

D. BEACH.  
SPARK CATCHER AND CONSUMER.

No. 108,958.

Patented Nov. 8, 1870.

Fig 3.

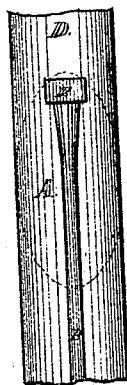


Fig 4.

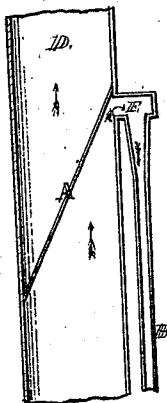


Fig 1.

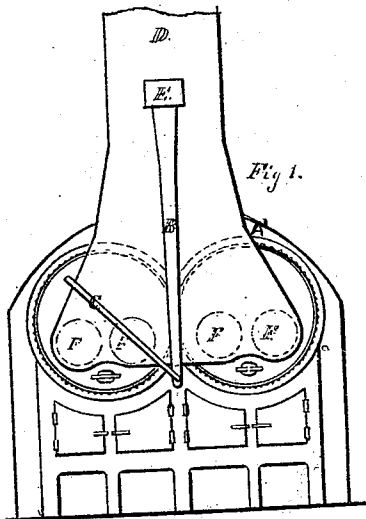
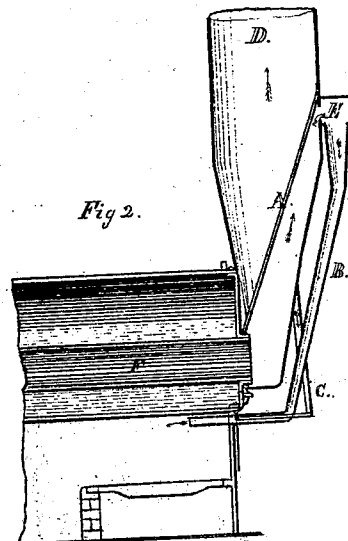


Fig 2.



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WITNESSES:

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# United States Patent Office.

DARWIN BEACH, OF OSHKOSH, WISCONSIN.

Letters Patent No. 108,958, dated November 8, 1870.

## IMPROVEMENT IN SPARK-CATCHERS AND CONSUMERS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, DARWIN BEACH, of the city of Oshkosh and State of Wisconsin, have invented a new and useful device for diverting sparks from smoke-flues and which I here designate a "Spark-Catcher;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, in which—

Figure 1 is a front elevation of the same, as applied at the base of the smoke-flue, showing also the boiler and flues, the fire-box, and the arch.

Figure 2 is a sectional side elevation of fig. 1.

Figure 3 is a detached front elevation of a smoke-flue with the screen inserted above the base.

Figure 4 is a side sectional elevation of fig. 3.

A' is an arch, with boilers set, and employing the usual accessories.

D is a smoke-stack.

F F are boiler-flues.

A is a wire screen, set diagonally, as shown in figs. 1 and 2, at the base of the smoke-stack, and, in figs. 3 and 4, above the base.

B is a spark-flue, attached to the smoke-stack at the upper end of the screen A, with opening as seen at E, and extending down to connect with the fire-box.

O is a steam-pipe that forms a connection between the boiler or exhaust and the spark-flue.

To enable others skilled in the art to better understand my device, I will proceed to describe its operation.

Fire being applied in the usual manner to the boiler the smoke and sparks, with the heat, passes through the flues F F, the smoke and sparks passing into the smoke-stack D, and as they ascend, the sparks are diverted by the diagonally-set screen A, through the opening E into the spark-flue B, and from thence returned to the receptacle or fire-box and ash-pit.

A jet of steam passing into the flue B, through the pipe O, adds to the draught and hence facilitates the return of the sparks.

There are other means by which the sparks may be disposed of; but I prefer the same as set forth in this application.

Having thus fully described my invention,

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

A smoke-stack, with a diagonal screen, A, set in smoke-stack D, in combination with the opening E and return-flue B, as herein shown and described, and for the purposes set forth.

DARWIN BEACH.

Witnesses:

W. G. RITCH,  
E. N. COULER.