

B. BROWER.
Letter File.

No. 237,241.

Patented Feb. 1, 1881.

Fig. 1.

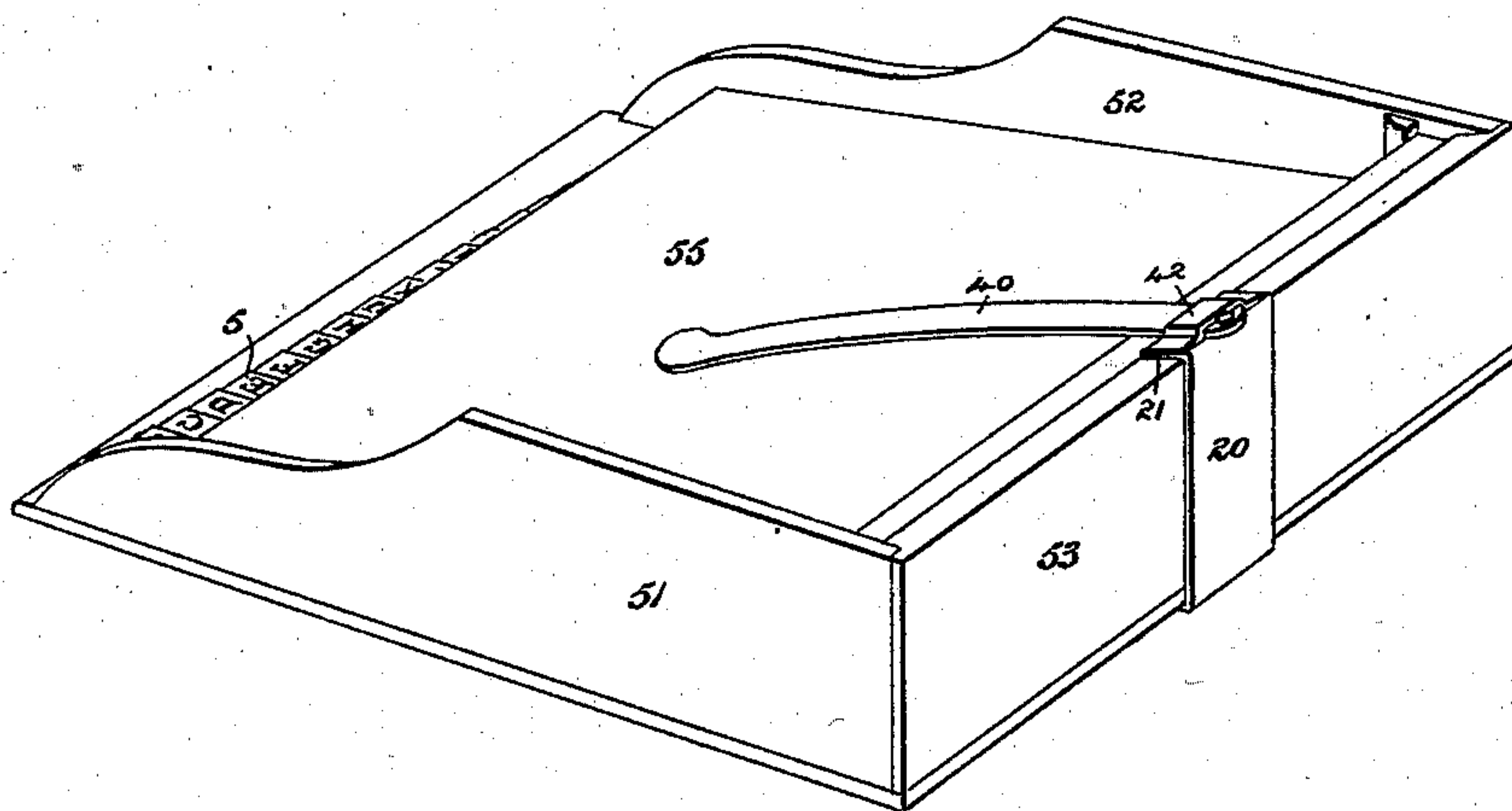


Fig. 2.

