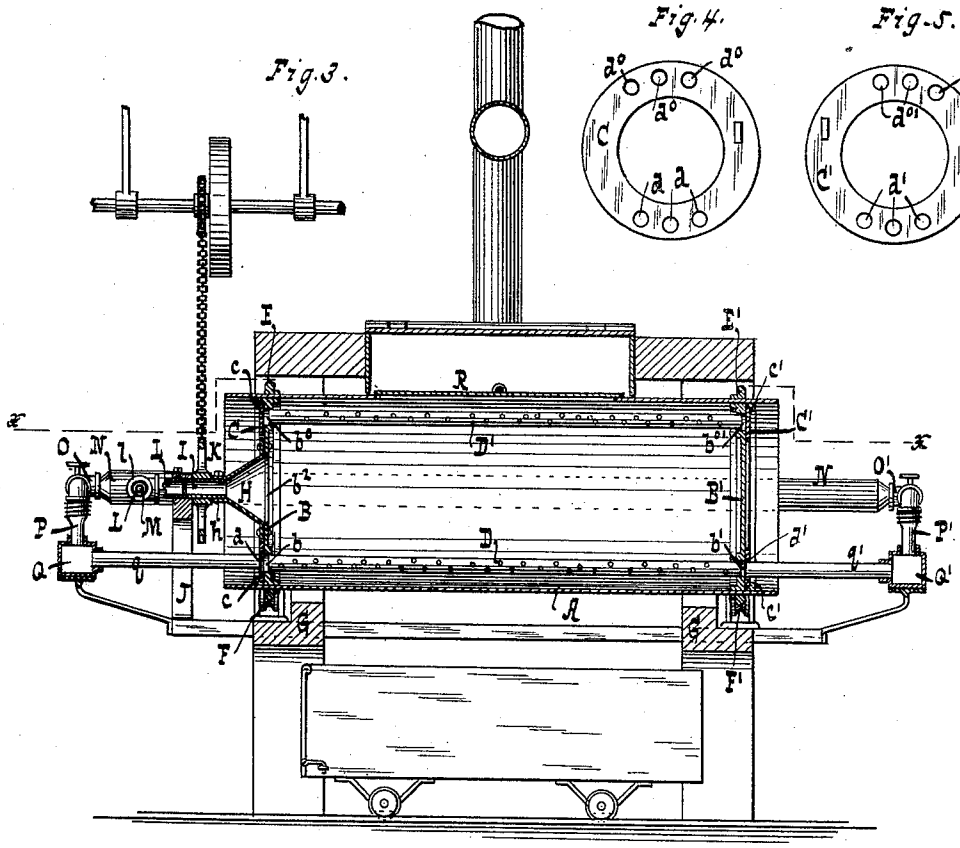


Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

RICHARD V. F. DE GUINON, OF BROOKLYN, NEW YORK.

APPARATUS FOR TREATING CHARCOAL.

SPECIFICATION forming part of Letters Patent No. 429,682, dated June 10, 1890.

Application filed September 26, 1889. Serial No. 325,131. (No model.)

To all whom it may concern:

Be it known that I, RICHARD V. F. DE GUINON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Apparatus for Treating Charcoal, of which the following is a specification.

The object of this invention is to provide an apparatus by means of which the gases which are absorbed by charcoal can be driven out.

The peculiar and novel construction of my apparatus is pointed out in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 represents an end view. Fig. 2 is a horizontal section in the plane $x\ x$, Figs. 1 and 3. Fig. 3 is a longitudinal vertical section in the plane $y\ y$, Fig. 1. Figs. 4 and 5 are face views of the circular slides.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a cylinder, which may be made of wrought or cast iron. In the example illustrated in the drawings it is made of wrought-iron, having cast-iron heads B B′ secured therein. Each of these heads has one or more holes $b\ b^0\ b'\ b^{0\prime}$, which are so distributed that if the holes $b\ b'$ are at the bottom the holes $b^0\ b^{0\prime}$ are at the top, or vice versa. These holes are controlled by circular slides or gates C C′, which are fitted in guides $c\ c'$, secured to the interior of the cylinder A, and which are provided with holes $d\ d'\ d^0\ d^{0\prime}$, so placed that if the holes $d\ d'$ register with the holes $b\ b'$ in the heads B B′ the holes $b^0\ b^{0\prime}$ in the heads are closed, and vice versa.

