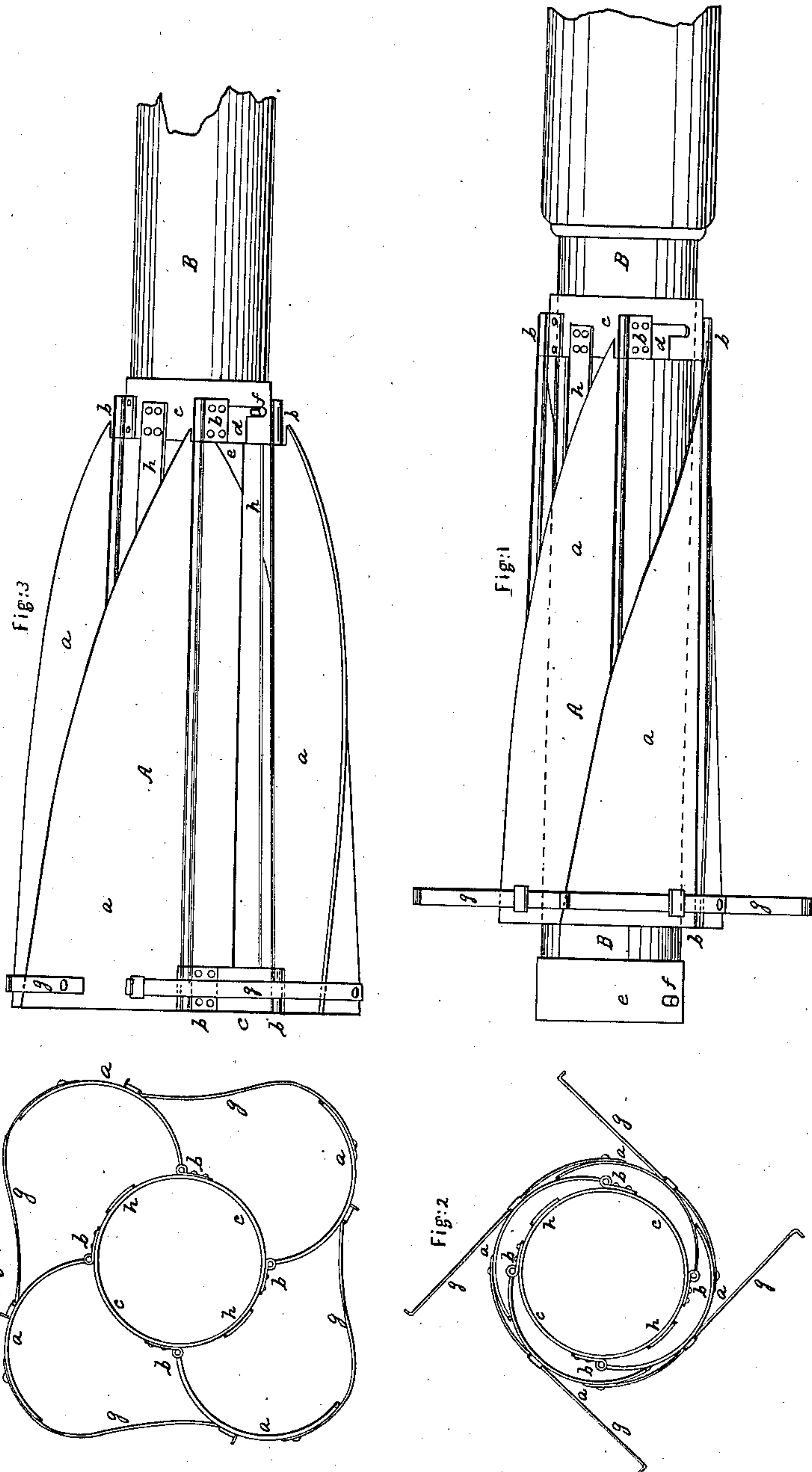


I. Edge.  
Rocket.

N<sup>o</sup> 41689

Patented Feb. 23. 1864.



WITNESSES.

*Wm. H. Hyde*  
*Erroy Schermishoring*

INVENTOR.

*Isaac Edge*

# UNITED STATES PATENT OFFICE.

ISAAC EDGE, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN ROCKETS.

Specification forming part of Letters Patent No. 41,689, dated February 23, 1864.

*To all whom it may concern :*

Be it known that I, ISAAC EDGE, of Jersey City, in the State of New Jersey, have invented certain new and useful Improvements in Rockets; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon.

The nature of my invention relates to the construction, application, and use of a director or guiding appendage for rockets, to regulate their flight as well as to facilitate their transportation; and it consists in (see drawings) forming the director A (Figures I, II, III, and IV) with vanes or wings *a a a a*, which are flat or curved, and hinged (*b b b b*) at each end to flat rings or collars *c*, and which rings are made to slide over the body of the rocket B; and the wings can be closed as shown in Figs I and II, as arranged for transportation, or can be withdrawn and opened and secured to the rear end of the rocket, ready for use, as shown at Figs. III and IV. The forward ring *c* is provided with one or more slots, *d*, for locking the director fast to the base of the rocket, which is provided with a ring-plate, *e*, upon which a lock-pin, *f*, is fixed for taking into the slot *d*.

*g g g g* are tie-straps to keep the wings in proper position when opened, and *h h* are ties or braces to secure the rings and other parts together.

Other means may be employed for fastening the tail to the rocket, as well as to secure the wings when open; but I find the plan shown to be good.

I make the director of tin or other proper material, and for signal-rockets paper will do.

I do not claim jointed feather guides attached to the body of the rocket; nor do I claim, broadly, a feather guide or tail which in use is to be withdrawn to the rear of the rocket; but

I claim—

A telescopic tail to guide and rotate a rocket in its flight by means of wings fixed to rods, held at each end by rings made to slide or close on the rocket, and be partly withdrawn and fastened to the end of the rocket when in use, the wings being then expanded and secured from spreading by means of ties or straps, substantially as described.

ISAAC EDGE.

Witnesses:

J. B. HYDE,  
LEROY SCHERMERHORN.