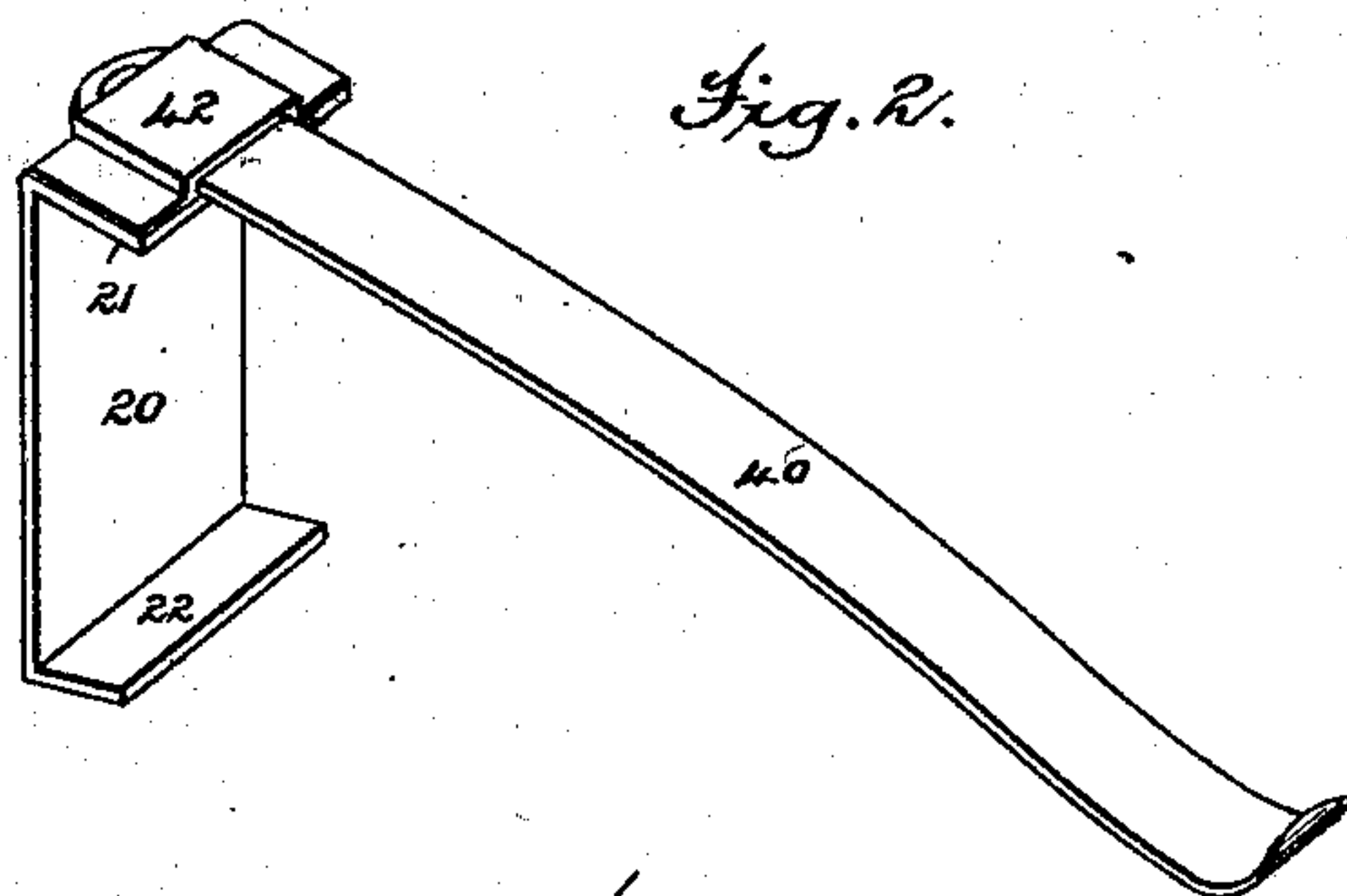
