

No. 643,749.

Patented Feb. 20, 1900.

L. H. MERTZ.
TELEPHONE DIRECTORY.

(Application filed Nov. 16, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

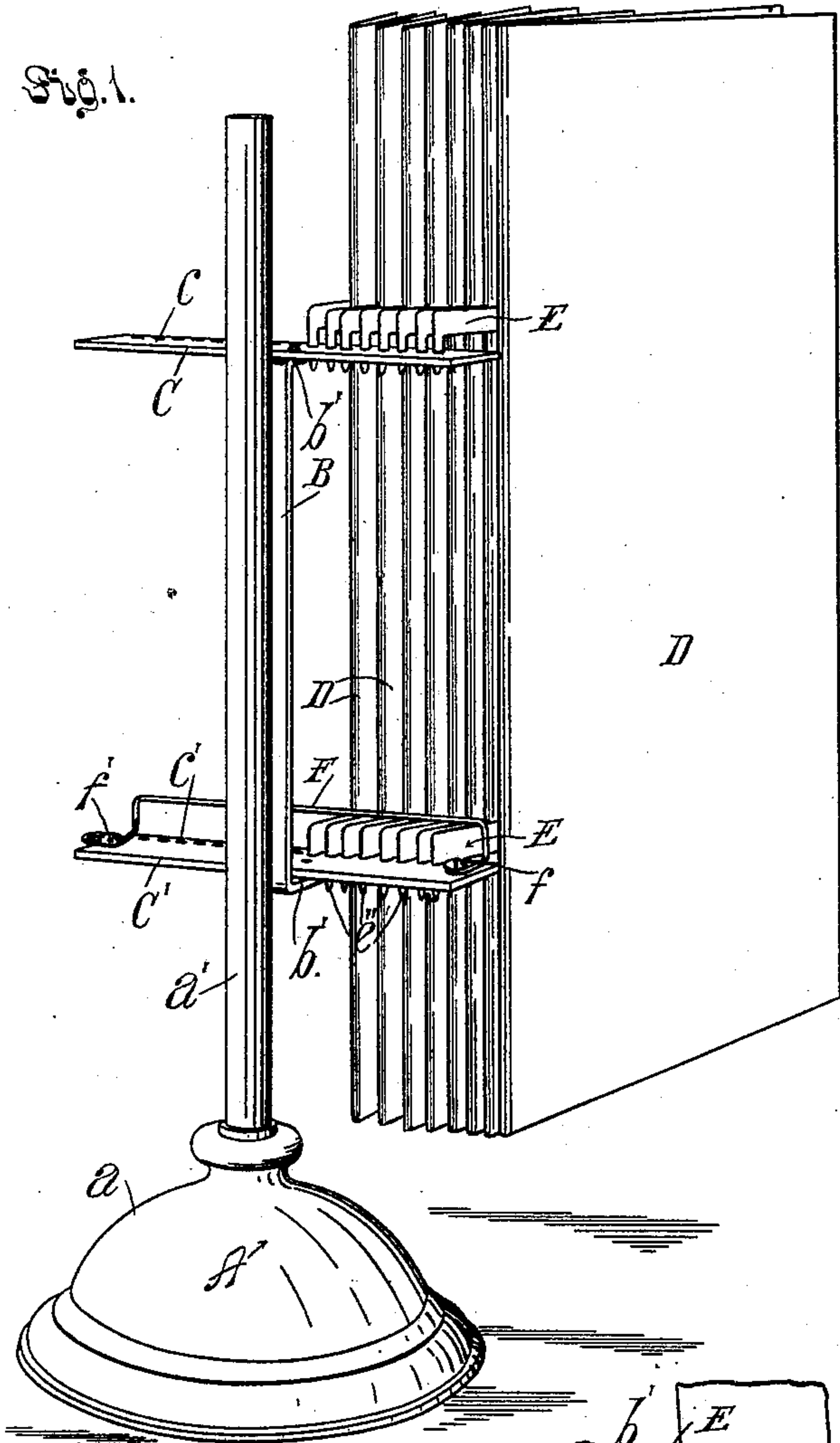


Fig. 2.

