

No. 629,891.

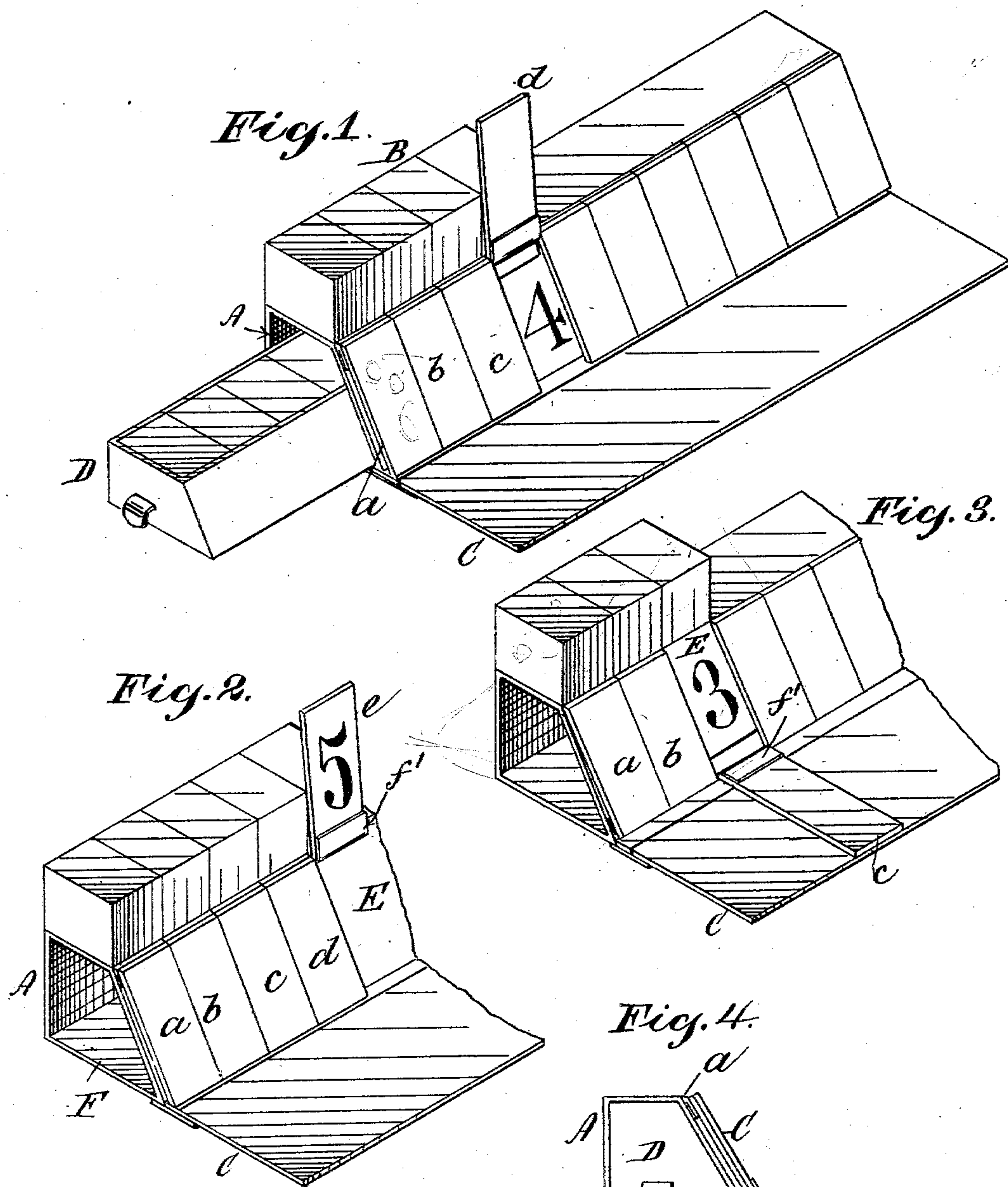
Patented Aug. 1, 1899.

M. S. CUNNINGHAM.
DEVICE FOR TEACHING COMPUTATION.

(Application filed Feb. 20, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

D. W. Gardner

Elihu C. Church

Inventor:
Mary S. Cunningham.

No. 629,891.

Patented Aug. 1, 1899.