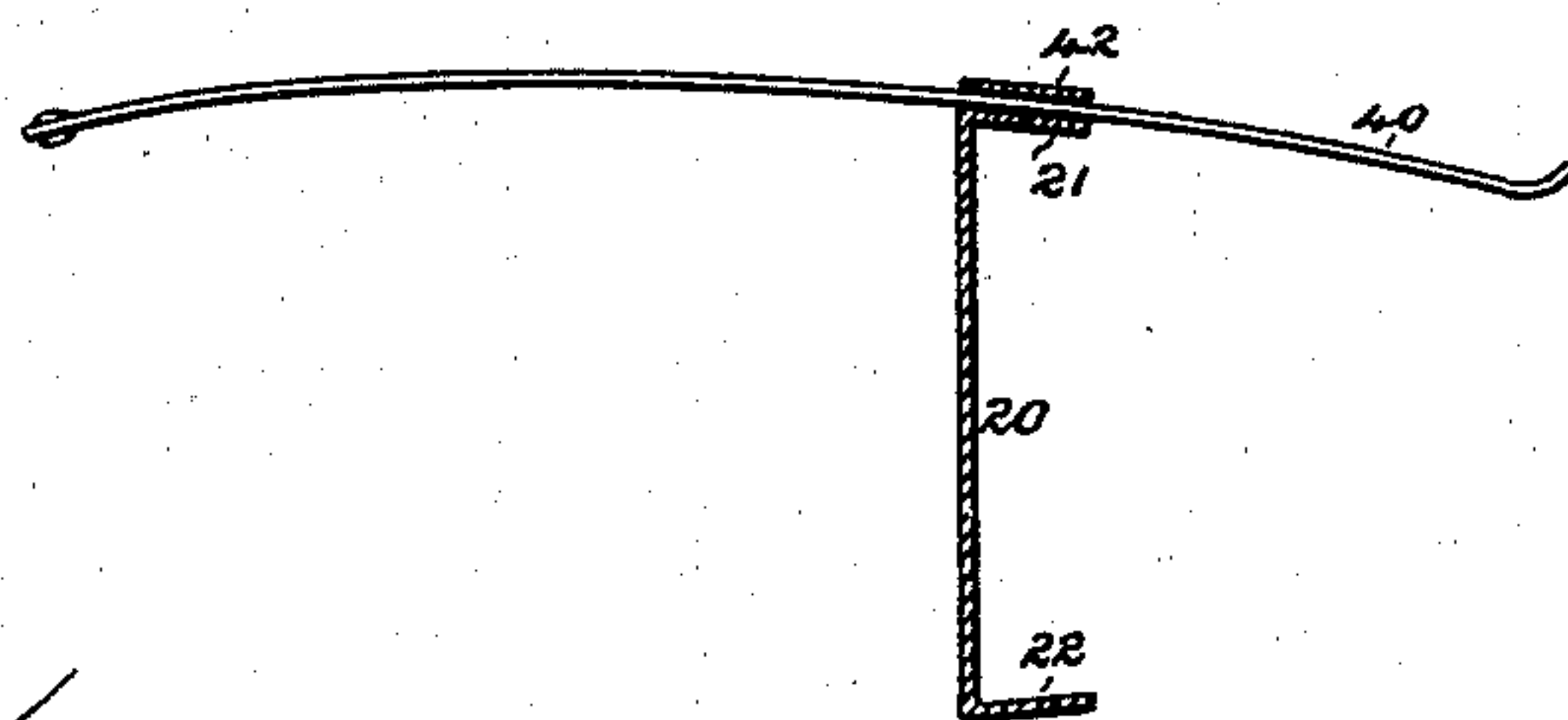


