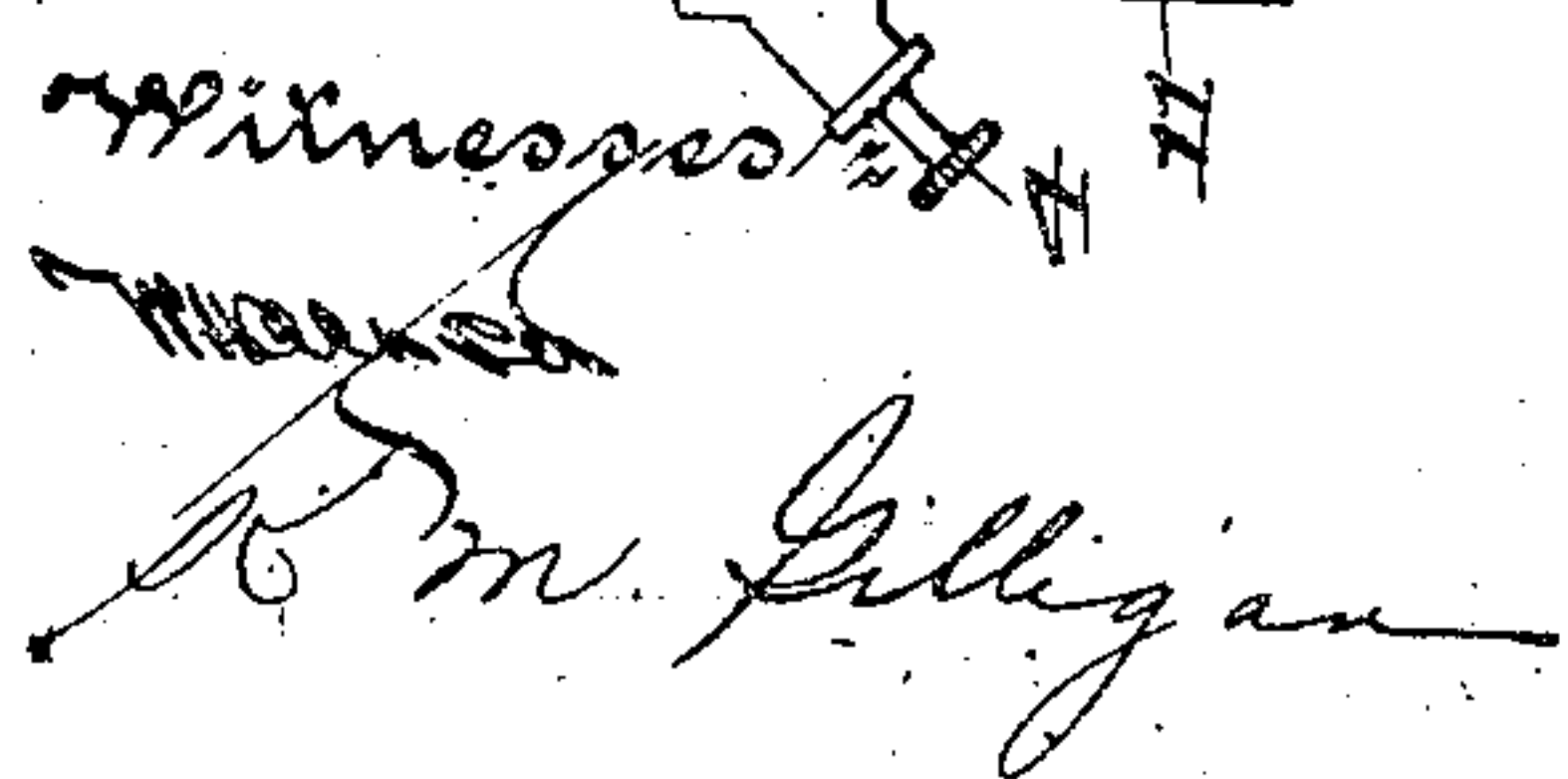


GAS APPARATUS.

969,502.

Patented Sept. 6, 1910.



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Att'y

UNITED STATES PATENT OFFICE.

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GAS APPARATUS.

