

No. 788,304.

PATENTED APR. 25, 1905.

H. H. CUMMINGS.

MULTIPLE ARTICLE HOLDER AND METHOD OF FORMING SAME.

APPLICATION FILED AUG. 10, 1903.

2 SHEETS—SHEET 1.

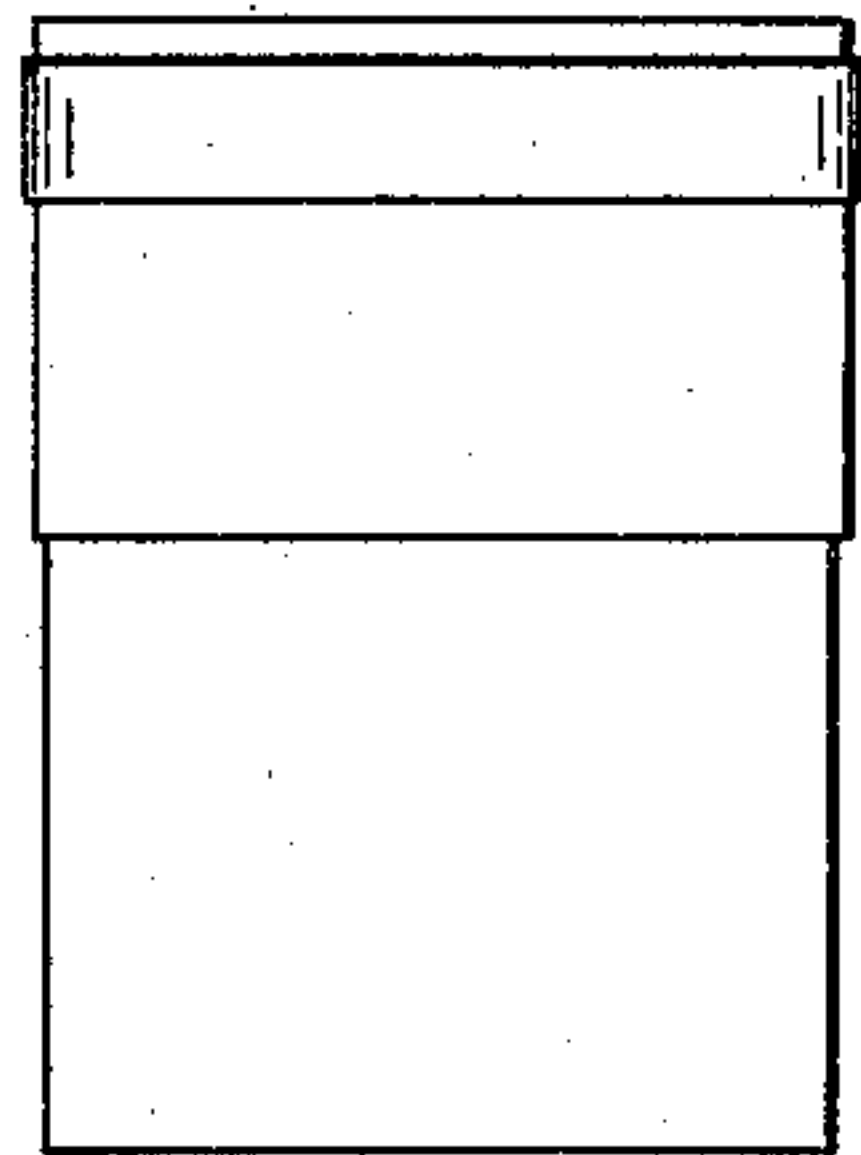


