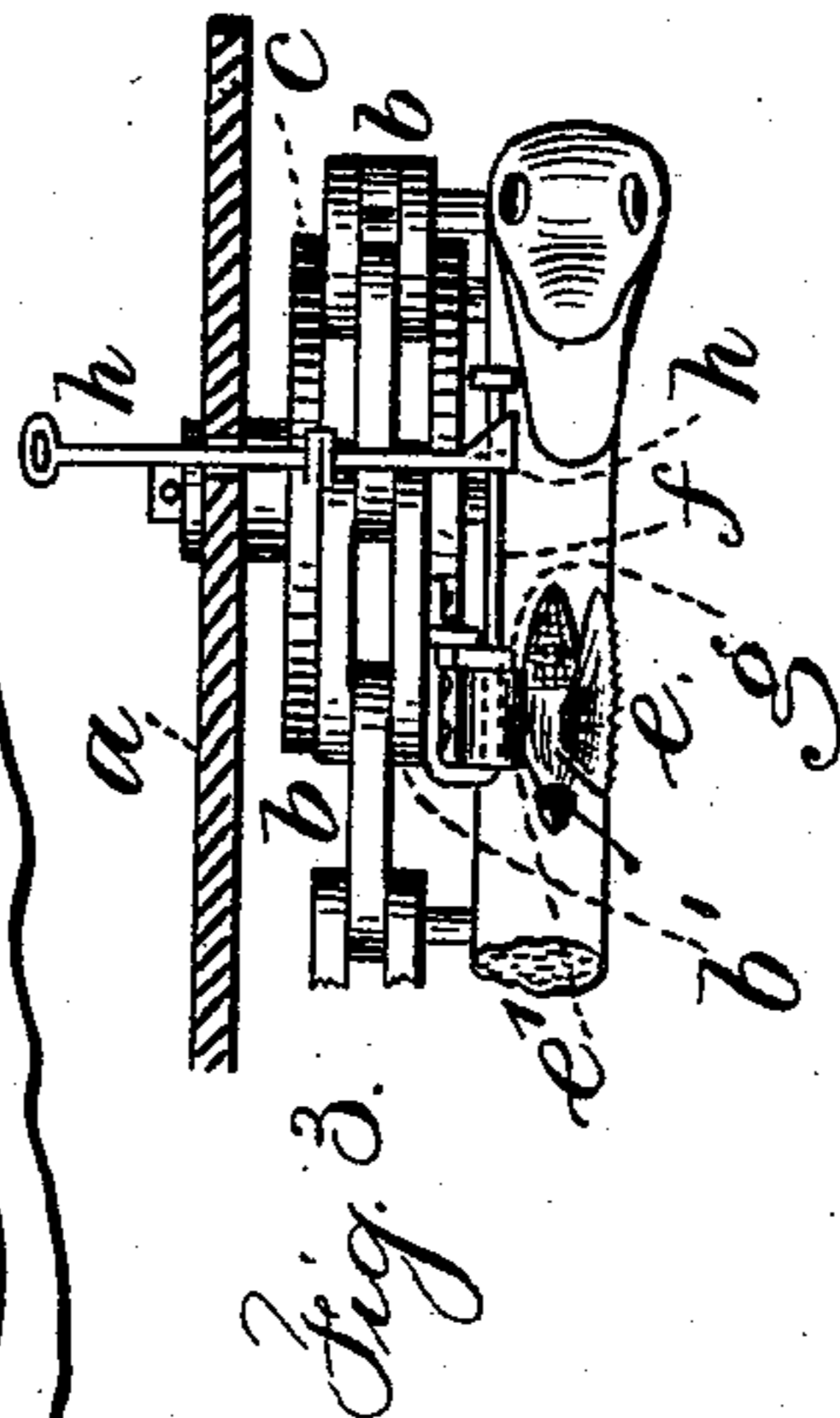
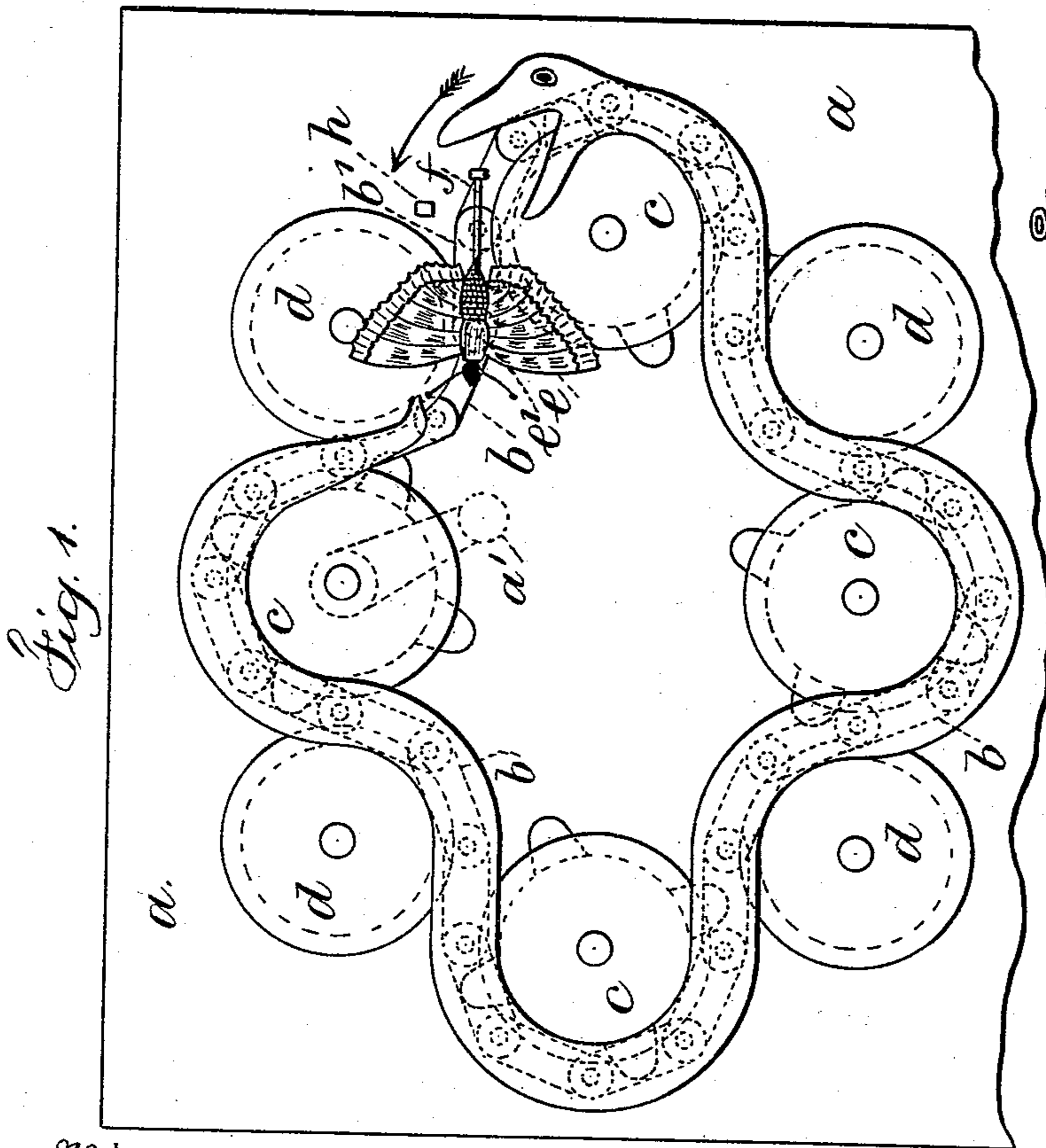
