

(No Model.)

C. M. CRANDALL.
TOY OR PUZZLE.

No. 413,612.

Patented Oct. 22, 1889.

Fig. 1.

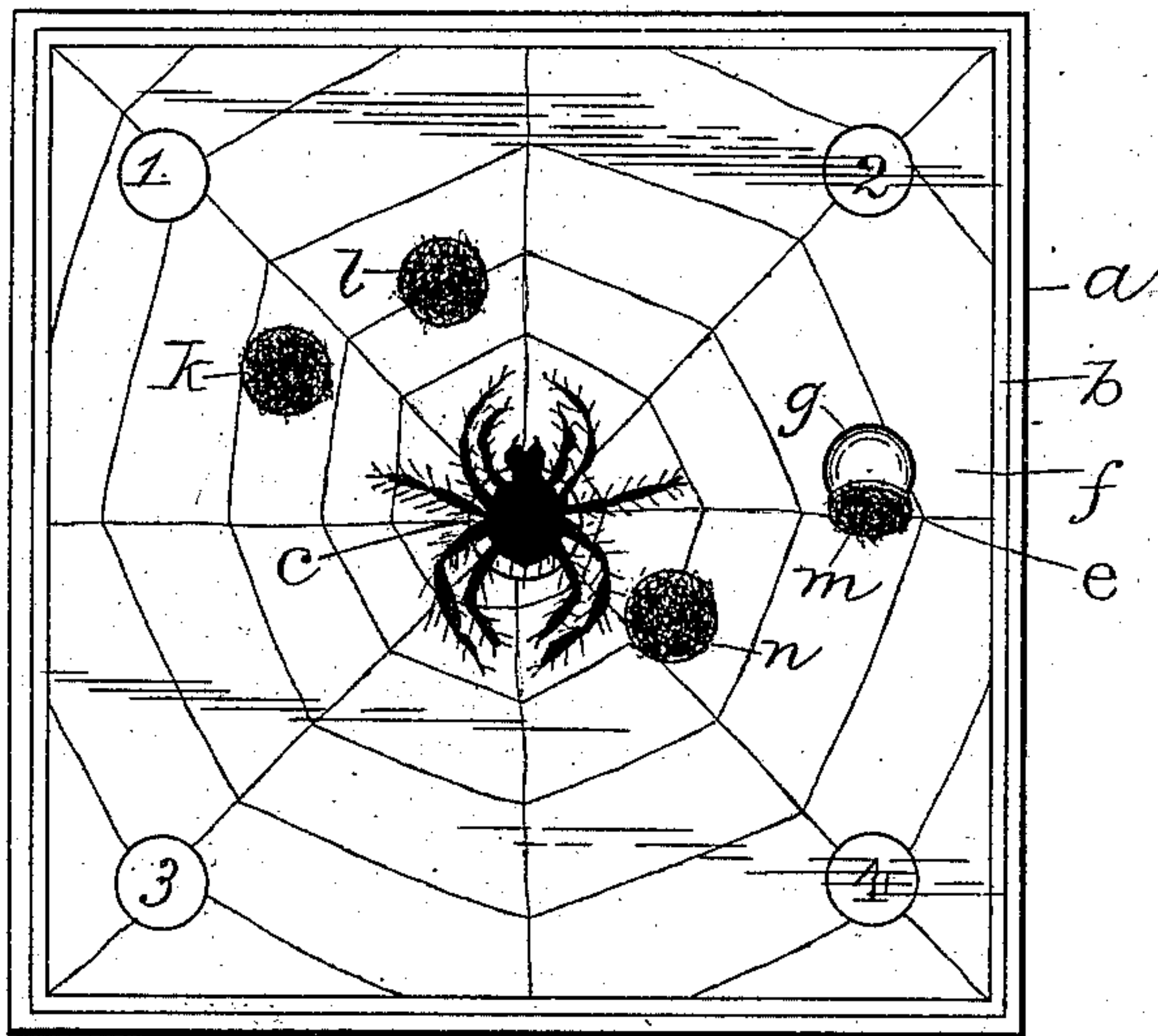


Fig. 2.

