

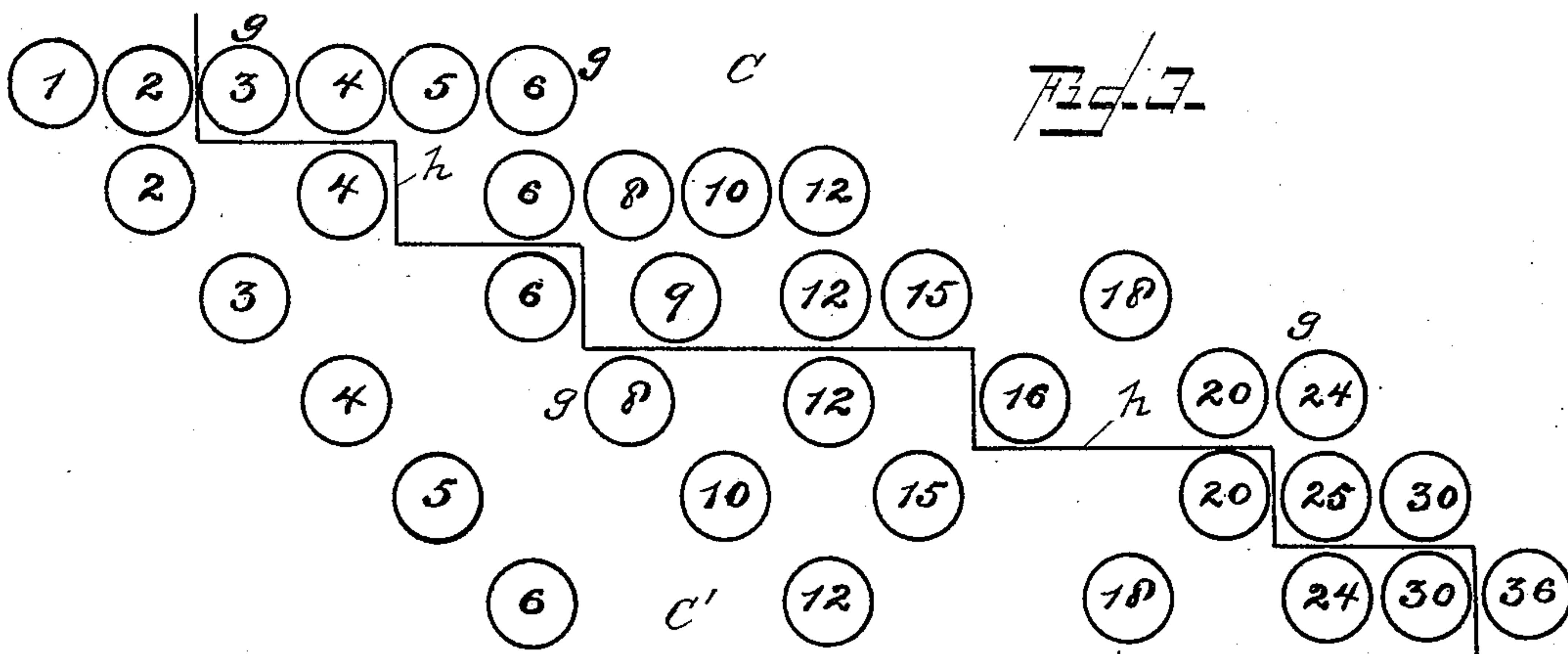
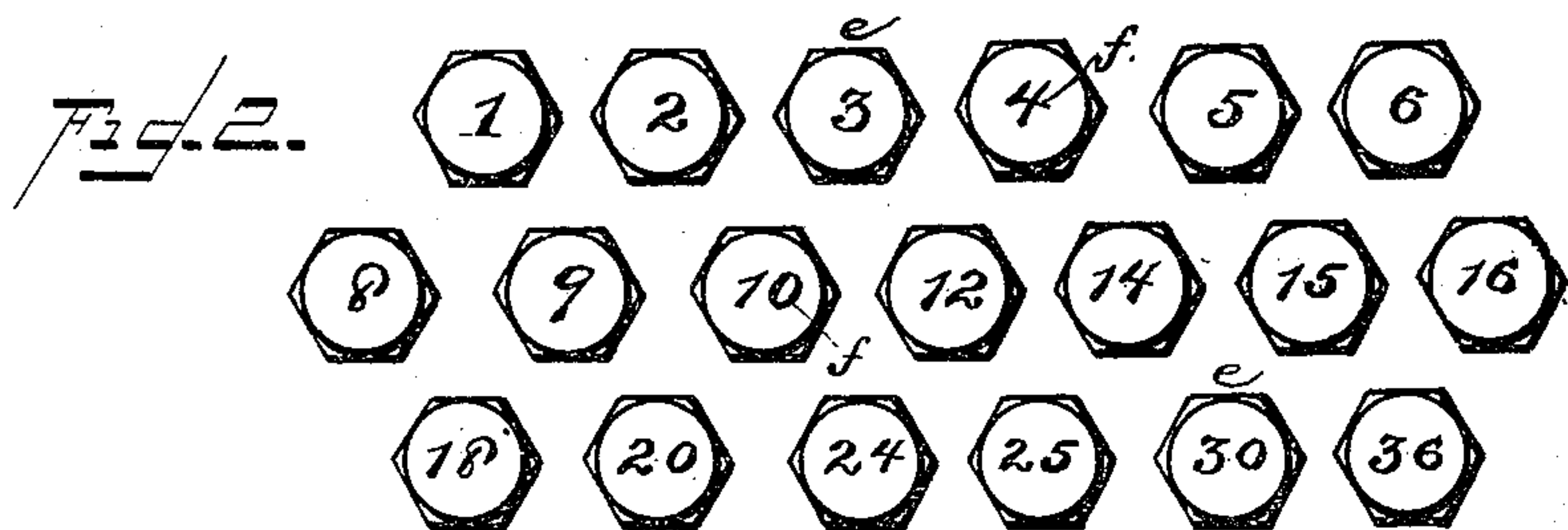