M. S. CUNNINGHAM.
DEVICE FOR TEACHING COMPUTATION.

(Application filed Feb. 20, 1899.)

(No Model.)

2 Sheets—Sheet 2.

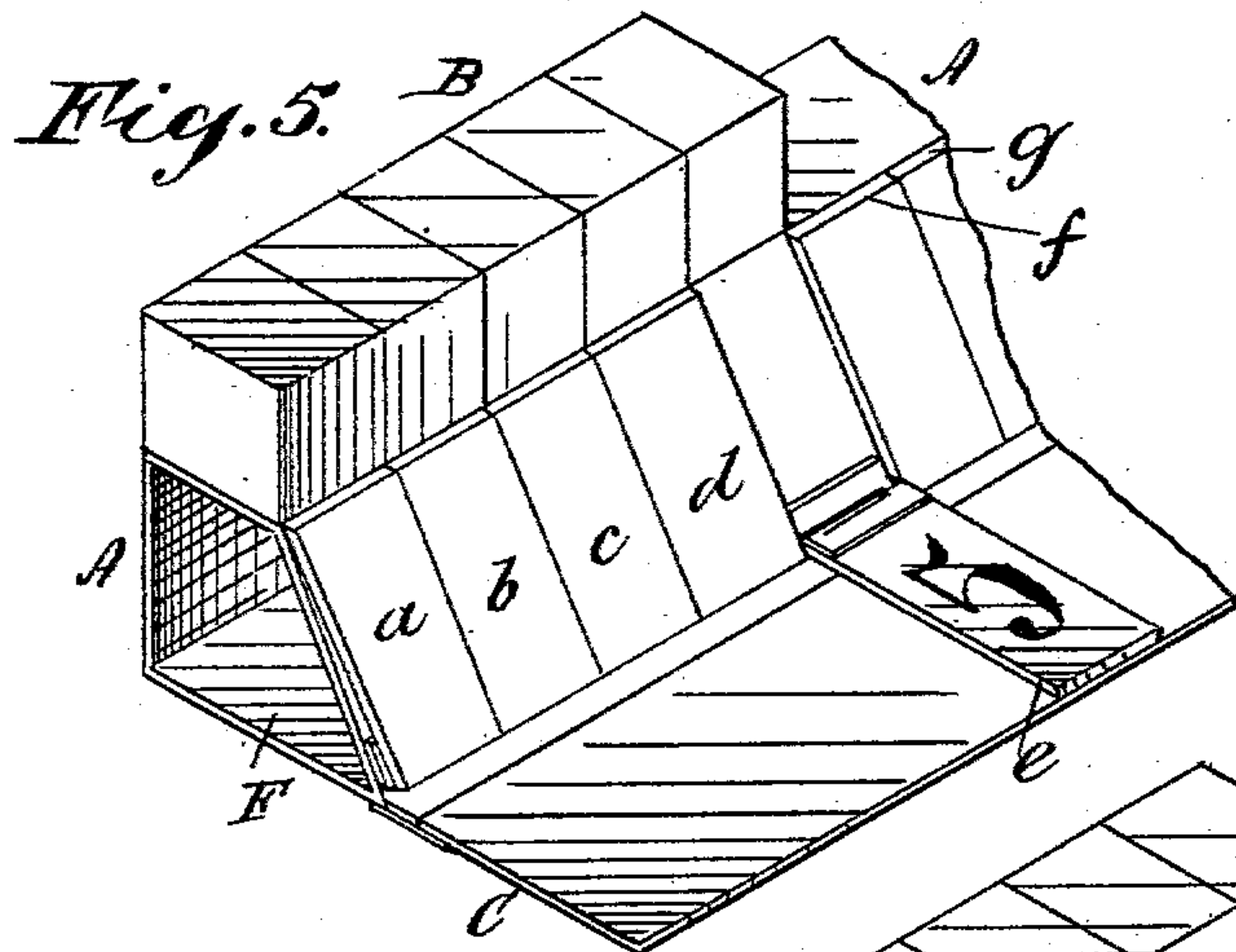


Fig. 6.