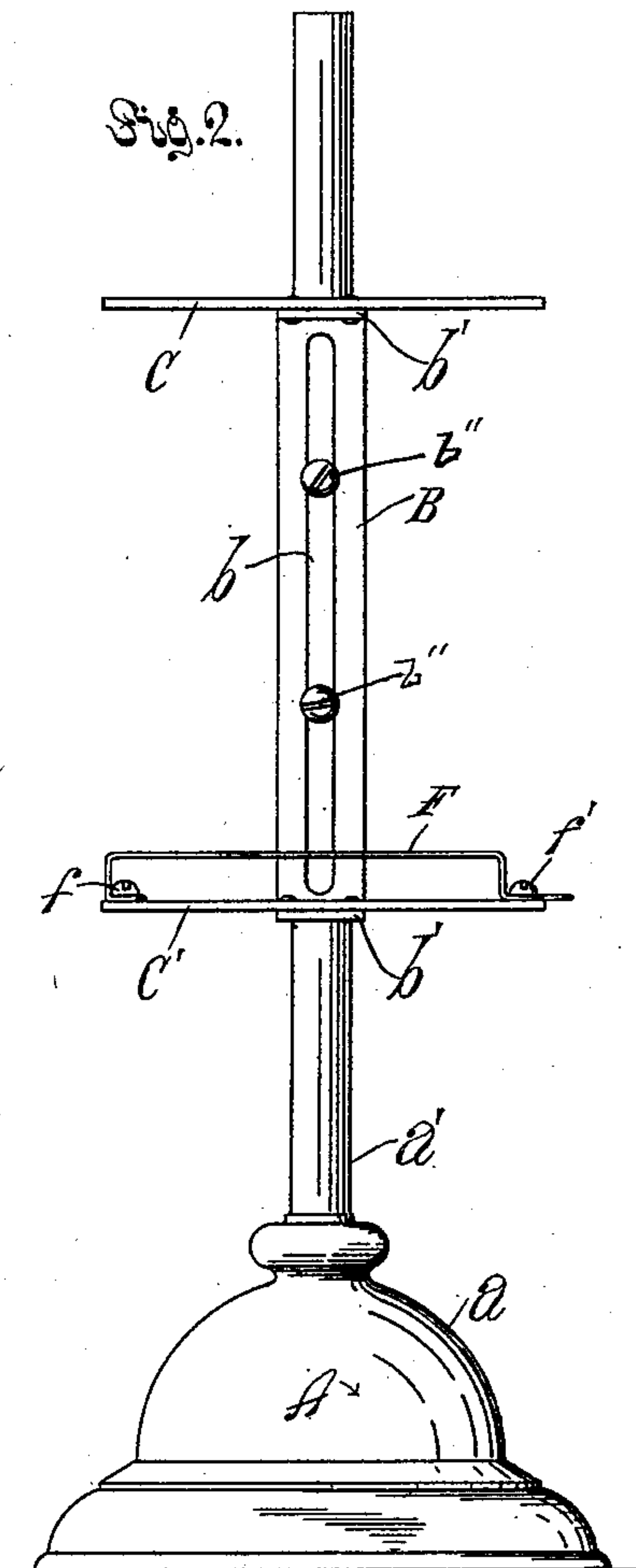


Fig. 4.