In the example illustrated by the drawings I have shown six holes in each of the heads; but in some instances two holes will be sufficient in each head, and in these holes are secured the foraminous pipes D D′, which extend through the entire length of the cylinder A from one head to the other.

On the circumference of the cylinder A are firmly secured two rings E E′, which engage grooved rollers F F′, so that said cylinder can be rotated. The rollers F F′ are mounted in standards supported by the brick-work G, and for the purpose of rotating the cylinder A a chain and chain-wheel or any other suitable means may be used.

On the head B of the cylinder A is firmly secured a hollow cone H, the large end of which communicates with the interior of the cylinder through a central opening b^2 in the head B, while its small end is provided with a tubular extension h, in which is firmly secured a short pipe I, the outer end of which extends into a journal-box J, in which it can turn round freely. On this pipe I is mounted the chain-wheel K, which serves to impart a rotary motion to the cylinder A. The outer end of the pipe I abuts against the end of a pipe L, which is firmly secured in the journal-box J, and which is open at its outer end.

In the example shown in the drawings the pipe L is provided with an elbow l, through which extends a pipe M, as shown in Fig. 2. This pipe communicates with a drum N, which contains air under pressure, and if the stop-cock of the pipe M is opened the jet of air passing into the pipe L acts as an ejector, whereby the gases contained in the cylinder A are driven out into the open atmosphere.

The compressed-air drum N rests upon standards N′, Fig. 2; or it may be supported in hangers secured overhead, and from its ends extend the pipes O O′, which communicate by means of flexible pipes P P′ with hollow heads Q Q′. Each of these heads is provided with one or more nozzles $q\ q'$, corresponding in number and position to the holes $b\ b'\ b^0\ b^{0\prime}$ in the heads B B′ of the cylinder A.

The charcoal to be treated is introduced into the cylinder A through a door R, and after the charge has been ignited the door R is closed and the nozzles $q\ q'$ are introduced into the corresponding holes $b\ b'$, so that when the communication between the air-drum N and the heads Q Q′ is opened compressed air is blown into one of the foraminous pipes D, which at the time is in line with the nozzles $q\ q'$. By these means the compressed air is uniformly divided throughout the charge of charcoal, and the entire mass is caused to burn violently throughout. After the charge has thus been ignited the nozzles $q\ q'$ are withdrawn, the holes $b\ b'$ are closed, and the cylinder A is rotated, while at the same time the

gases from the interior of said cylinder are drawn out by the ejector-pipe M. As soon as the nature of the gases ejected through the pipe L indicates that the charcoal has been freed from the noxious gases previously absorbed by the same the rotation of the cylinder A is stopped, and steam is injected through one of the foraminous pipes D, in order to stop the combustion of the charge as rapidly as possible. The door of the cylinder A is then opened, and the cylinder is turned so as to discharge its contents into the car R.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the cylinder A, of the foraminous pipe D and the nozzles q q', for injecting compressed air into the foraminous pipe, substantially as described.

2. The combination, with the cylinder A, the foraminous pipe D, and air-nozzles q q', of the ejector M, substantially as described.

3. The combination, with the cylinder A and with the compressed-air drum N, of the foraminous pipe D, the cone H, the pipes I L, the journal-box J, the pipe M, extending from the air-drum into the pipe L, the rings E E′, the rollers F F′, and means, substantially as described, for imparting to the cylinder A a revolving motion.

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

RICHARD V. F. DE GUINON.

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.