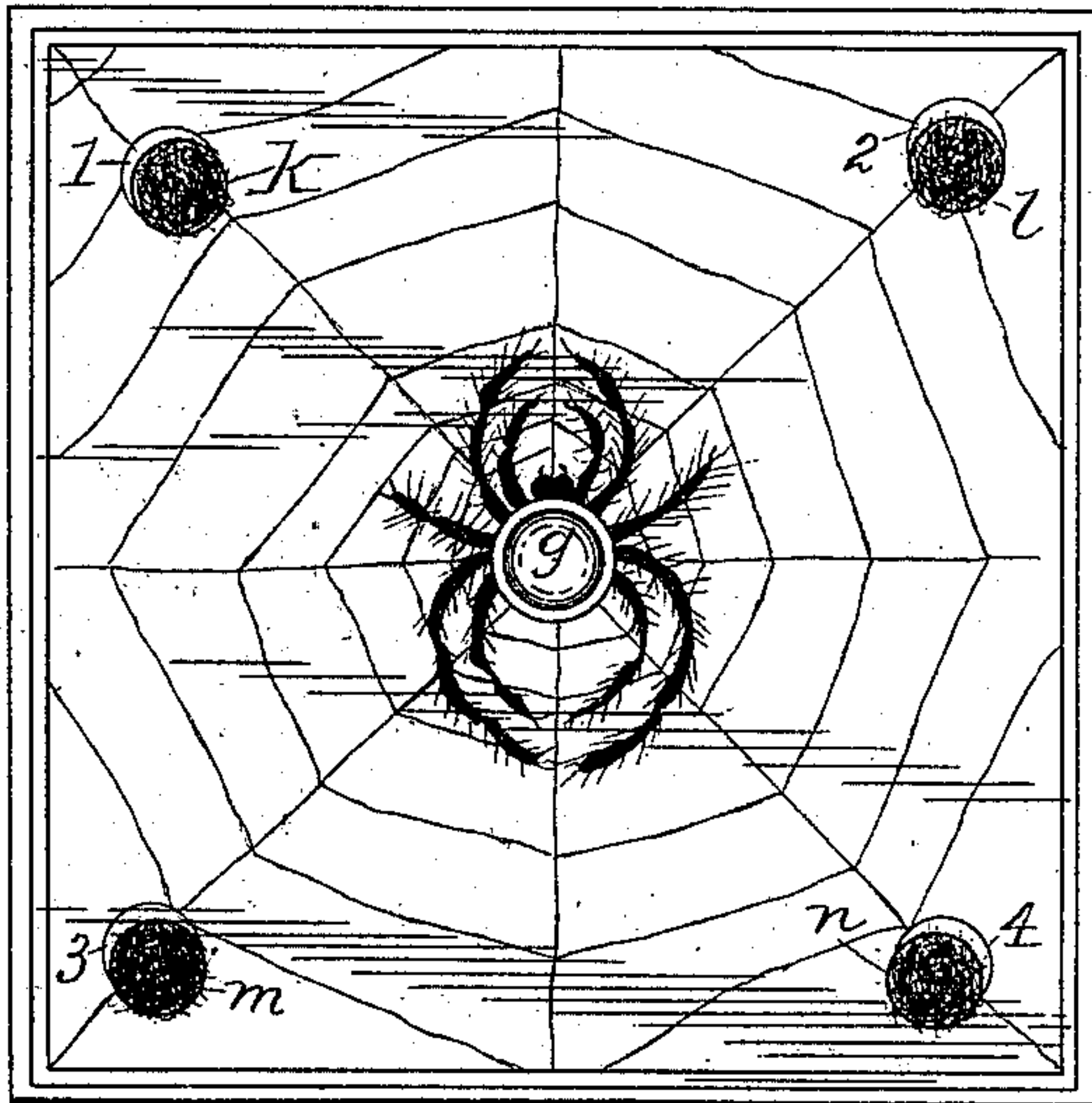
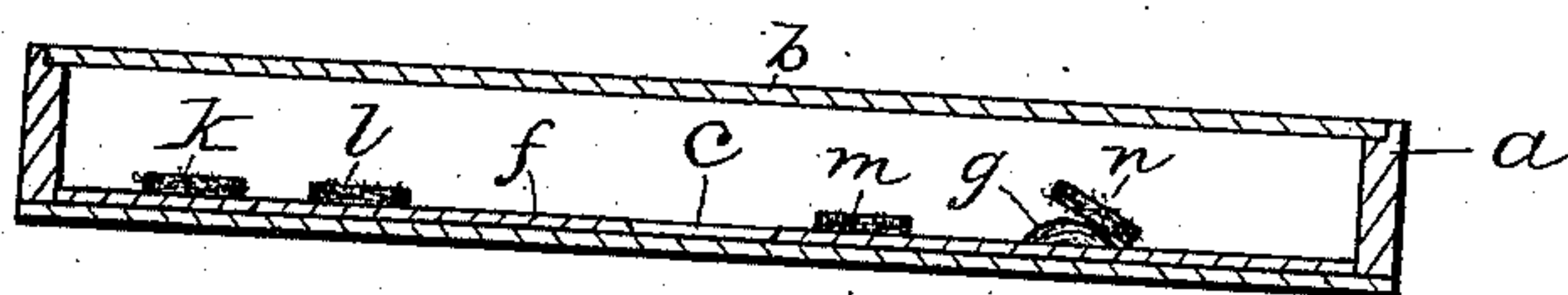


Fig. 3.