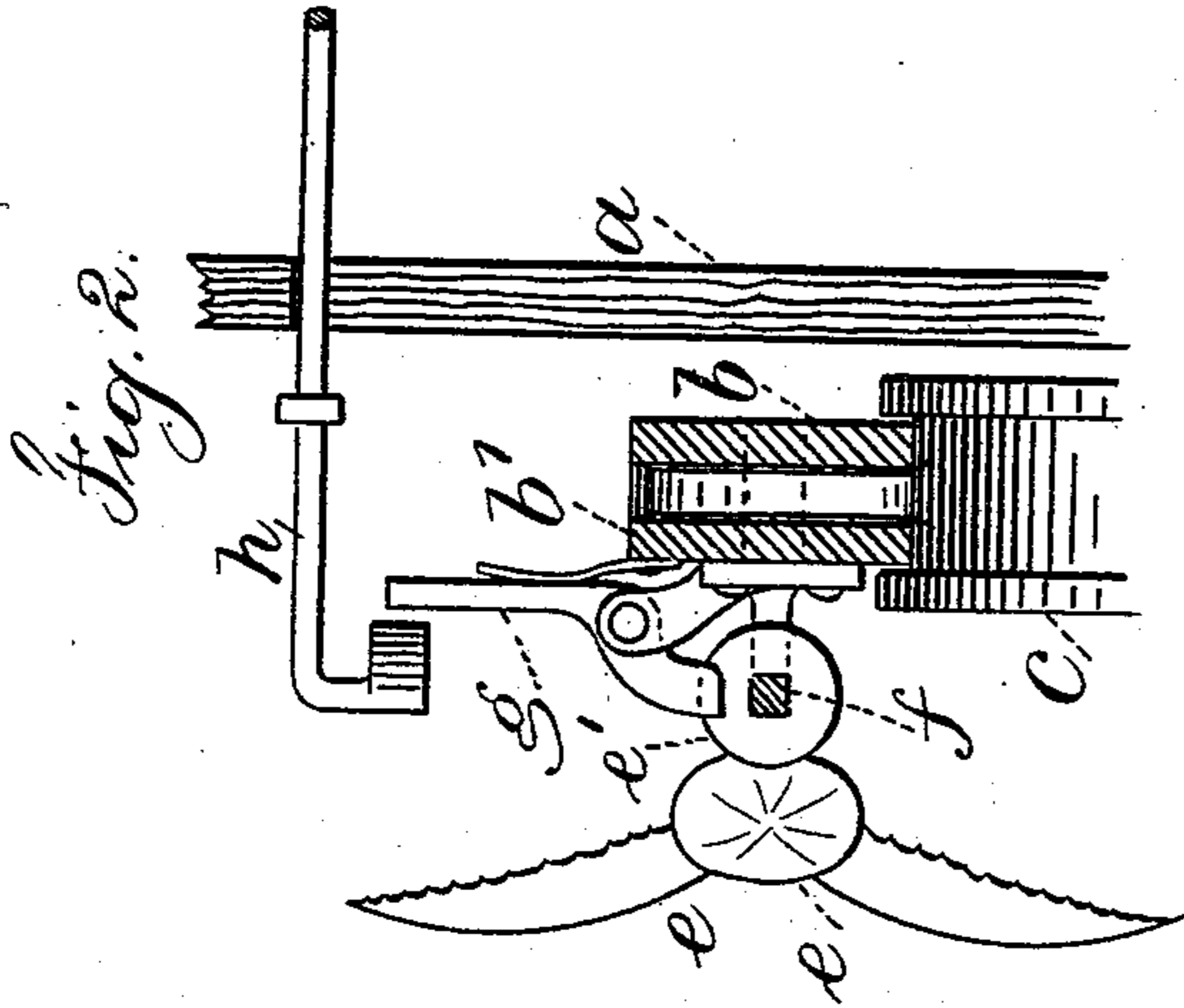