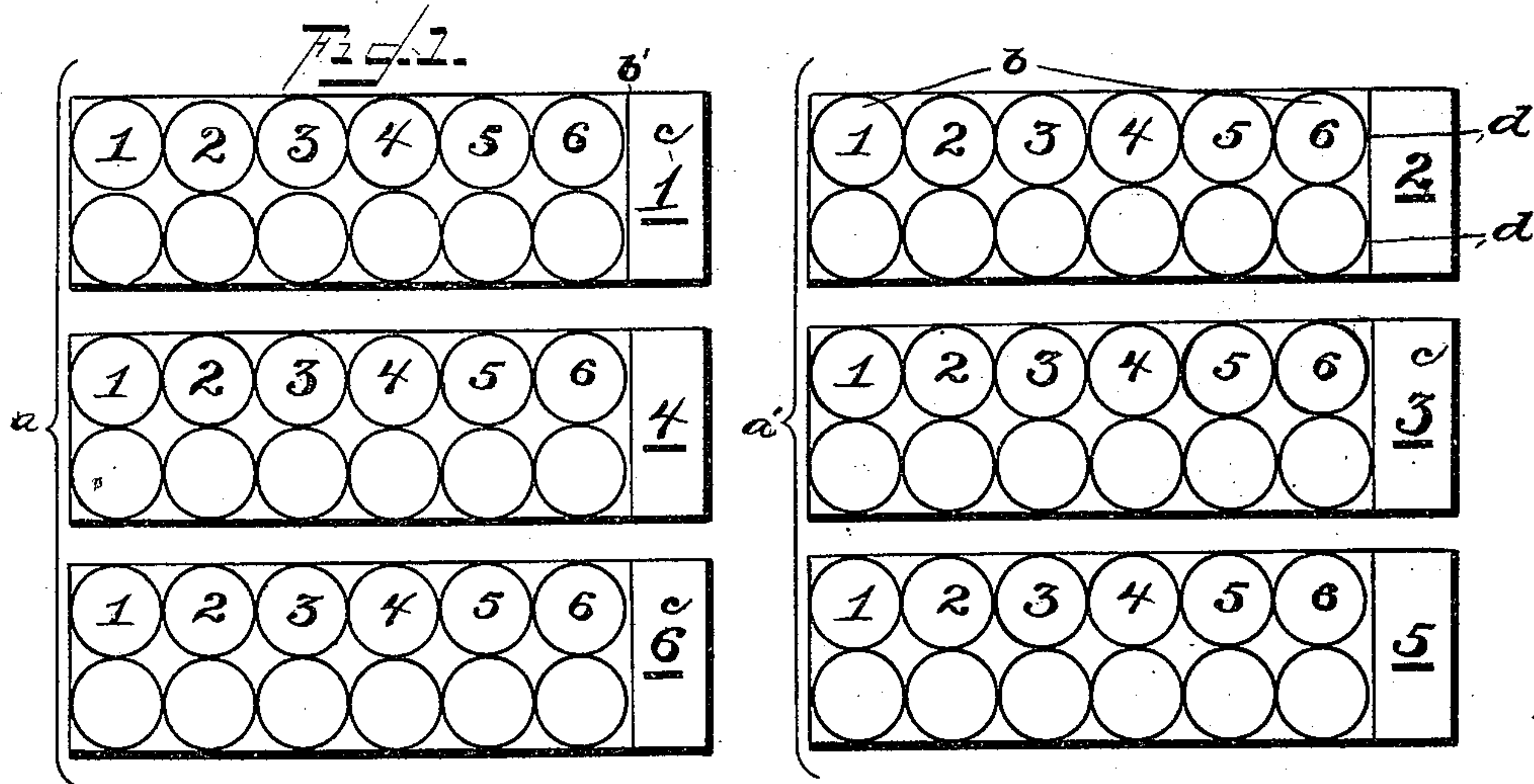
(No Model.)