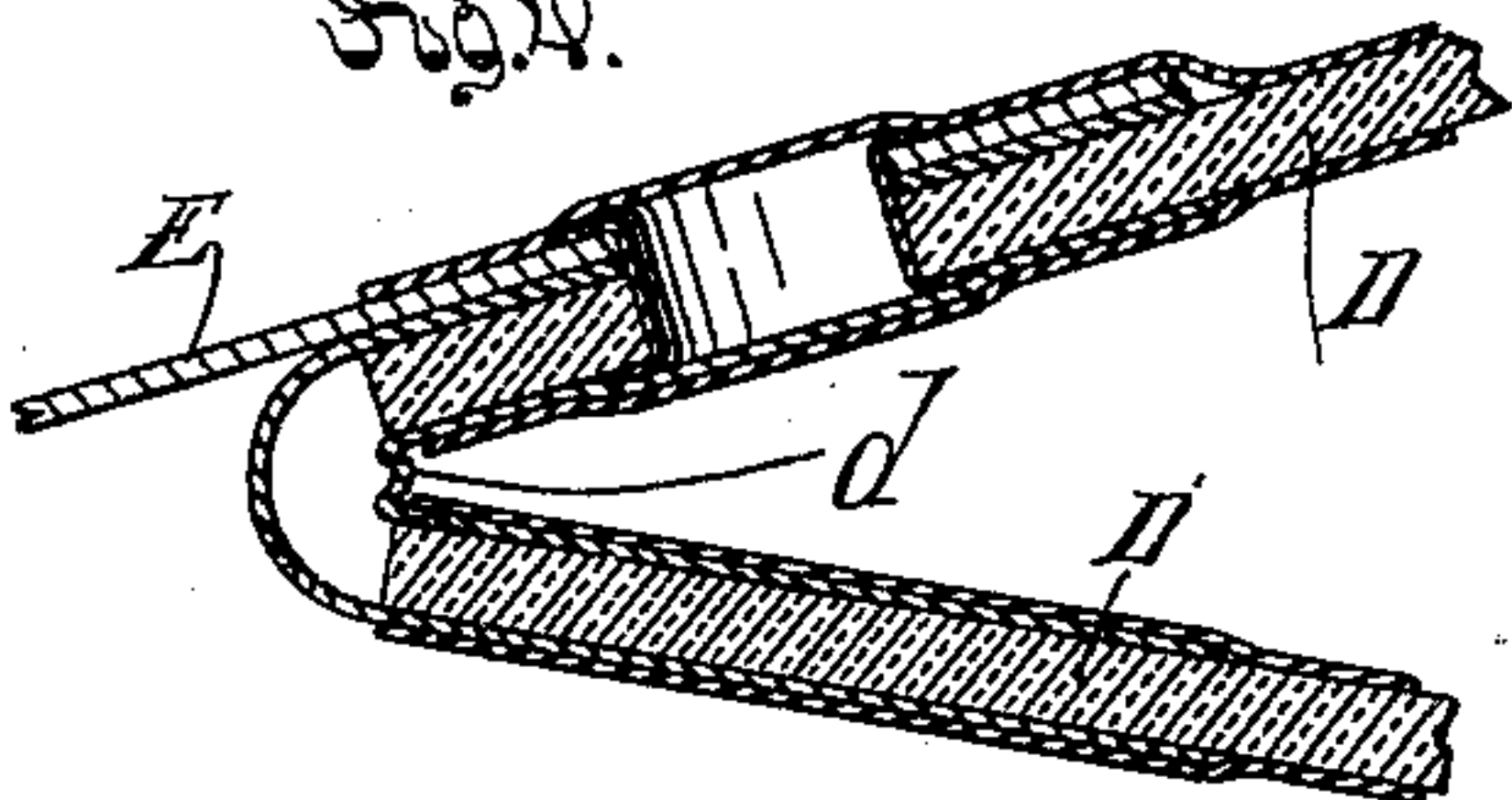


Fig. 3.