(No Model.)

G. J. M. ASHBY.
PYROTECHNIC DEVICE.

No. 487,898.

Patented Dec. 13, 1892.



Witnesses

Chas. H. Smith
J. Staib

Inventor

George J. M. Ashby
Per Lemuel W. Serrell
att'y.

UNITED STATES PATENT OFFICE.

GEORGE J. M. ASHBY, OF CONEY ISLAND, NEW YORK, ASSIGNOR TO
ARTHUR BROCK, OF LONDON, ENGLAND.

PYROTECHNIC DEVICE.

SPECIFICATION forming part of Letters Patent No. 487,898, dated December 13, 1892.

Application filed July 28, 1892. Serial No. 441,441. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. M. ASHBY, formerly of London, England, but now residing at Coney Island, in the county of Kings and State of New York, have invented an Improvement in Pyrotechnic Devices, of which the following is a specification.

Among pyrotechnic devices as heretofore employed there is one known as the "snake and butterfly."

The devices employed in connection with this pyrotechnic device consist of an endless chain of wooden links mounted upon sprocket-wheels and grooved rollers and so arranged as to travel a circuitous path. The pyrotechnic devices were fastened to one face of said chain by pins, and at one link the pyrotechnic devices representing the snake's head were fastened, and at the second forward link to the head pyrotechnic devices were fastened illustrating a butterfly. These pyrotechnic devices when lighted and rotated by these means presented the appearance of a snake chasing a butterfly. Heretofore this illusion has been incomplete, resulting from the fact that the snake never caught the butterfly; and the object of my invention is to combine with this endless chain and its rollers and sprocket-wheels and the pyrotechnic devices connected to said chain devices for adjustably mounting the butterfly, whereby at a given signal the same is released and allowed to fall into the apparently-open mouth of the snake. This I accomplish, preferably, by attaching to one link of said chain a bent arm, upon whose other or free end is a stop. This arm sectionally is preferably flat, and upon the same is placed a block of wood capable of moving lengthwise upon said arm, and to this block the pyrotechnic devices forming the butterfly are attached, and there is a small lever of any desired construction also fastened to the chain-link or to the arm carrying the aforesaid butterfly-block, which lever can at the desired moment be operated either by hand or by a suitable mechanical contrivance to release the butterfly-block, when the centrifugal motion or the weight of the block, owing to position, will cause said block to move along the arm and apparently fall into the open mouth of the snake. This endless chain and the sprock-