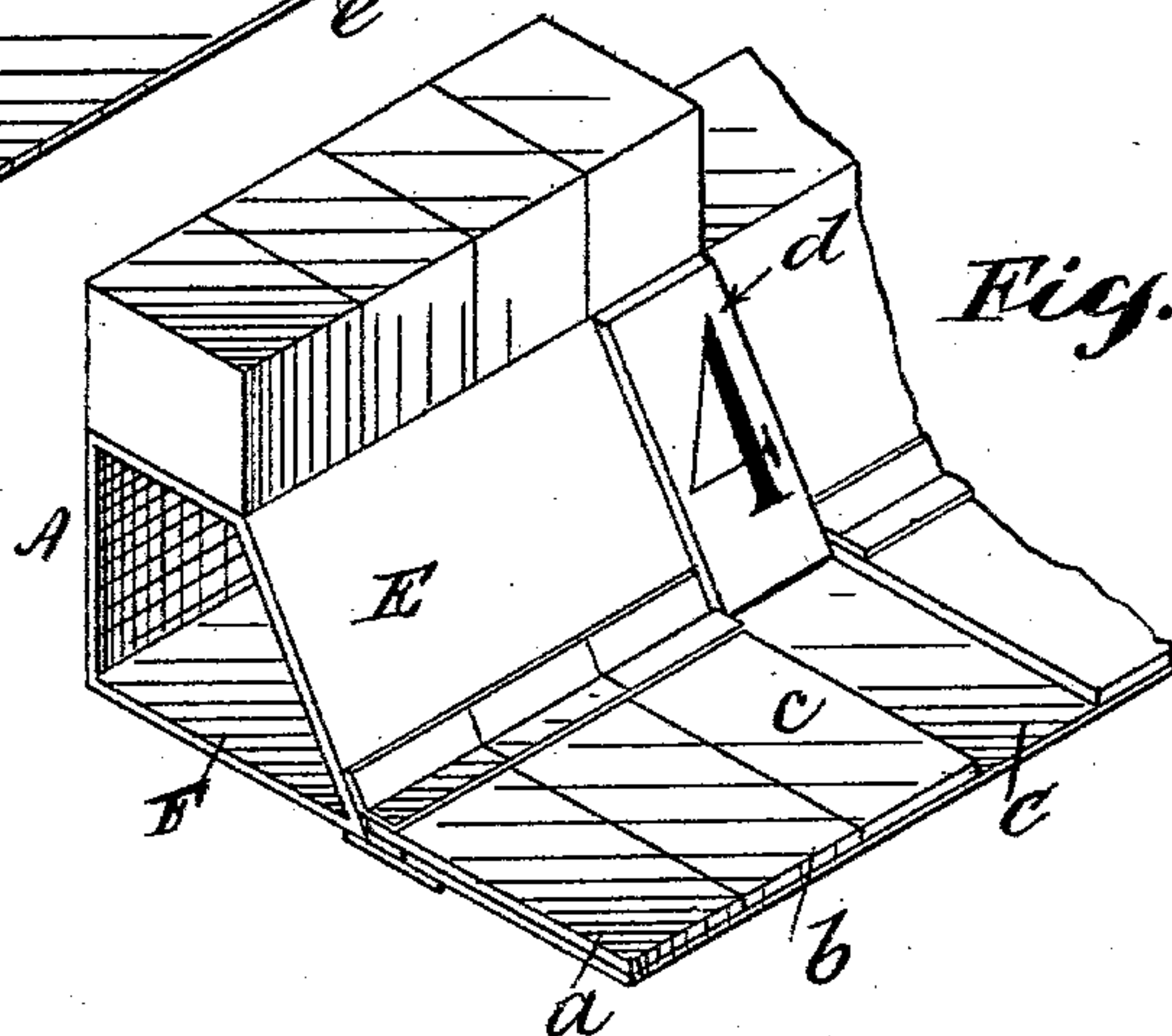