Fig. 3.



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Fig. 4.

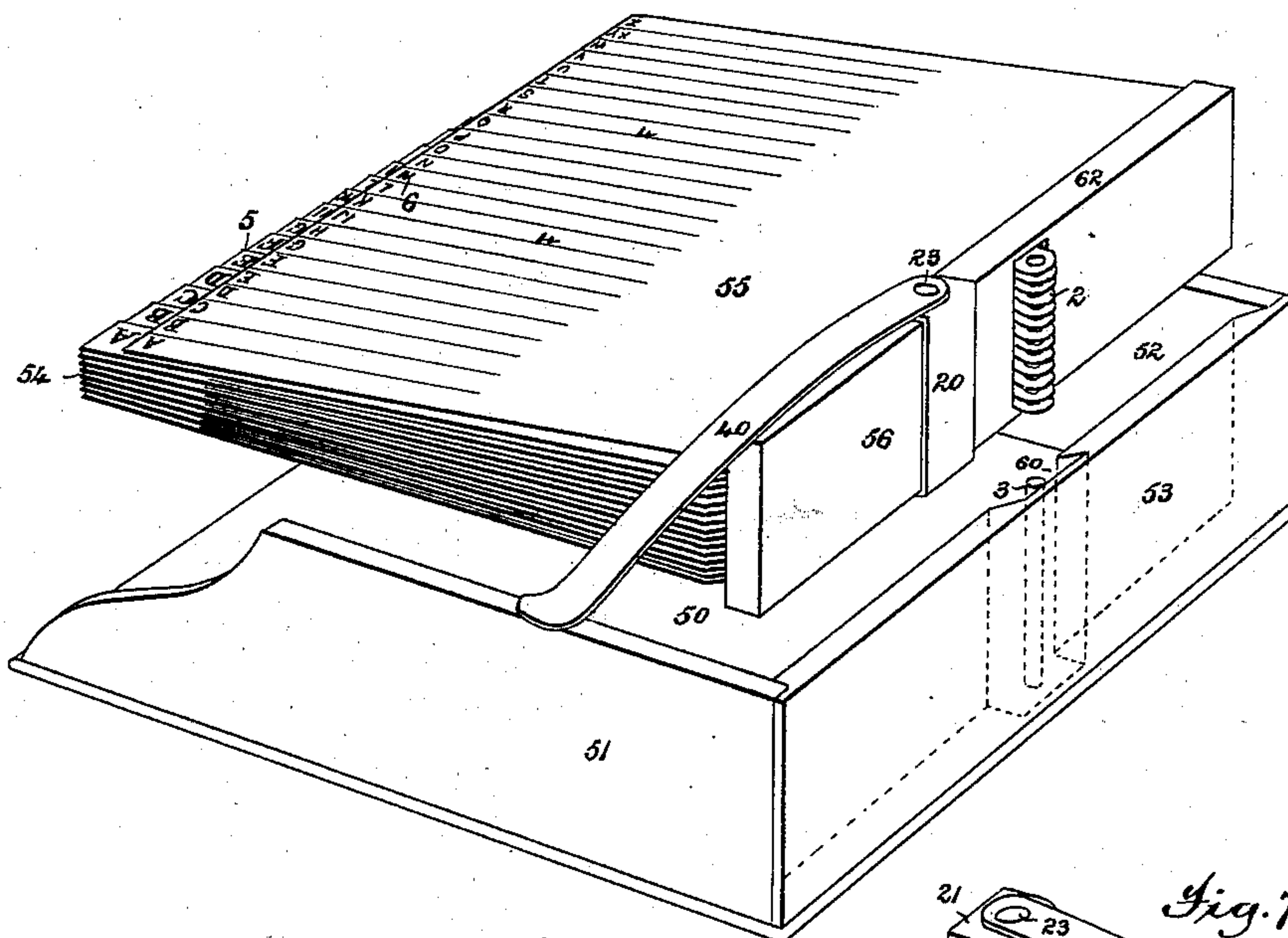


Fig. 6.