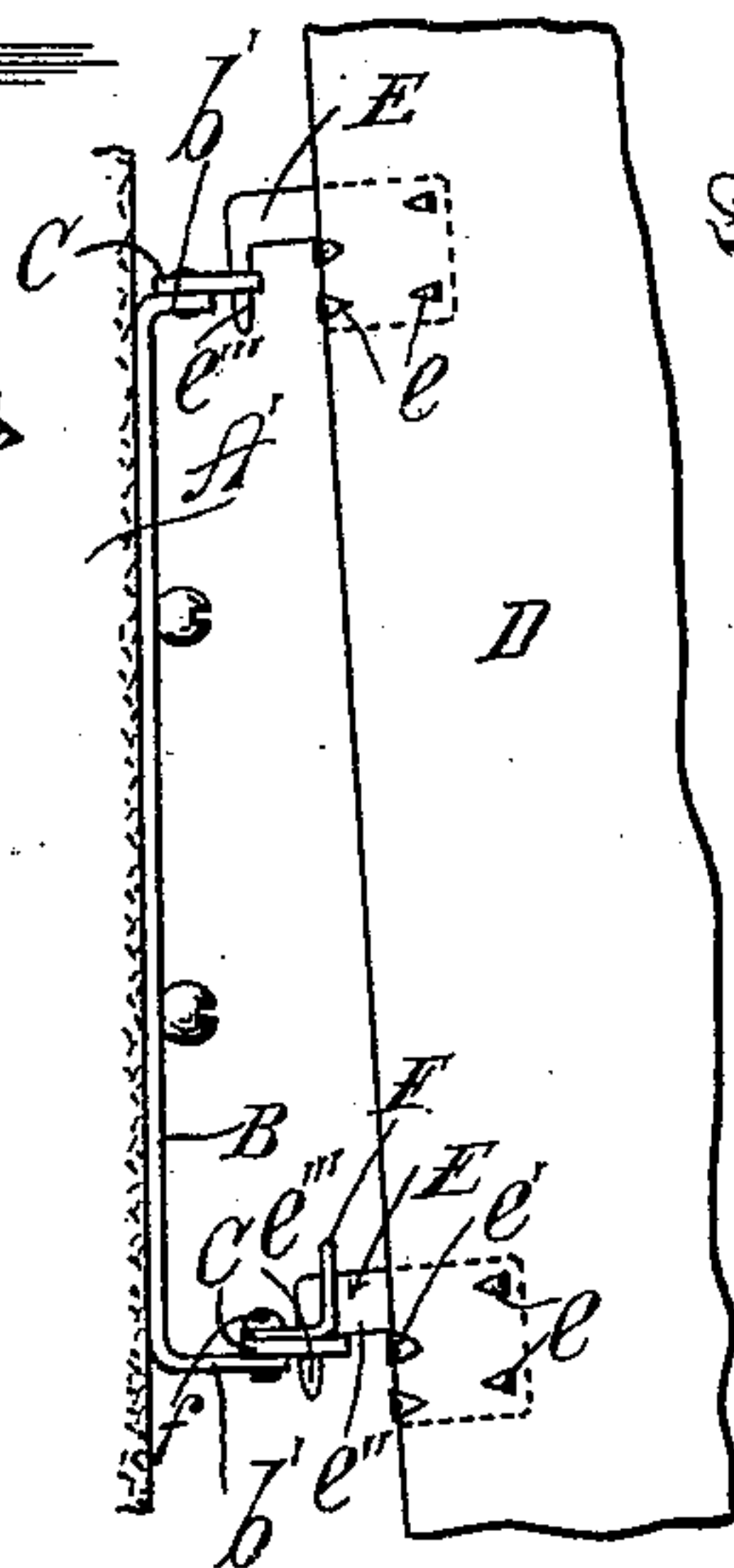


Fig. 5.



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No. 643,749.