ets and grooved rollers connected therewith are mounted upon a suitable backing.

In the drawings, Figure 1 is an elevation illustrating my improvement. Fig. 2 is a section in larger size through the link to which the butterfly is attached, and Fig. 3 is a plan view adjacent to the butterfly and head of the snake.

a represents the foundation or backing, preferably of boards, upon which the other devices are fastened.

b represents an endless chain, preferably of wooden links, and *c* represents sprocket-wheels, and *d* grooved pulleys, around which said endless chain *b* extends in a circuitous path. These sprocket-wheels *c* and grooved pulleys *d* have axes and bosses secured to the backing *a*, one sprocket-wheel by preference having a shaft that passes through the backing and to whose opposite end is connected a crank and handle *a'*, by which said sprocket-wheel is rotated to operate the endless chain and cause the same to travel around the circuitous path represented. Upon the face of the links composing the endless chain *b* pins are placed at different points and in different directions, and upon these pins are fastened the devices constituting the illustration of a serpent and the pyrotechnic devices, which when lighted complete the representation. One link of said chain carries the representation of the head and open mouth of the serpent, and the serpent extends completely around the endless chain, with the exception of a few of the links. The second link forward of the head of the serpent is employed, by preference, to carry the devices making up the pyrotechnic butterfly, and when these pyrotechnic devices are lighted and the chain set in motion by the one sprocket-wheel and its crank the appearance is presented to those witnessing the display of the snake chasing the butterfly in a circuitous path.

The pyrotechnic devices representing the butterfly *e* consist of a block *e'*, which carries the framework supporting the powder-cylinders, which when lighted give the display in color, and I provide an arm *f*, fastened to the link *b'* of the endless chain *b*, and the block *e'* is adapted to slide lengthwise on the arm *f* in a path generally parallel with the move-

ment of the endless chain, and a stop is provided at the extreme end of the arm *f* to prevent the butterfly-block *e'* falling off the arm.

A small curved or otherwise-formed lever *g* 5 is pivoted to the link *b'*, and the end of this lever engages the block *e'* and maintains the same in its normal position at the forward end of the arm *f*, and a device *h* is provided upon the backing *a*, operated from behind the 10 backing *a*, which device consists of a movable arm or wedge, which can be brought into the path of the lever *g* at the desired moment during the pyrotechnic display, so as to release the sliding block *e'* and allow the same 15 to move along to the free end of the arm *f*, adjacent to the mouth of the serpent, so as to give the appearance to those witnessing the pyrotechnic display that the serpent has caught the butterfly in its mouth. This act 20 would usually complete the pyrotechnic display.

I do not herein limit myself to the precise devices shown to move the butterfly device from its first or normal position up to the 25 mouth of the serpent, as other equivalent devices may be employed to equal advantage.

I claim as my invention—

1. The combination, with the endless chain, the pyrotechnic devices connected therewith illustrating a serpent, and the means for op- 30 erating the same, of the butterfly pyrotechnic device, an arm upon which said device is mounted, and devices capable of liberating said butterfly, so that it may move from a normal position up to the mouth of the serpent, 35 substantially as set forth.

2. The combination, with the backing *a*, and endless chain *b*, and the pyrotechnic devices connected upon said endless chain and representing a serpent, and the sprocket-wheels 40 and pulleys for operating said endless chain in a circuitous path, of the pyrotechnic butterfly device *e* and its block *e'*, the arm *f*, connected to the link *b'*, the lever *g*, and a device, such as the device *h*, for liberating the 45 butterfly device and its block to allow the same to move by gravity or centrifugal motion along the arm *f* up to the mouth of the serpent, substantially as described.

Signed by me this 26th day of July, 1892.

GEORGE J. M. ASHBY.

Witnesses:

GEO. T. PINCKNEY,

WILLIAM G. MOTT.