E. E. BLISS.

GAME OR EDUCATIONAL DEVICE OR APPLIANCE.

No. 438,757.

Patented Oct. 21, 1890.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

ELEANORA E. BLISS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## GAME OR EDUCATIONAL DEVICE OR APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 438,757, dated October 21, 1890.

Application filed May 26, 1890. Serial No. 353,274. (No model.)

*To all whom it may concern:*

Be it known that I, ELEANORA E. BLISS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Games or Educational Devices or Appliances, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to an improved game or set of devices which can be used either for amusement or for education, it being intended especially for teaching, and providing practice in respect to the mutual relations of numbers of certain classes.

15 I have illustrated in the drawings and will below describe how my invention can be applied in teaching the ordinary multiplication-table or in playing a game based upon the numbers involved in such a table.

Figure 1 shows a set of cards or strips of suitable material, as wood, ivory, bone, or the like.

25 In order to simplify the illustration and description of the device, I have limited the basic number to six; but it will be understood that any number can be used. In practice I have used the numerals 1 to 12, inclusive, they being the basis of the ordinary multiplication-table. The principle involved is the same with the six to which the illustration is limited herein. The said six cards or slips are each indicated by *a* or *a'*. Each is provided with a series of numerals, from 1 to 6, inclusive, as shown at *b*, and these numerals are to be treated as multiplicands when the device is in use. Again, each has a numeral at *c*, preferably in a space distinguished from that of the numerals at *b* by a dividing-line, as at *b'*, or by being differently colored; or this numeral at *c* can be of a larger size, so as to be readily distinguishable. This numeral at *c* can be considered as a multiplier in relation to the multiplicands at *b'*, and it will be seen that these multipliers also extend from 1 to 6, inclusive, regarding the whole set of cards *a* and *a'*. I prefer to divide that part of each card which lies at the side of the space occupied by the multiplier at *c* into two compartments, as at *d d'*, the aforesaid multiplicand-numerals *b* lying in one of them and the other being left blank, and, further, pre-

fer to divide both these compartments *d d'* by transverse lines into as many small spaces as there are multiplicands. But as to these details there can be variation, and taste can be followed in several respects. In fact, the blank compartment *d'* can be omitted and still have the cards adapted to their purpose, as will appear below.

60 Fig. 2 shows a set of relatively small cards, squares, or disks *e e* of bristol-board, wood, ivory, or bone. Each of these has a numeral on its face, as at *f*, and these numerals constitute a single series of the multiples derivable from the said basic numbers 1 to 6, each one of the total aggregate of possible multiples occurring but once.