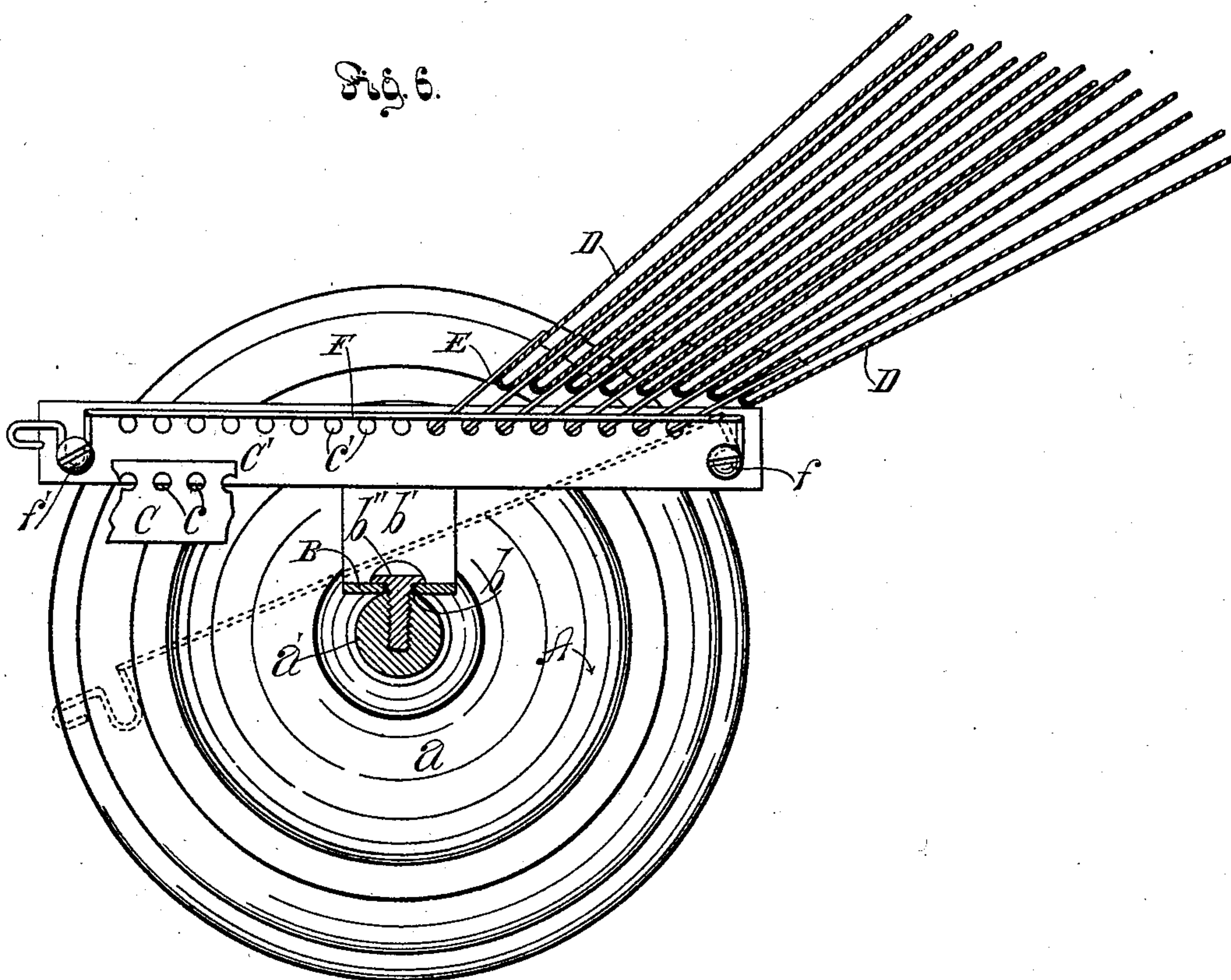
Patented Feb. 20, 1900.

L. H. MERTZ.
TELEPHONE DIRECTORY.

(No Model.)

(Application filed Nov. 16, 1898.)

2 Sheets—Sheet 2.



Winnings

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E. A. Waterman.

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Lewis H. Mertz
by Townsend Bro.
his attys

UNITED STATES PATENT OFFICE.

LEWIS H. MERTZ, OF LOS ANGELES, CALIFORNIA:

TELEPHONE-DIRECTORY.

SPECIFICATION forming part of Letters Patent No. 643,749, dated February 20, 1900.

Application filed November 16, 1898. Serial No. 696,600. (No model.)

To all whom it may concern:

Be it known that I, LEWIS H. MERTZ, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Mechanical Indexes, of which the following is a specification.

My invention relates particularly to those devices which are used for indexes for telephone-directories; but it is adapted for use upon library finding-lists and for many other uses for which a mechanical index is adapted.

One object of my invention is to provide a simple index which will be provided with stiff leaves upon which the indexed matter is arranged, the leaves being preferably made of cardboard and pivotally secured or hinged by metallic hinges to a supporting-standard in such a manner that the leaves may be turned from side to side and from force of gravity will swing fully open when swung toward either side to thereby greatly facilitate the convenient consultation of the index.

A further object of my invention is to provide improved means for hinging the leaves to the support or standard in such a manner that the leaves may be quickly placed in position or removed therefrom in case it is necessary to change the leaves owing to changes in the subject-matter of the index, and yet to prevent the accidental removal of the leaves from their hinge-supports; also to double the capacity of the index without increasing the number of metallic hinges employed.