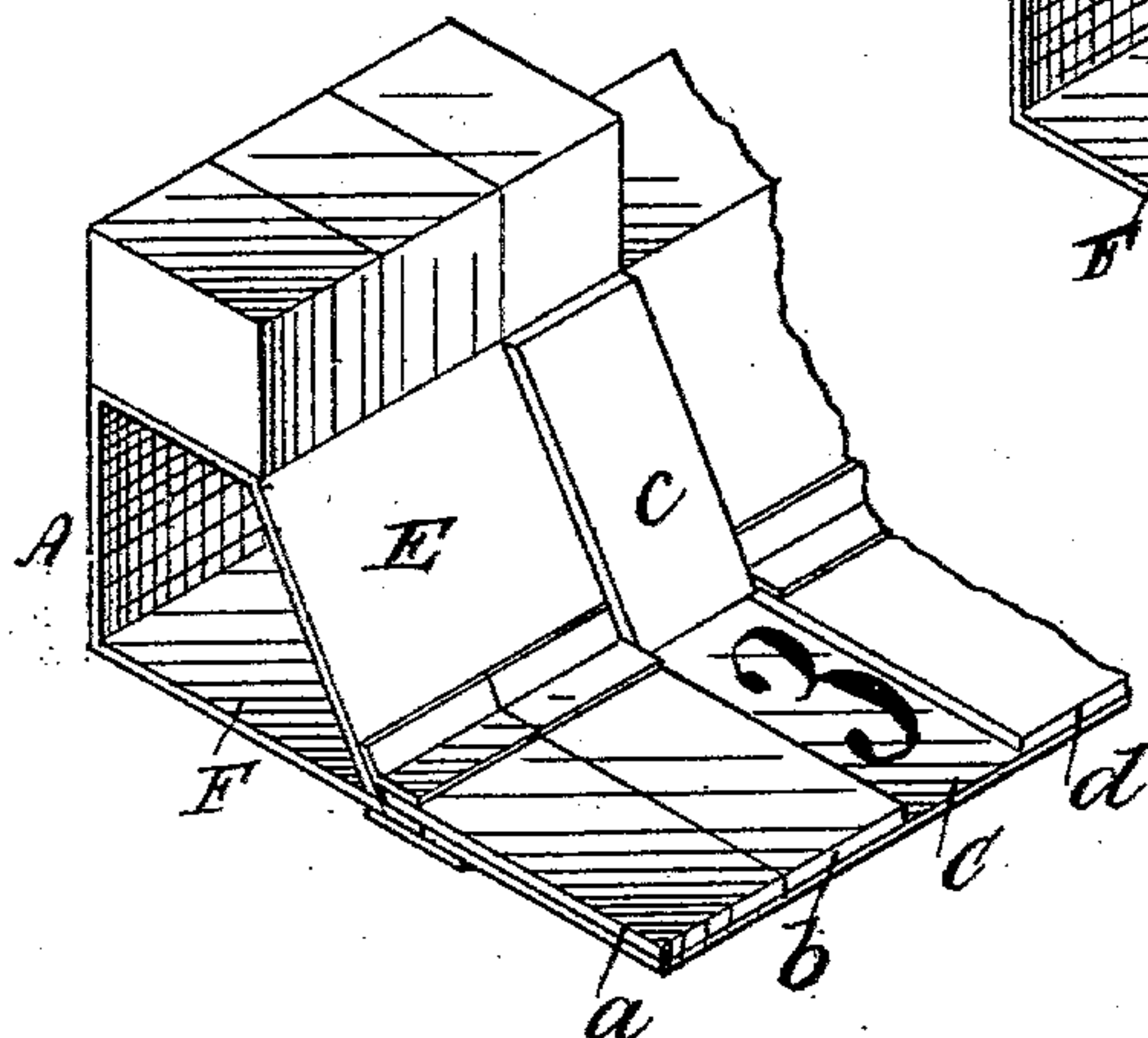