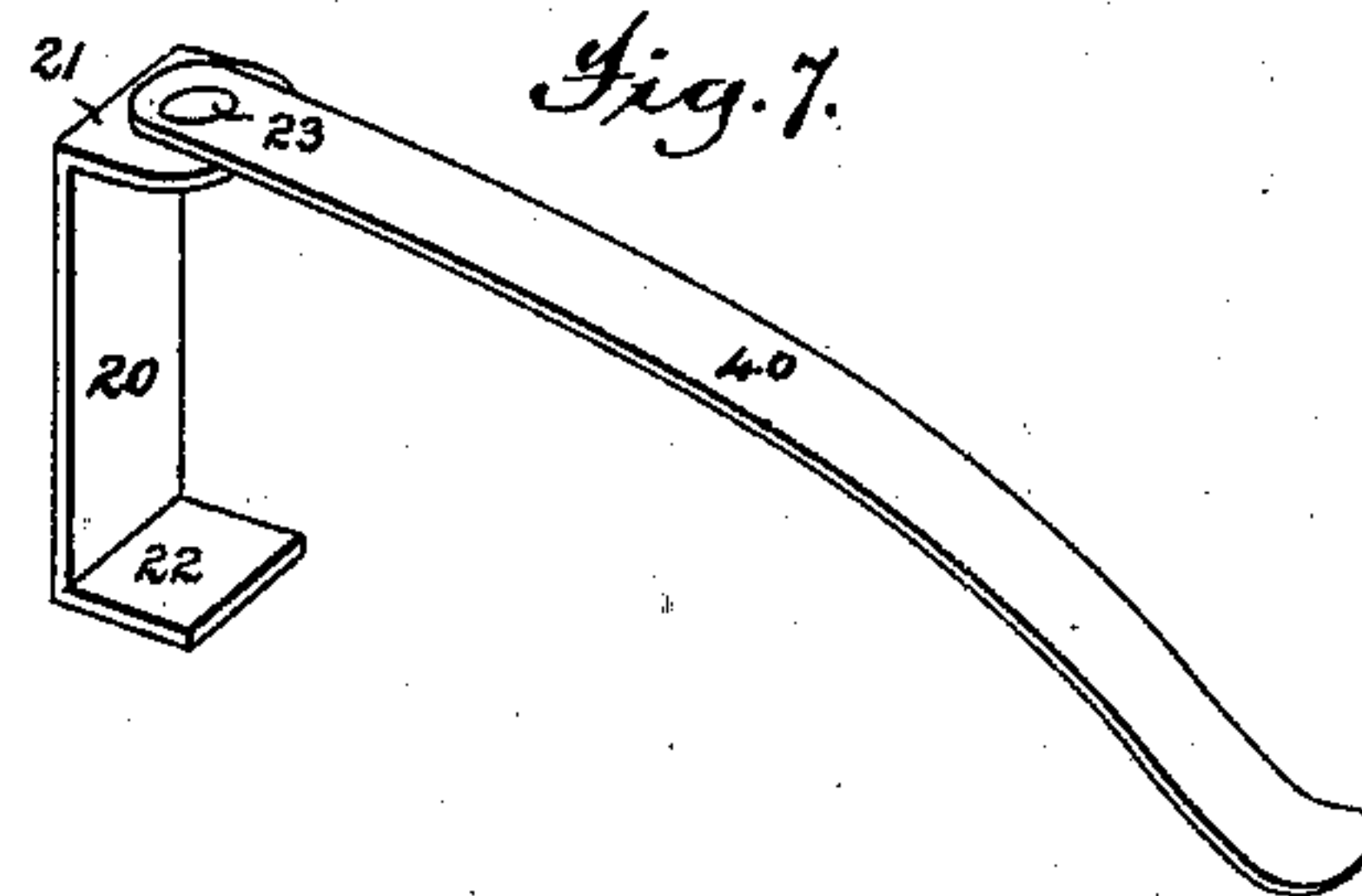