A further object of my invention is to provide a device of this kind which will be very simple in construction, may be attached to the wall of a building in case it is desired to attach it in such a position, or may be secured to supporting-standards having a weighted base, so as to adapt the index for use upon desks with hand-telephones.

It is also an object of my invention to provide simple and effective means for vertical adjustment of the index.

My invention comprises the various features of construction and combinations of parts hereinafter fully set forth and claimed.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective view of my im-

proved device arranged for use upon a desk. In this view the hinge-bars are shown only partially filled with leaves, leaving room for additional leaves as more subject-matter is added to the index. Fig. 2 is a front elevation of the same device with the leaves removed from the hinge-bars. Fig. 3 is a side elevation of my device adapted for attachment to the wall of a building. Fig. 4 is a fragmental section showing my arrangement whereby one metallic hinge serves to support two cardboard leaves, thus practically doubling the capacity of an index in which each cardboard leaf is supported by an independent metallic hinge. Fig. 5 is a side elevation of one of my improved hinges for protecting the edge of the cardboard leaf against wear from the hinge-bars. Fig. 6 is a plan view to illustrate the retaining device. A fragment of the upper hinge-bar is also shown in order to indicate the relative positions of the holes for the upper and lower hinge-pintles.

In the drawings, A represents a base, which, as shown in Figs. 1 and 2, comprises a cast-metal or weighted bottom *a* and an upright or stem *a'*.

In Fig. 3, A' represents a base, which in this case is a wall of a room or any other suitable support.

B is a standard which is preferably made of sheet metal slotted along its length, as at *b*, and outturned at each end, as indicated by *b'*, to form shouldered or angled portions. Ordinary screws *b''* are passed through the slot in the standard into the base or stem for the purpose of adjusting the standard vertically. To the outturned ends are secured pivot or hinge bars C C', respectively, which are provided with corresponding pivot-holes *c c'*. The outturned lower end of the standard is longer than the upper outturned end, so that the pivot-holes *c'* of the lower pivot or hinge member are each arranged in front of a vertical line passing through a corresponding pivot-hole *c* in the upper member. For this reason the leaves will not stand at right angles with the pivot or hinge bars unless they are held in that position, but will swing to one side or the other, owing to which side of the vertical line they are carried before being released.

For ordinary use the leaves of my index are preferably made of stiff cardboard and the index matter is printed upon book or news paper and pasted upon the leaves; but for special uses the leaves may be made of any material desired.

In order to provide convenient and permanent means for hinging the leaves to swing, I provide each leaf D with hinges E, which are made of metal, preferably of tin, and are provided with prongs *e*, which are forced through the cardboard and clenched, as indicated in Fig. 3.

In order to prevent the metallic hinge-bar C' from wearing the cardboard at the point at which the bar contacts therewith when the leaves are swung to one side or the other of a central point, I provide one prong *e'*, directly beneath the arm *e''* of the lower hinge, and bend or clamp such prong around the outside of the rear edge of the leaf to form a clasp, as clearly shown in Fig. 3. Thus when the leaf swings to engage with the hinge-bar the metallic clasp rests against such bar and prevents abrasion of the leaf. A lower prong *e* is also bent around and clamped upon the edge of the leaf to assist in retaining the hinge in its proper position and prevent any up-and-down play of the hinge. Each hinge is provided with a pintle *e'''*, projecting downward from the arm of the hinge and adapted to enter one of the pivot-holes in the hinge-bar.

In Fig. 4 I have shown a leaf D, provided with a metallic hinge E and having a supplementary leaf D', hinged to the first leaf D by means of a flexible hinge *d*, preferably of cloth, so that thereby each pair of metallic hinges will carry two cardboard leaves instead of one. The hinges are preferably formed by placing the two leaves on a flat surface at such a distance from each other as will permit of their being placed side by side without breaking the hinge when completed. A piece of suitable flexible material, preferably cloth, is then pasted or otherwise suitably secured to the corresponding surface of each side of the leaves. When the leaves are folded together, the portion of the hinge upon the inner sides of the leaves will buckle or crease and permit the edges of the leaves coming very close together, as shown in Fig. 4, while the portion upon the outer surfaces will be kept taut or stretched. When the leaves are opened for examination of the inner faces, the two portions of the hinge will be substantially parallel with each other and each of the same tension or rigidity.