Fig 2

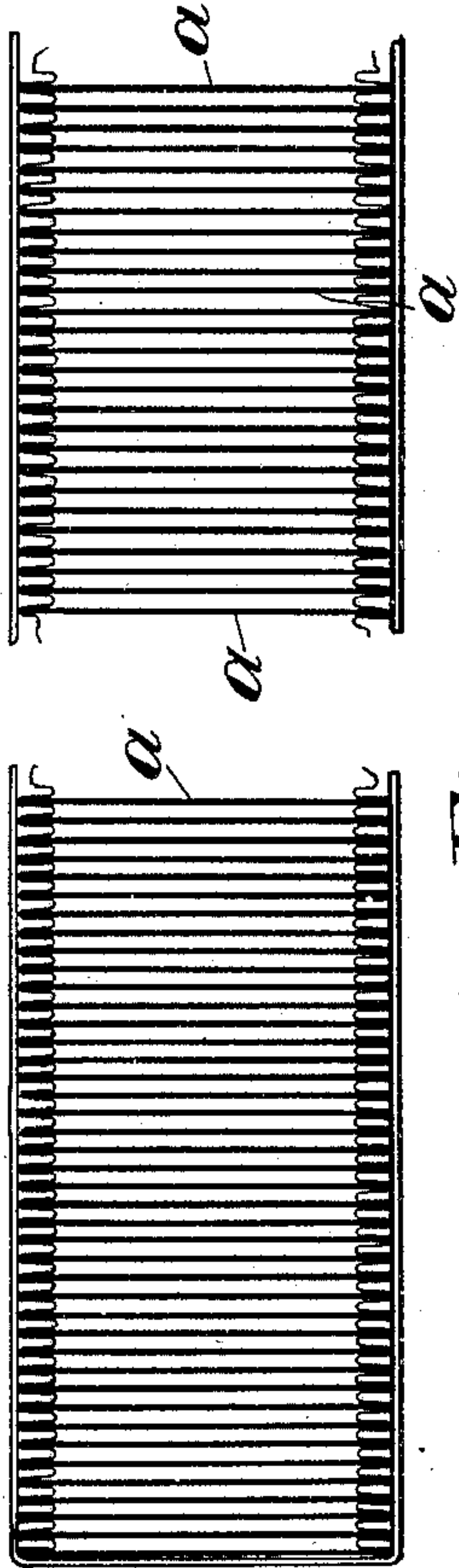


Fig. 1

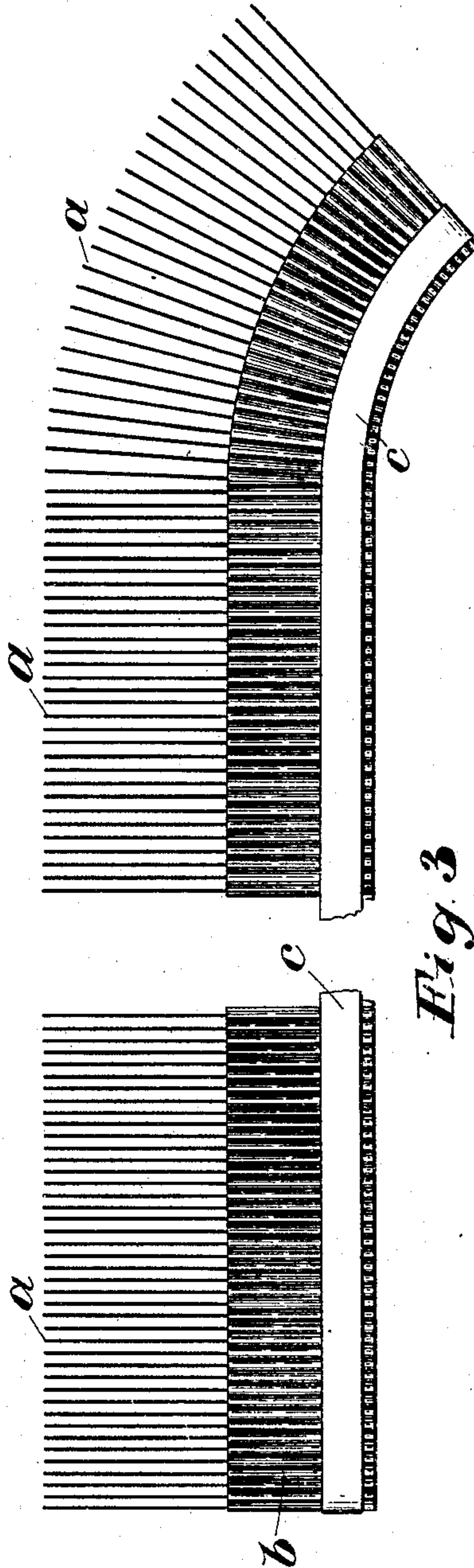


Fig 3

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2 SHEETS—SHEET 2.