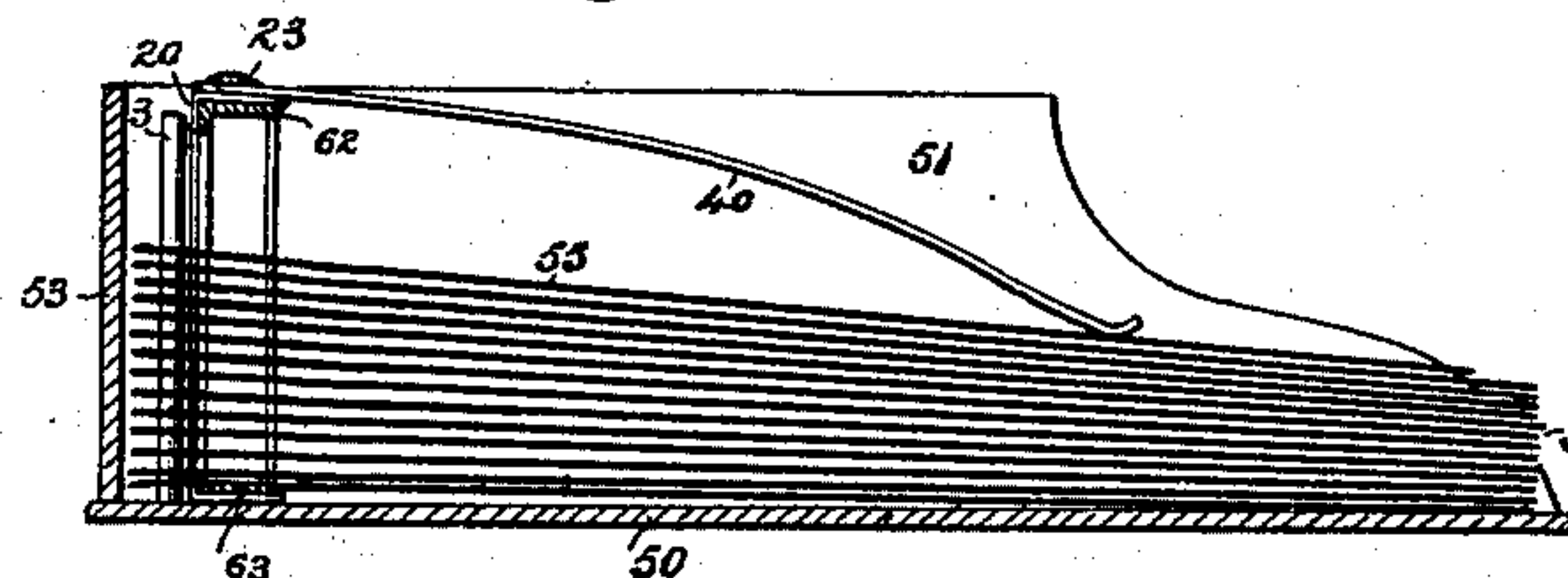