In constructing my indexes I find that the metallic hinge requires considerable space for the pintle or pivot hole and that therefore if the index comprises a large number of leaves, each requiring an independent hinge, it will occupy so much space as to be unwieldy. By hinging a cardboard sheet by a flexible hinge to another cardboard sheet which is hinged by a metallic hinge I decrease the number of metallic hinges required, permit the leaves to

lie in more compact form than is possible where the same number of leaves are hinged by hinges having their pivots all arranged in line with each other, and am enabled to provide in the same space double the number of leaves that I could without this arrangement.

In order to provide for the convenient removal and replacement of the leaves whenever revision of the index becomes necessary and yet to prevent accidental displacement thereof, I provide a retaining-bar F, secured to the lower hinge-bar C' by a pivot *f* at one end and a clamp-screw *f'* at the other end, so that when the clamp-screw is loosened the retaining-bar may be pushed to the rear away from above the lower hinges, and the leaves can be readily lifted and the pintles removed from the pivot or pintle holes. After the leaves are placed in position the retaining-bar is swung back into place above the tops of the hinges and engaging therewith prevents the accidental removal of the pintles from the pivot-holes.

The distance apart at which the pivot-holes are arranged regulates the width of the margin of leaf exposed when the leaves are swung to one side or the other, and this margin serves to display the index-letters or other marginal reference-matter. The hinge-arms are preferably long in order to secure sufficient margin for this purpose.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an index, the combination set forth of a standard; two horizontally-arranged hinge-bars attached to the standard, and provided with corresponding pivot-holes, each pivot-hole of the lower bar being arranged in front of a vertical line passing through the corresponding pivot-hole of the upper bar; a series of stiff leaves, each provided with metallic hinges having pintles to fit in the pivot-holes of the upper and lower bars; and a removable retaining device common to all the hinges in one bar and arranged above them to retain the pintles in the pivot-holes.

2. In an index, the combination set forth of two parallel hinge or pivot bars provided with corresponding pivot-openings; leaves, each provided with metallic hinges projecting from the leaf, each hinge being provided with a pintle to fit in one of the pintle or pivot holes; and a removable retaining-bar arranged to engage the hinges to prevent the pintles from being accidentally withdrawn from the pivot-holes, said bar being provided with a pivot at one end and a clamp-screw at the other.

3. In an index, the combination set forth of a weighted base; an upright secured to the base; a standard secured to the upright, and having its ends outturned, the lower outturned end being longer than the upper one; corresponding pivot or hinge bars arranged transverse the standard, secured to said out-

turned portions and provided with corresponding pivot or pintle openings; and stiff leaves, each provided with metallic hinges, each having a pintle to fit in one of the pintle-holes.

5 4. In an index, the combination set forth of the pintle or pivot bars provided with corresponding pivot-openings; a series of stiff leaves, each provided with metallic hinges projecting from the leaves, each hinge being
10 provided with a pintle to enter one of the pivot or pintle holes; and a series of auxiliary stiff leaves, one secured to each of the hinged leaves by a flexible hinge independent of the metallic hinge, said hinge comprising two op-
15 positively-arranged strips of material, each secured upon corresponding sides or surfaces of the two leaves with a space between the adjacent edges of the leaves.

5. The combination set forth of the hinge-

bar provided with the pintle-opening, a card- 20
board sheet having a metallic hinge provided with an ear bent over the edge of the sheet beneath the hinge-arm, and adapted to rest against the hinge-bar when the leaf is swung to one side or the other. 25

6. The slotted standard provided with the two angled portions and with the longitudinal slot between said angled portions; an upright stem; screws inserted through the slot into the stem to clamp the standard to the stem; 30
hinge-bars being secured to the angled portions to support the leaves substantially as set forth.

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Witnesses:

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