Fig. 4

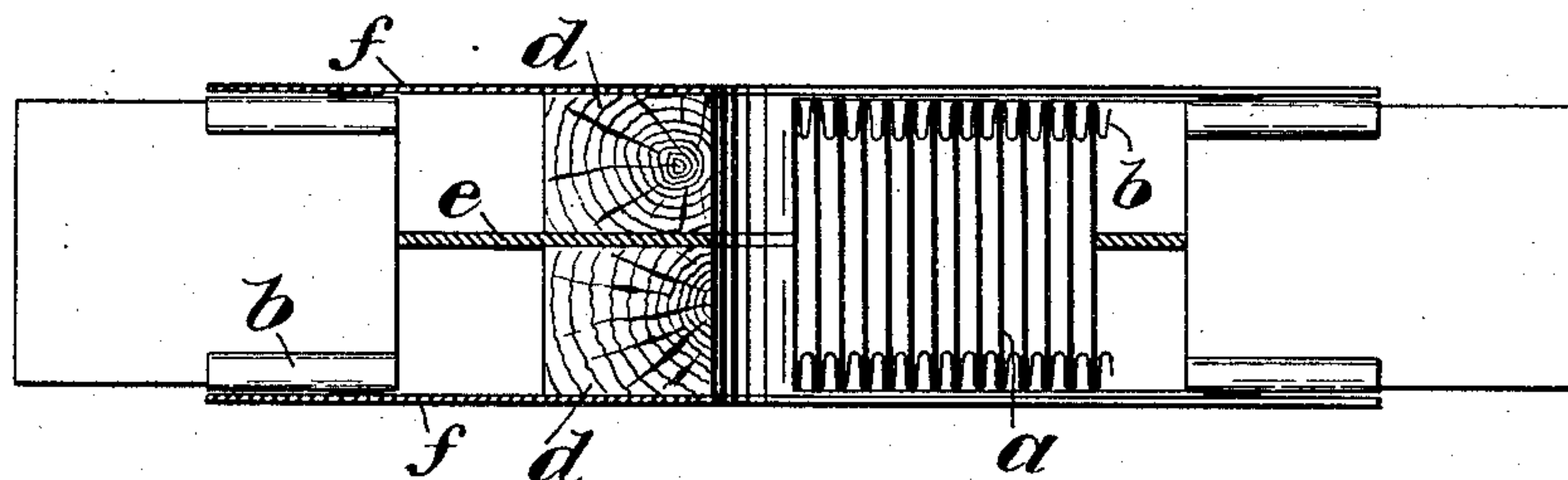
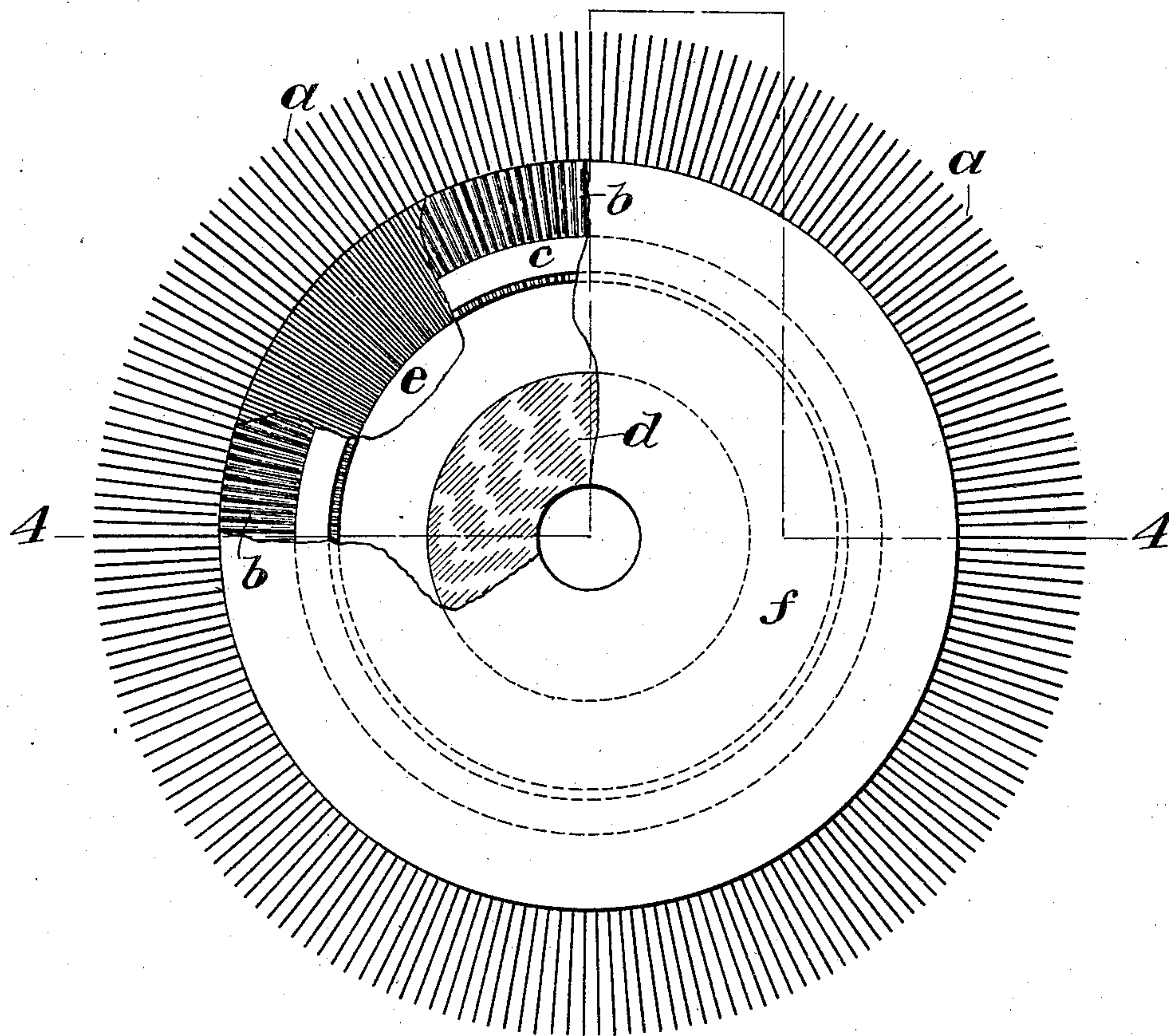


