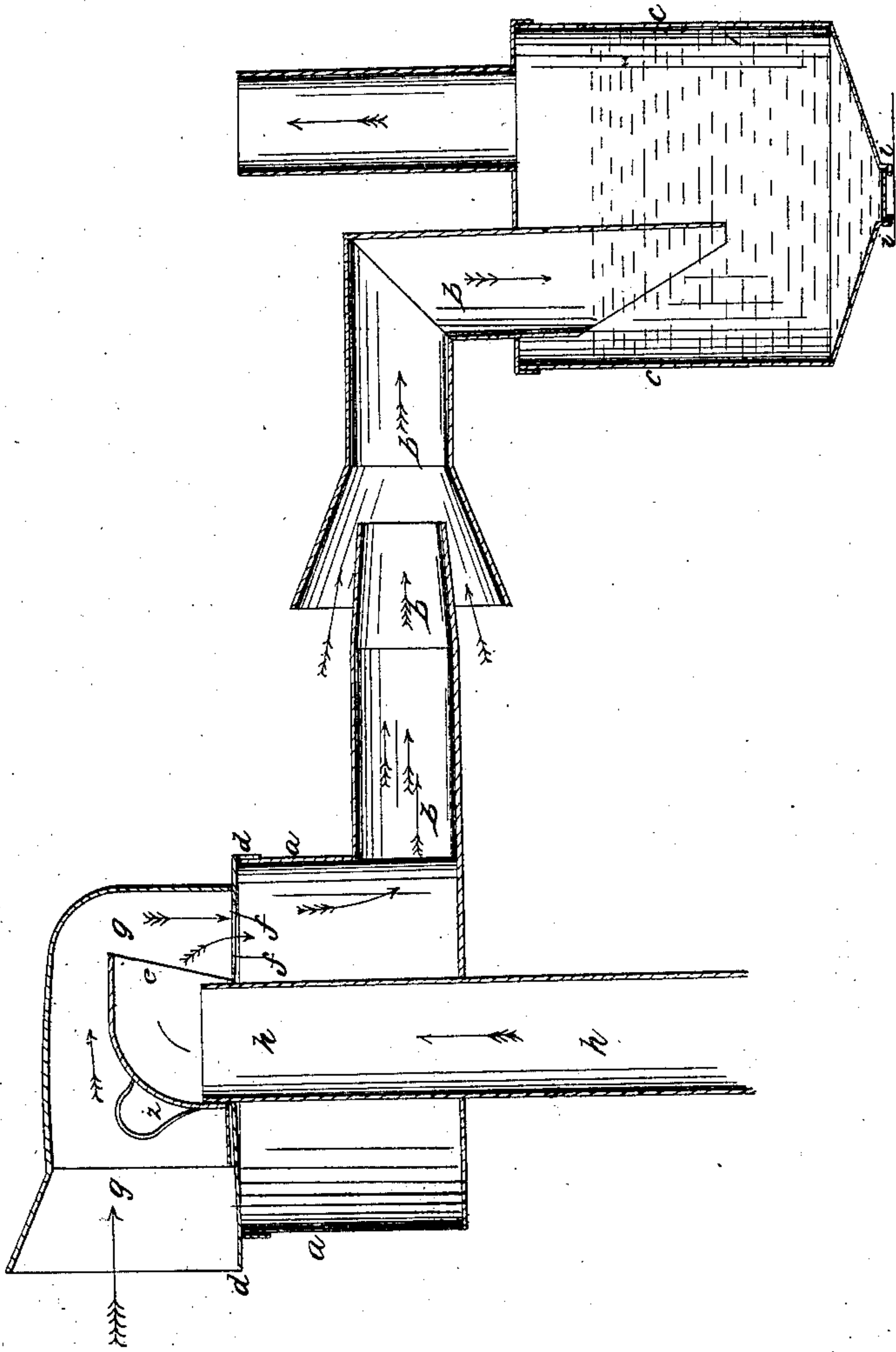


Spark Arrestor,

Patented June 19, 1866.



Inventor:
Charles B. Keyes

UNITED STATES PATENT OFFICE.

CHARLES BRIGHT KEYES, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN SPARK-ARRESTERS.

Specification forming part of Letters Patent No. 55,669, dated June 19, 1866.

To all whom it may concern:

Be it known that I, CHARLES BRIGHT KEYES, now of the city of Washington, in the District of Columbia, have invented certain new and useful and improved devices or improvements for chimneys, for the comfort of persons and the safety or security of property; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and letters, which form part of the same.

My invention is as follows, it being for the purpose of gathering, controlling, and directing the sparks, soot, and smoke of locomotives or any other chimney-stack or pipe:

First. I put around the chimney-stack or pipe a chamber, *a a*, to which chamber is attached a pipe, *b b*, or conductor, through which the resultants of the fire—as the sparks, soot, and smoke—pass to the water-tank *c c*, fixed at the rear end of the tender, or to any other suitable location, by means of a continuous pipe, *b b*.

Second. On the top of the chamber *a a*, I put a revolving cover, *d d*, on which I place and to which I attach a shield or deflector, *e e*, for the purpose of preventing a pressure of air down the chimney-stack or pipe, for the purpose of increasing the draft, and for the purpose of giving direction to the sparks, soot, and smoke down into the chamber *a a* at *f f*, and so through the pipe *b b* into the water-tank *c c*. I also place on the revolving cover *d d* an open-mouthed trumpeter *g g*, opening directly opposite to the shield or deflector *e e*, for the purpose of gathering a current of air or wind and causing the same to pass over the shield

or deflector *e e* into the chamber *a a*, thus increasing an upward draft through the pipe *h h*, thus aiding combustion, and also disposing of the contents or result of the fire—as sparks, soot, and smoke.

Third. When used on a locomotive-engine, I place at the rear end of the tender *k k* a water-tank, *c c*, into which, or any other suitable place, I conduct the contents or result of the fire by means of the pipe *b b*, and out of which tank *c c*, I let them pass by means of a valve, *i i*, fixed at the bottom of said tank.

Fourth. The revolving cover *d d* has fixed to it a lever, to which is attached a rope, chain, or some such thing or device, by means of which I turn the top or revolving cover *d d* in any direction which may be desirable.

I claim as my invention—

1. The revolving cover *d d*, constructed substantially as described in paragraph two, letters *d d* and *i i*.

2. The combination of the revolving cover *d d* with a shield or deflector, *e e*, and an open-mouthed trumpeter *g g*, substantially as described in paragraph two, letters *g g*.

3. The combination of the revolving cover *d d*, and the shield or deflector *e e*, and the open-mouthed trumpeter *g g*, the opening through *f f*, in connection with a pipe, *b b*, and the water-tank *c c*, and the arrangement *i i* for turning the cover *d d*, substantially as described in paragraphs three and four.

CHARLES BRIGHT KEYES.

Witnesses:

EDM. F. BROWN,

THOMAS C. CONNOLLY.