969,502.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN HAWLEY TAUS-
SIG, a citizen of the United States, and resi-
dent of Philadelphia, in the county of
5 Philadelphia and State of Pennsylvania,
have invented certain new and useful Im-
provements in Gas Apparatus, of which the
following is a specification.

Objects of the present invention are,
10 first:—to enable stand-pipes to satisfac-
torily deliver through the hydraulic main
gas at relatively high temperatures, such for
example as are attained where a group of
retorts discharge through a single stand-
15 pipe; second:—to cool the gas prior to its
entering the hydraulic main, thereby con-
densing the thinner tars along with the
heavier tars and enabling the former to
give fluidity to the latter, reducing the abil-
20 ity of the gas to carry off water vapors
which in their turn are conveyers that
would if present, carry the lighter tars from
the hydraulic main, and avoiding the break-
ing of water seals; third:—to insure a suffi-
25 cient supply of fluid in the hydraulic main
for floating off lamp-black on the surface;
and fourth:—to provide simple, reliable and
efficient apparatus for effectuating the above
objects.

30 The invention comprises the improve-
ments to be presently described and finally
claimed.

In the drawings, Figure 1, is an end view
of so much of a gas apparatus as is neces-
35 sary for understanding the invention. Fig.
2, is a view drawn to an enlarged scale
showing in section a portion of a bridge-
pipe and of the hydraulic main, and Fig. 3,
is a front view of the sprayer or nozzle
40 shown in Fig. 2.

In the drawings, 1 and 2, are the stand
and bridge-pipes.

3, is the hydraulic main or pipe.

4, is a sprayer or nozzle arranged in the
45 wall of the bridge-pipe and adapted to in-
ject a jet of cooling fluid into the bridge-
pipe. As shown the sprayer or nozzle 4, is
adapted to create a film-like jet that extends
across the bridge-pipe and covers its cross-

sectional area insuring contact of the gas 50
with the water. The jet may advantageously
be so arranged that a part of it reaches or
plays upon the most of the inner surface
of the bridge-pipe and thus prevents the
deposit of lamp-black and avoids the neces- 55
sity for cleaning. The character and design
of the sprayer or nozzle are susceptible of
variations and change. However, the noz-
zle should discharge into either the stand-
pipe or bridge-pipe, or the hydraulic main, 60
in such manner that its jet reaches the hy-
draulic main and does not run down the
stand-pipe. In the drawings the nozzles are
shown as arranged in three locations, but in
most cases a nozzle in any one of these loca- 65
tions is sufficient.

5, is an adjustable overflow fitted with the
usual seal 6, and adapted to convey am-
moniacal liquid from the hydraulic main to
the receptacle or well 8. 7, is a filter or 70
lamp-black separator. From the receptacle
8, this liquid is taken by means of a pump
9 and passed through the cooler 10, from
which it is piped as by pipes 11, to the
sprayers or nozzles 4, of the stand-pipes. 75
The cooler 10, is shown to consist of a piece
of apparatus commonly called a condenser.
Cold water circulates by the pipes 13 and
in doing so cools the ammoniacal liquor.

12, is an overflow for taking away the 80
excess of ammoniacal liquid which accumu-
lates from the gas entering the hydraulic
main and which, since it may be made to
circulate is not unduly weakened.

The gas in its passage to the hydraulic 85
main is cooled by the jet of water or am-
moniacal liquid which it encounters with
the result that the objects stated in the be-
ginning of this specification are accom-
plished as well as other objects, which will 90
be apparent to those skilled in the art.

I claim:

1. The combination with coal gas appa-
ratus having stand and bridge and hydraulic
pipes of a sprayer nozzle mounted in and 95
projecting substantially flush with the inner
surface of said pipes and adapted to inject
a film jet of cooling fluid in such direction

that it reaches the hydraulic main and said nozzle accessible from the exterior for cleaning, substantially as described.

2. The combination of the stand and
5 bridge-pipes and hydraulic main, nozzles or sprayers for injecting a jet of fluid, and devices for conveying fluid from the hydraulic main to the nozzles or sprayers including

pumping, filtering and cooling means, substantially as described. 10

In testimony whereof I have hereunto signed my name.

JOHN HAWLEY TAUSSIG.

Witnesses:

H. K. JAMES,

K. M. GILLIGAN.