Fig. 5



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UNITED STATES PATENT OFFICE.

HENRY H. CUMMINGS, OF MALDEN, MASSACHUSETTS.

MULTIPLE-ARTICLE HOLDER AND METHOD OF FORMING SAME.

SPECIFICATION forming part of Letters Patent No. 788,304, dated April 25, 1905.

Application filed August 10, 1903. Serial No. 168,906.

To all whom it may concern:

Be it known that I, HENRY H. CUMMINGS, a citizen of the United States, residing at Malden, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Multiple-Article Holders and Methods of Forming the Same, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention comprises a multiple-article holder and a method of forming the same, such holder being particularly intended to serve as a magazine for holding a large number or series of similar articles, such as would be employed in the case of a vending or other coin-controlled device, wherein the articles might consist of a series of similarly-shaped cards, packages, or other like objects.

While my invention is particularly adapted for coin-controlled or vending machines, it is not exclusively so, for the holder may be employed for any purpose where a large number of like articles are to be held to await the performance of some intended individual operation, or the holder may be employed for mere purposes of display or storage, while other uses will readily be apparent.

I have herein described my invention with reference to a holding device intended specifically to hold a series of similar articles, such as like strips of cardboard, so located and held as to be accessible to the feeding mechanism of a coin-controlled machine or in other situations where it becomes necessary to withdraw each card severally from the holder and thereupon perform some operation, such as its delivery to the operator of the machine or its delivery preceded by a record made upon the card.

My invention will be best understood by reference to the following description of the specific embodiment selected, taken in connection with the accompanying illustration, while its scope will be more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a plan view of my holder, partially broken away and looking downward upon the edges of the contained cards. Fig. 2 is an end view thereof. Fig.

3 is a side elevation of the same, partially broken away and showing the end thereof slightly bent to better illustrate the flexibility of the holder and the ready separation of the cards or other articles. Fig. 4 is a section on the line 4 4, Fig. 5, showing one embodiment of my invention mounted in disk form for use in a coin-controlled machine; and Fig. 5 is a side elevation of the same, partially broken away to show the constructional details.

Referring particularly to Figs. 1, 2, and 3, the duplicate articles *a*, and which may be of any character whatever, are herein represented as cards—such, for example, as sub or miniature targets employed in connection with my improved coin-controlled target-practice apparatus described in my copending application numbered 168,907, filed August 10, 1903. These cards are held in a stack, as shown, and in closely arranged though separated parallel relation within a series of preferably shallow vertical pockets formed by the crimped or fluted bands *b*, of paper or other suitable and preferably flexible material. The pockets are preferably of such size and shape as to embrace but the lower portion of the two side edges of each card strip, leaving the top and bottom edges and also the upper portion of the side edges of the cards free, so that cards may be easily manipulated or seized or operated upon by automatic or other feeding devices or extractor mechanisms. Freedom of the upper target portion also gives added flexibility to the entire holder, so that it may be bent to conform to any desired surface, such capacity being indicated by the bend shown in Fig. 3, the fluted or crimped holding member yielding freely to permit the assumption of any desired shape by the entire holder. Near the base of the holding-strip *b* I preferably employ a piece of flexible tape *c* or other suitable binder to bind about the entire holder to give added strength thereto and when the holding-strips *b* are composed of paper to assist in retaining the desired shape.