Witnesses

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TOY OR PUZZLE.

SPECIFICATION forming part of Letters Patent No. 413,612, dated October 22, 1889.

Application filed September 20, 1889. Serial No. 324,523. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. CRANDALL, a citizen of the United States, residing at Waverly, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Toys or Puzzles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a puzzle or toy adapted to be held in the hand and operated by tilting it in various directions; and it consists in the peculiarities more fully described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a top view of the puzzle before it has been solved; Fig. 2, a similar view showing the position of parts after the puzzle has been solved; and Fig. 3, a side view, partly in section, showing the box tilted.

The letter *a* represents any suitable inclosure adapted to be held in the hand. This inclosure is provided with a transparent cover *b*, which permits its contents to be seen. The floor *f* is provided with a central depression *c*, around which is marked off any suitable design—such as a spider's web *e*—having within it the points 1, 2, 3, and 4. A small quantity of quicksilver *g*, sufficient to enter and properly fill the depression *c*, is placed upon the floor of the inclosure and in the present instance represents a spider. One or more pieces of non-metallic or other suitable material which is less active or responsive to variations in the inclination of the floor of the inclosure are placed upon the latter. For convenience four small disks of felt are used. This material is found especially adapted for the purpose owing to its lightness and peculiar qualities. These pieces of felt *k l m n* each have a color corresponding with that of the points 1, 2, 3, and 4, and are laid loosely upon the floor of the inclosure and given such size, shape, and weight as to lie still upon the floor during the movements of the quicksilver, but which will readily yield to its action when brought in contact with them. The four pieces represent flies which have been caught in the web *e*.

The task to be accomplished is to make the spider advance, catch, carry, or move,

and deposit each fly upon its own point in the web. This is done by tilting the floor of the inclosure to make it unlevel, whereby the quicksilver, being very volatile and heavier than the felt, will run under or against it and push or carry it to the required point upon the floor, as shown in Figs. 2 and 3. The extreme sensitiveness of the silver renders the task of directing its movements exceedingly difficult, interesting, and puzzling. The nature of the metal will not permit the felt to stick to its surface. The quicksilver will engage and move the felt from place to place and then withdraw without carrying the felt with it. Hence it will be seen that there are two bodies, one of which is more responsive to variations in its support than the other, whereby the more active one approaches, engages, shifts, and deposits the other. While thus gravitating about, the movements of the fluid strongly resemble the quick actions of a spider or other living creature in the act of catching its prey. When the pieces of felt have all been deposited upon their respective points and the quicksilver has retreated to the central depression, as shown in Fig. 3, then the puzzle has been solved.

Although felt has been selected as a desirable material to be acted upon by the quicksilver, yet any other suitable light substance having the proper size, shape, weight, and quality might be successfully employed, the principal object being to have it of sufficient lightness to be readily moved by the force of the quicksilver.

It is also evident that many other changes could be resorted to without departing from the scope and spirit of my invention. Therefore I do not limit myself to the precise construction shown.

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

1. A puzzle or similar device consisting of an inclosure containing two or more bodies of different specific gravity movable therein, one of which is arranged to come in contact with and shift the other and to deposit it at various points upon the surface it travels over, substantially as described.

2. In a puzzle or similar device, an inclosure containing two or more movable bodies, one of said bodies being less responsive to

variations in the level of the inclosure than the other, whereby the more active body is made to shift the other from place to place, in the manner and for the purpose described.

5 3. In a puzzle or similar device, an inclosure having a body of quicksilver arranged to traverse its floor, in combination with pieces of felt placed loosely upon the floor and adapted to be moved by said quicksilver, for
10 the purpose substantially as described.

4. An inclosure closed upon all sides and having a transparent cover, a floor contain-

ing a depression, a body of quicksilver located upon the floor and adapted to enter the depression, and one or more lighter bodies of 15 non-metallic substance adapted to be shifted by the quicksilver, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES M. CRANDALL.

Witnesses:

H. H. KINNEY,

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