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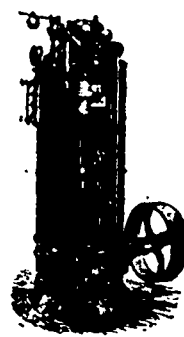
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application.

**Proposed Scheme for Keeping Mines
Clear of Inflammable Gas.**—Mr. Gilbert
McPherson* proposes to effect this object (1)
by draining the coal of its gas before it is
worked out, while the bords are being driven;
(2) by removing the pillars according to a plan
by which the goaf is kept clear of inflammable
gas. The first of these plans has never been
tried, but the second has been successfully
applied in one instance. In the first scheme it
is proposed to exhaust the gas from the coal,
before it is worked out, by artificial means (the
ordinary system of ventilation being still em-
ployed) so that it could give out no gas while
being taken down. This is to be effected by
laying down the shaft from the surface a small
column of pipes, and laying throughout the
mine a system of gas-draining tubes, a small
branch being carried into every working-place.
In the centre of each working-place a hole
would be drilled to the depth in each case
which experience would determine for each
particular seam. Into this a tamping block or
plug would be inserted and screwed up so as to
make it air-tight, and a connection made
between it and the draining-tubes by means of
a small India-rubber hose, distended with wire,
united to the tubes and the tamping plug by
union couplings of the simplest description.
On the surface an air-pump of suitable dimen-
sions would require to be erected and con-
nected with the column of pipes. When the
whole connections were made and the air-pump
started, the air contained in the holes drilled in
the coal would be exhausted and a partial
vacuum formed, when the gas in the surrounding
coal would be swept into the drain-pipes owing
to the atmospheric pressure forcing the air
through the pores of the coal, the air in its
passage becoming charged with inflammable
gas. In the second scheme it is proposed to
remove the bords after a system that the author
illustrates, by which, instead of beginning to
remove them in the usual method, an air-course
is first arranged round their district, and this
air course is maintained till every bord is
removed. In the stoppings on the side of the
main air-course, which are of the usual descrip-
tion, three-inch wooden tubes are built in at
suitable intervals, and by means of these minia-
ture air-courses a quantity of air sufficient to
ventilate the goaf constantly circulates. This
method has been successfully tried in a mine
belonging to Messrs. Galloway & Co., at Hurl-
ford. There can be no doubt that by keeping the
goaf free from inflammable gas a very great
danger is removed.