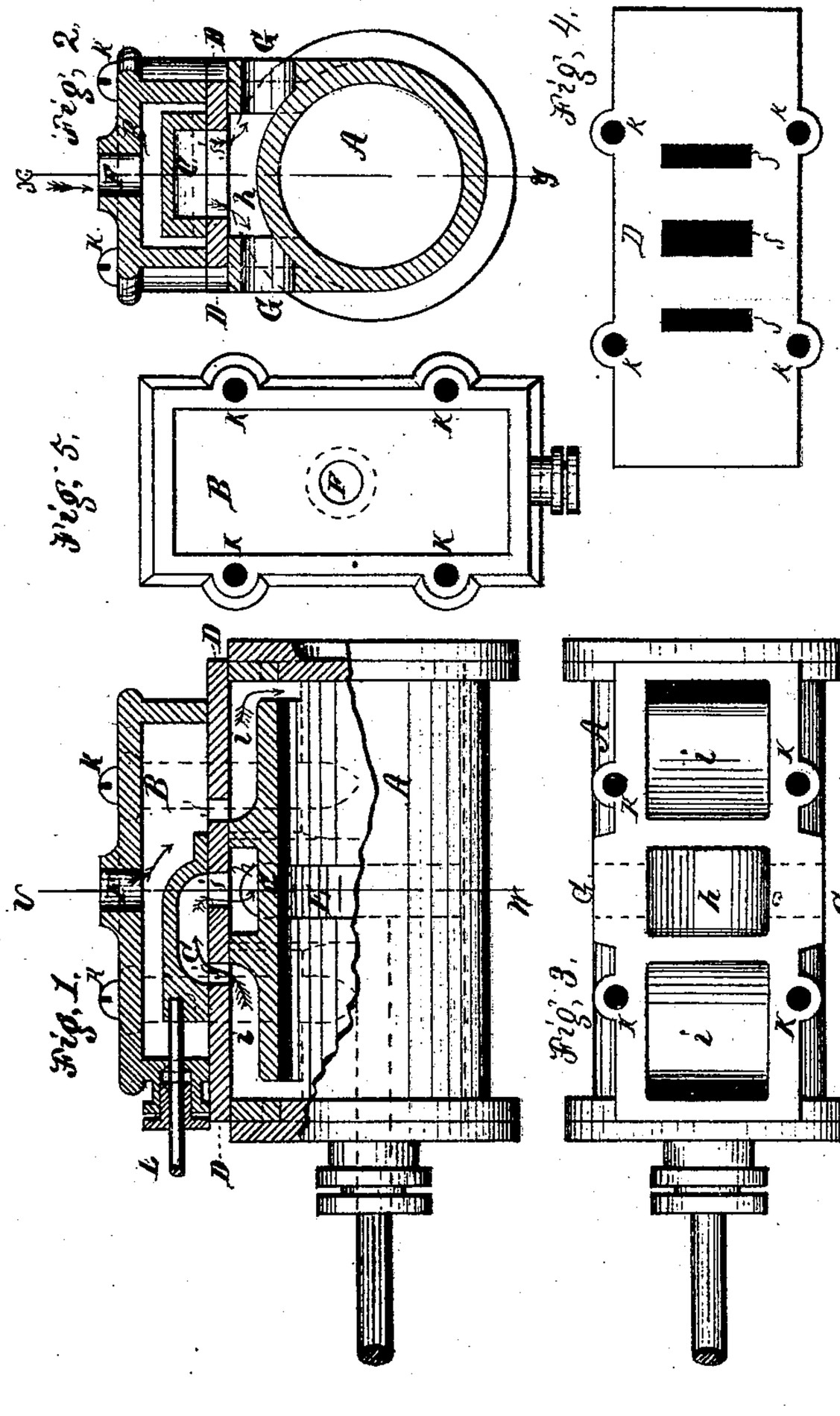
A. L. Dewey,

Toy Steam Engine.

No. 85,572. Patented Jan. 5. 1869.



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ALBERT L. DEWEY, OF WESTFIELD, MASSACHUSETTS.

Letters Patent No. 85,572, *dated January* 5, 1869.

IMPROVEMENT IN TOY STEAM-ENGINES.

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, ALBERT L. DEWEY, of Westfield, in the county of Hampden, in the State of Massachusetts, have invented a new and improved Toy Steam-Engine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of these specifications, in which—

Figure 1 is a vertical section of my invention, taken in the line *x y*, fig. 2.

Figure 2 is a transverse section of the same, taken in the line *v w*, fig. 1.

Figure 3 is a plan view of the cylinder with the steam-chest and valve-seat removed.

Figure 4 is a detached view of the valve-seat.

Figure 5 is an inverted view of the steam-chest.

Similar letters of reference indicate corresponding parts.

This invention relates to a new method of forming the steam-ways or ports to small steam-cylinders, whereby the same may be made in the casting of the cylinder in a cheap and simple manner, without employing baked sand cores, as is practised in the casting of larger cylinders, but which in the case of very small ones would be impracticable.

A represents a small steam-cylinder.

B is the steam-chest to the same.

C represents the ordinary slide-valve.

D is the valve-seat for the same.

E is the piston-head.

F is the induction-pipe.

G is the eduction-pipe.

h is the exhaust-steam way.

i i are the ordinary steam-ways, communicating with each end of the cylinder A.

j j j are the valve-ports.

k k k k represent four screws, by which the cylinder, valve-seat, and steam-chest are fastened together.

L is the valve-rod.

The operation of this cylinder is the same as the ordinary ones in common use, and consequently requires no further description.

The construction of this improvement is as follows:

The cylinder A is cast with open or uncovered steam-ways or ports *i h i*, as shown in figs. 1, 2, and 3. The valve-seat D is made in a separate piece from the cylinder A. It is formed or punched out of thin sheet-metal, and contains the three ordinary valve-ports *j j j*, as shown in fig. 4, and it also serves to cover the open steam-ways *i h i* in the cylinder A, figs. 1, 2, and 3. This valve-seat is placed between the steam-chest B and cylinder A. The three pieces A B D are held together by four or more screws *k k k k*, figs. 1, 2, and 3.

As this toy is designed for instruction as well as amusement, it can be seen that, by the above-described arrangement, a person can obtain a better idea of the construction of the steam-cylinder and its steam-ports than could be obtained from the ordinary method of construction; for, by removing the four screws *k k k k*, the steam-chest and valve-seat can be entirely removed from the cylinder A, leaving its steam-ways *i h i* exposed to view.

This arrangement also allows a much larger steam-way to be formed in a small cylinder than could be obtained by the usual method of construction.

Having now described the nature of my improvement, and the manner the same is carried into effect, some of its advantages I claim to be as follows:

First, simplicity and cheapness of its construction.

Second, the facility by which a correct idea may be obtained of the form and direction of the steam-passages by juveniles, and others unacquainted with the construction of the steam-engine.

But I do hereby declare that I do not claim the well-known arrangement of the steam-passages of a steam-engine cylinder; neither do I claim the general form of the cylinder, or the parts pertaining to the same, for these are old and well known; but

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

The construction and arrangement of the parts composing the steam-cylinder A of a toy steam-engine, as herein described and set forth.

ALBERT L. DEWEY.

Witnesses:

GEO. W. ROSE,

SAMUEL P. MARINUS.