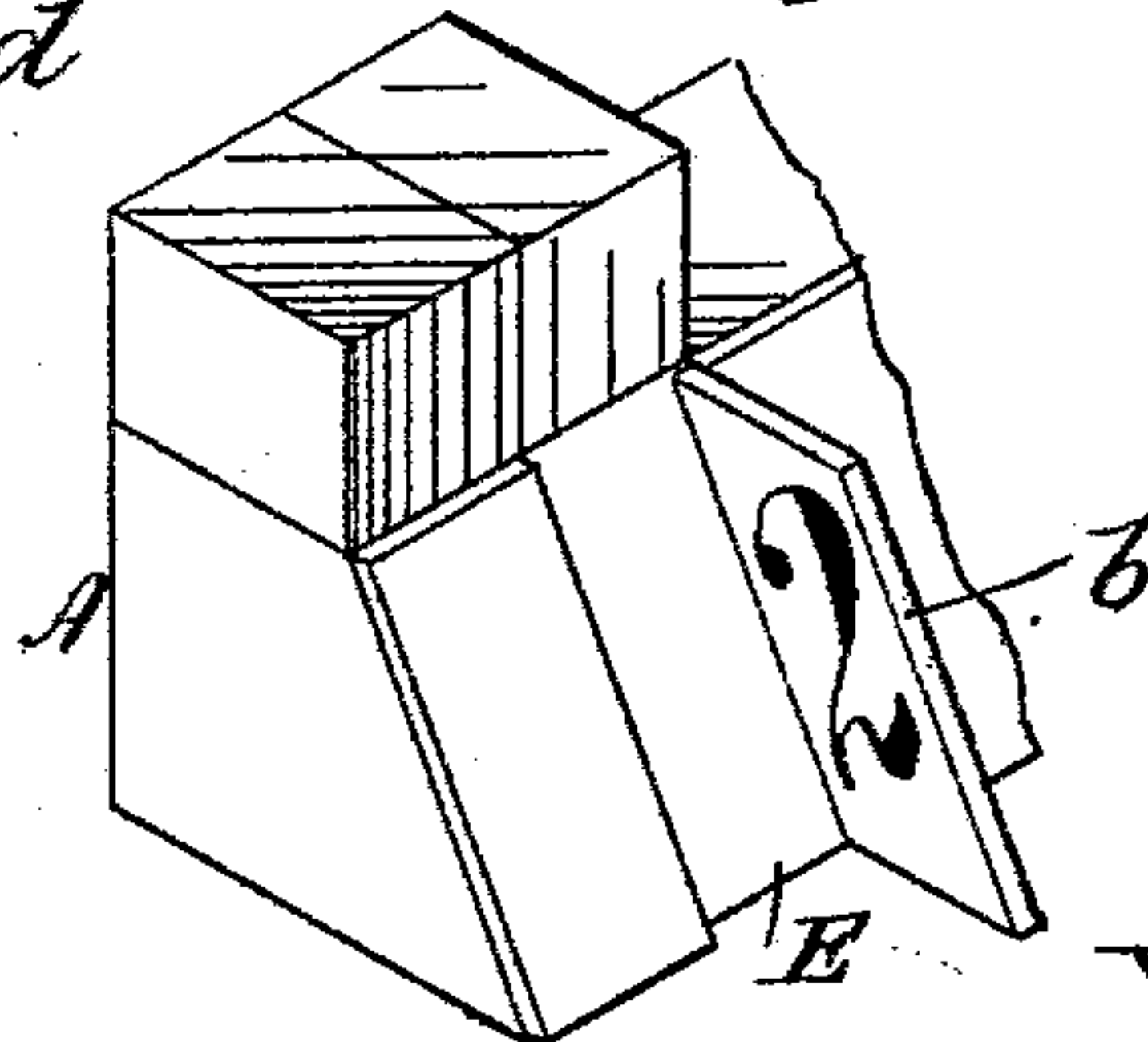