Fig. 3 shows a second set of small cards, squares, or disks *g* of any suitable material, and each being provided with a number. These numbers are also respectively multiples derivable from the base-numbers 1 to 6; but this set in Fig. 3 comprises not only one complete series of such multiples from 1 to 36, but also duplicates of some of them, the whole number comprising all of the multiples possible by permutation and combination of the base-numbers from 1 to 6. Thus there are two 3's, because of the fact that the product of 1 as a multiplier and 3 as a multiplicand is 3, as it also is when 1 is the multiplicand and 3 the multiplier. For similar reasons there will be four cards or disks, each with a 12, two with 20, &c. In order to have these cards or disks readily distinguishable from those in Fig. 2, they may differ therefrom in color or material or form, or the figures may be of different shape.

90 One of the ways in which the devices I have above described may be used is the following: Let it be supposed that the game is to be played by two persons. First the cards or strips *a a'* are shuffled or turned upside down and then divided equally. Fig. 1 shows them in two sets as though thus divided, those of one set being at A and those of the other at B. Then the disks or cards *g* in Fig. 3 are also shuffled and equally divided. A line of division is indicated in the drawings at *h*, there being one set at C and one set at C'. Then the cards, disks, or squares *e* (shown in Fig. 2) are either concealed in a box or otherwise, or are turned face down on a table. After



the players have obtained, as aforesaid, equal numbers of the cards *a* and of the cards or disks *g*, one of them draws from the box or turns up one of the cards or counters *e* to disclose the number thereon. As above described, that number will be a multiple of the series of multiples from 1 to 36, and as soon as it is announced each player should ascertain how many times it is derivable from the multipliers at *c* and the multiplicands at *b* on his cards *a* or *a'*, and after ascertaining them places in the blank space under each multiplicand, which is a factor in the given product, one of the cards or counters *g*. If he should not have a number among his counters *g* such as is called for and such as he perceives to be required by one of his blank spaces at *d*, he is to have the right to call for it from among the cards or counters *g* of the other player, or, if several are playing, from any one who may have it. As soon as all of the players announce that they have filled all of the blank spaces noticed by them to require the given number another card or counter *e* is drawn from the box or is inverted on the table and the above-described steps are repeated. This continues until all of the cards or counters at *e* have been drawn or turned. After they have all been thus drawn or turned all of the cards and counters at *g* should also have been put in place on the cards *a a'*. If any remain, it is because mistakes have been made by one or more of the players, and the player making the mistake is found from the fact that some of the blank spaces at *d'* on his cards *a* or *a'* are not filled.

It will be seen that success depends upon quickly perceiving the relations between the several multipliers and multiplicands and their products; and when a large number of cards and counters *g* are in use based upon a comparatively long series of numbers, as from 1 to 12 or 1 to 20, the game calls for close

attention, and can be used with excellent results as an instrument of education in the lines for which it is adapted.

What I claim is—

1. The herein-described game, comprising a set of cards, each having a series of multiplicand-numerals and a multiplier-numeral thereon, and a set of cards each containing a number which is a multiple involving as factors the multiplier and one of the multiplicands on one or more of the aforesaid cards, the said second set of cards comprising duplicate multiples such as aforesaid, as set forth.

2. The herein-described game, having a set of cards, each having a series of multiplicand-numerals and a multiplier thereon, a second set of cards, each containing a numeral which is a multiple derivable from the multiplier and one of the multiplicands on one or more of the cards of the aforesaid set, and a third set or list of numbers, each being a multiple such as aforesaid and adapted to have its numbers selected by chance, substantially as set forth.

3. In a game or educational appliance, a set of cards, as at *a a'*, all containing the same series of multiplicand-numerals and each having a different multiplier-numeral distinguished from the aforesaid multiplicand-numerals and a series of blank spaces respectively corresponding to said multiplicands, and a second set of cards, each provided with a numeral which is a multiple of one of the said multipliers and one of its multiplicands, and the numbers on the said second set of cards comprising all of the multiples obtainable by permutation in the way described from all of the said multipliers, substantially as set forth.

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

ELEANORA E. BLISS.

Witnesses:

H. H. BLISS,  
M. B. MAY.