The method of forming the above-described holder and of stacking the articles therein consists in crimping or fluting two oppositely-arranged paper strips to form the holding-pockets described, the strips being fastened

together at their extreme ends to form a continuous rectangular holder with its oppositely-arranged pockets. I prefer to insert in each pair of pockets as they are formed by the crimping of the paper the article, herein a target-slip belonging thereto, since this economizes time and cost of manufacture and also gives form and body to the holder-strips as rapidly as the formation of the holder proceeds. This, however, is not essential, since the holding strip or strips *b* may be formed of material sufficiently heavy to maintain the form and shape imparted thereto by the crimping, and the cardboard strips or other articles may be subsequently inserted. When the holder has been completely formed, it is bound about with the binding-tape *c*.

In Figs. 4 and 5 I have shown a holder similar to that illustrated in Fig. 3 mounted upon a circular support and having its two ends secured together to form a rotary holder or magazine. Between the two cylindrical hub-pieces *d* is a disk *e*, upon which the lower edges of each card within the holder rests, thereby maintaining each card at the same radial distance from the center of the holder. The holder having been wrapped about the disk *e* and its ends secured together, it is firmly fastened in position by the two outside retaining-disks *f*, which are glued or otherwise secured to the tape *c*. The rotary or circular holder described is especially adapted for use as a magazine-holder for coin-controlled devices, where the radially inner edges of the cardboard strips may be easily acted upon by suitable feeding mechanism operating from within and on either side of the wall *e*.

The holder which I have described admits of great rapidity of construction and great economy in space, permitting the stacking of the maximum number of articles with the least permissible separation. Since it may be made of paper or cloth or any similar light material, the resulting holder has not only a minimum weight, but after its contents has been exhausted it may be thrown away without material loss. Its flexibility permits it to conform to any desired surface or to be placed in any desired position for facilitating the withdrawal of the cards or other articles or for better permitting their cooperation with suitable feeding mechanism. The separation of the cards or other articles is uniform for the same holder, but may be made anything desired by varying the thickness of the holding-strips, or the degree of separation at the upper card edges may be varied in the same holder, if desired for any purpose, by bending or flexing certain portions of the same, as shown in Fig. 3.

The cards shown in the embodiment of my invention illustrated are confined or retained by gentle friction upon a portion of two edges only, leaving all the necessary unconfined card-

surface for cooperation with the extractor or feeding devices.

It will be obvious that my invention is in no wise limited to the specific embodiment herein shown and described, to the arrangement of parts therein, or to the specific purpose to which its application is indicated, but that my invention is capable of wide modifications in every respect without departing from the spirit thereof.

I claim—

1. The method of forming a multiple-article holder which consists in fluting or crimping a double band or strip of thin material and forming thereby pairs of oppositely-arranged pockets and causing said strips to maintain substantially the same relative position.

2. The method of forming a multiple-article holder which consists in fluting or crimping a double band or strip of material and forming thereby pairs of oppositely-arranged pockets and binding the said strips into a definite relation with each other about their fluted sides.

3. The method of forming a multiple-article holder which consists in fluting or crimping a double band or strip of thin material to form thereby pairs of oppositely-arranged cooperating pockets.

4. A multiple-article holder comprising oppositely-arranged fluted holding-strips and presenting oppositely-disposed cooperating retaining-pockets formed by the corresponding folds in the opposite strips.

5. A multiple-article holder comprising oppositely-arranged fluted holding-strips to present pairs of cooperating pockets and a binding member attached to the said holder.

6. A holder for holding a series of cards or other articles of like form or configuration comprising a fluted holding member having retaining-pockets formed by the adjacent walls of the successive folds, said walls being substantially plane and parallel to afford most efficient engagement with the plane faces of the cards or other articles.

7. A flexible holder for a series of cards or other like articles providing holding means for holding the end portions of the cards but permitting the separation of the cards at their opposite end portions when the holder is bent.

8. A multiple-article holder having a continuous pocket-forming holding-strip providing pockets having each substantially parallel plane, opposing retaining-walls.

9. A rotary multiple-article holder having circularly-arranged fluted holding means.

10. A rotary multiple-article holder having a pocket-forming strip with circularly-arranged pockets thereon.

11. A rotary multiple-article holder for holding a series of like articles, having a flexible pocket-forming wall thereon.

12. A rotary multiple-article holder for

holding a series of similar cards or other like
articles, having peripheral holding means en-
gaging the sides of said articles to permit ra-
dial withdrawal of the same and leaving un-
5 confined a portion of the radially inner edges
of the said articles for engagement with suit-
able extractor means.

In testimony whereof I have signed my name
to this specification in the presence of two sub-
scribing witnesses.

HENRY H. CUMMINGS.

Witnesses:

THOMAS B. BOOTH,
EVERETT S. EMERY.