Fig. 8.



Witnesses:

D. W. Gardner.

Elihu C. Church.

Inventor:

Mary S. Cunningham

UNITED STATES PATENT OFFICE.

MARY S. CUNNINGHAM, OF NEW YORK, N. Y.

DEVICE FOR TEACHING COMPUTATION.

SPECIFICATION forming part of Letters Patent No. 629,891, dated August 1, 1899.

Application filed February 20, 1899. Serial No. 706,284. (No model.)

To all whom it may concern:

Be it known that I, MARY S. CUNNINGHAM, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Device for Teaching Computation, of which the following is a specification.

In the accompanying drawings are shown in Figure 1 a perspective view of my improved device; Fig. 4, a vertical cross-section thereof; Figs. 2, 3, 5, 6, 7, and 8, perspective views of different-sized portions (broken) of Fig. 1.

My invention is intended to be used by young children who are being taught the simplest operations of addition, subtraction, multiplication, or division and to aid such children therein.

In the drawings, Fig. 1, the device shown is not adapted to any higher number than ten; but of course this number may be increased or diminished, if desired, to conform to the child who is being taught.

In the drawings are shown blocks B, which are preferably equal in size and made of wood. The identity of these blocks in size and shape is not, however, essential, and they may be made of any desired material. This series of blocks B is an essential part of the device. I prefer to make a drawer D, into which the series of blocks B may be placed when the device is not in use and which is adapted to be inserted in the box or casing A; but this drawer D is not an essential part of my invention, nor need the structure A be a box or adapted to receive anything. It may, if desired, be solid; but I prefer to make it, as shown in the drawings, adapted to receive and inclose the drawer D.

The front or face E of the box or body A is preferably, as shown in the drawings, inclined or beveled as to the base F, forming an acute angle therewith, and is divided into spaces of equal width, each with a block B. Each of said spaces is marked with a figure, beginning at the left end with the figure "1," the second space having thereon the figure "2," and so on consecutively to the space on the right end of said face E. Upon the space at said right end is marked the highest figure which is to be used in the device. Each of said spaces is concealed by a cover, a series

thereof *a b c*, &c., covering the entire front or face E. These covers may be hinged at the bottom, Figs. 3, 5, 6, and 7, at the top, Fig. 2, or at the side, Fig. 8. Thus they may be raised, pulled down, or opened like a book-cover, according to the manner in which they are hinged. An outer covering C is adapted to be folded up to cover the series of covers *a b c*, &c.

The operation of my improved device is as follows: The child is presumed to have learned and to be able to recognize the Arabic figures "1, 2, 3, 4, 5, 6, 7, 8, 9, 10." The blocks B are taken in sufficient number for the computation which the child is to perform. Suppose the child is told to add one and one. He places a block at the left end on the top of the box. At its right and adjoining he places another block. All the figures which are upon the face E are concealed from his view by the series of covers *a b c*, &c. To find the correct answer to his problem, "One and one are how many?" he lifts up the hinged cover *b*, which is immediately in front of the second block, thereby disclosing the figure "2." This figure he recognizes and is immediately able to answer the question which was put.

Suppose the child to be asked: "Two and two and one are how many?" He knows when he has two blocks. He takes two blocks and places them at the left end on top of the box. Then he takes two more blocks and puts these at the right of the first two blocks. There are the "two and two," but he is to add one more. So he takes another block and places it at the right of the second couple of blocks. Then he lifts up the cover-piece, which is immediately in front of the last block which he has put up, and on the disclosed space of the front E appears a figure, which the child recognizes as "5," the correct answer. In the same manner the child may add any sums which are included in the figures used on the device. Subtraction he learns by simply removing from the number of blocks which he has placed in position the number of blocks equal to the number to be subtracted. He then lifts up the cover-piece, which is immediately in front of the block which remains, (at the right, if more than one block is there,) and upon the space of the face E, which is

thereby disclosed, appears a figure which he recognizes and knows to be the correct answer.

5 Multiplication and division the child learns in a corresponding way—by the disclosing of the figure after multiplying or dividing the blocks.

10 The figures in my improved device need not always be placed upon spaces in the face E. If the cover-pieces are hinged at the bottom, the figures may be placed upon spaces in the outer cover C, Fig. 6, or the figures may be on the cover-pieces *a b c*, &c., themselves, to be disclosed by lifting them, pulling them
15 down, or opening them from side to side, as the case may be. All this is apparent from the figures shown in the accompanying drawings.

20 My improved device will be found of great benefit in teaching little children these simple calculations in arithmetic, and their progress therein by the use thereof will be found to be surprisingly rapid.

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

1. In a computation-teaching device, the combination of a series of blocks with a box or body piece the face of which has thereon a series of figures which can be separately
30 disclosed by the displacement of cover-pieces

which rest upon said face, substantially as shown and described.

2. In a computation-teaching device, the combination of a series of blocks with a box-piece whose face has thereon a series of figures which may be separately disclosed by
35 displacing cover-pieces attached to and resting upon said face, the said box-piece being adapted to receive and hold a drawer for containing said series of blocks, substantially as
40 shown and described.

3. In a computation-teaching device, the combination of a series of blocks with a box or body portion and cover-pieces having on
45 one face thereof a series of figures which will be separately disclosed when said cover-pieces are moved, substantially as shown and described.

4. In a computation-teaching device, the combination of a series of blocks with a box
50 portion and cover-pieces attached thereto, which, when separately raised, disclose figures upon the inner side of a flap which covers said pieces, substantially as shown and described.

MARY S. CUNNINGHAM.

Witnesses:

ANNA M. CHURCH,
ELIHU C. CHURCH.