Fig. 5.

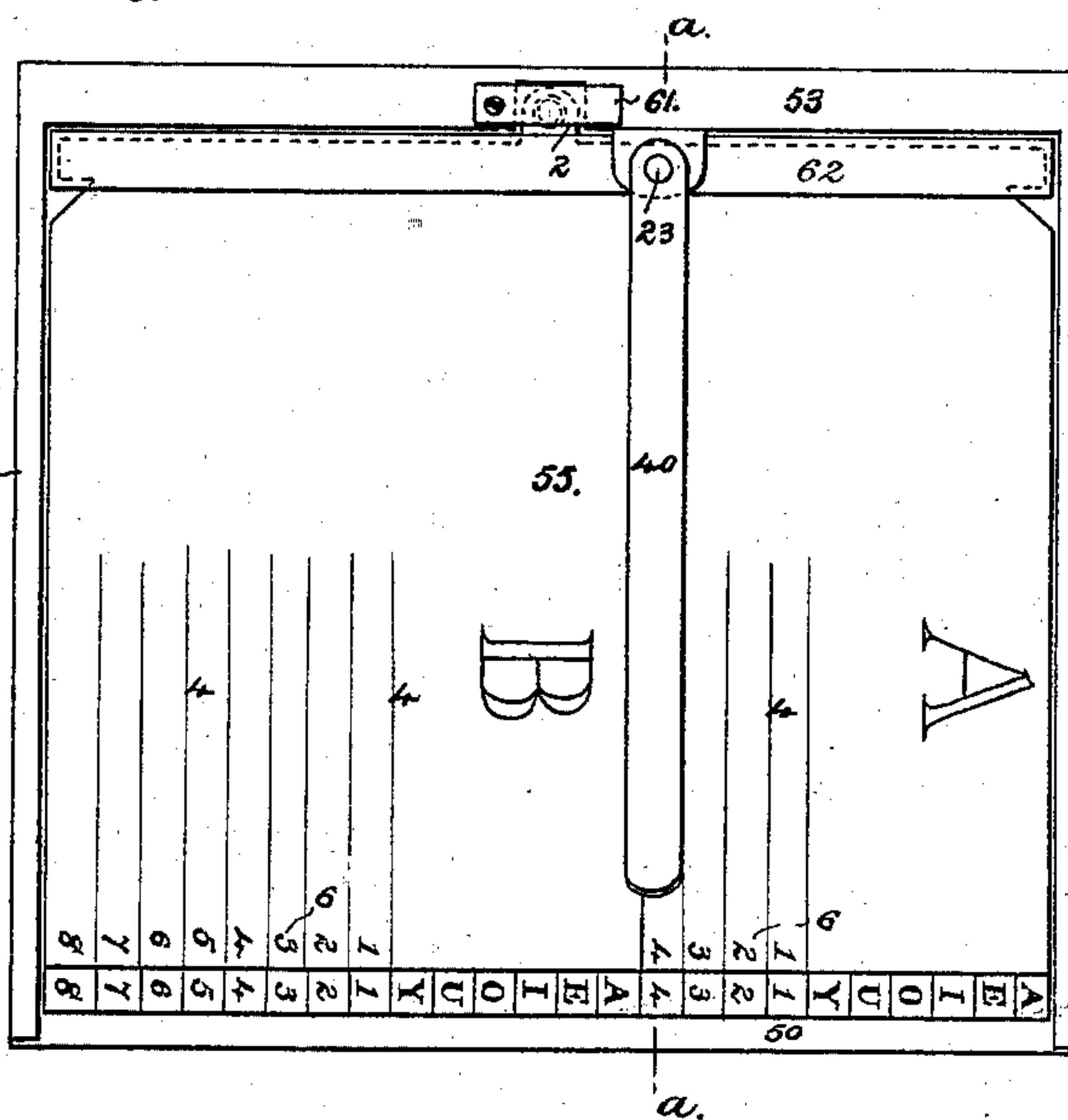
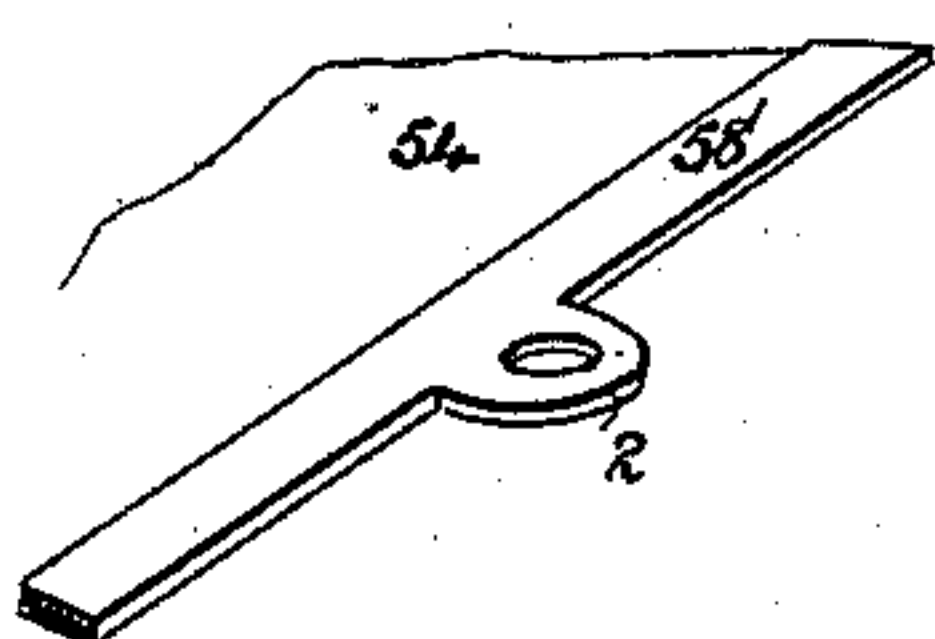


Fig. 8.



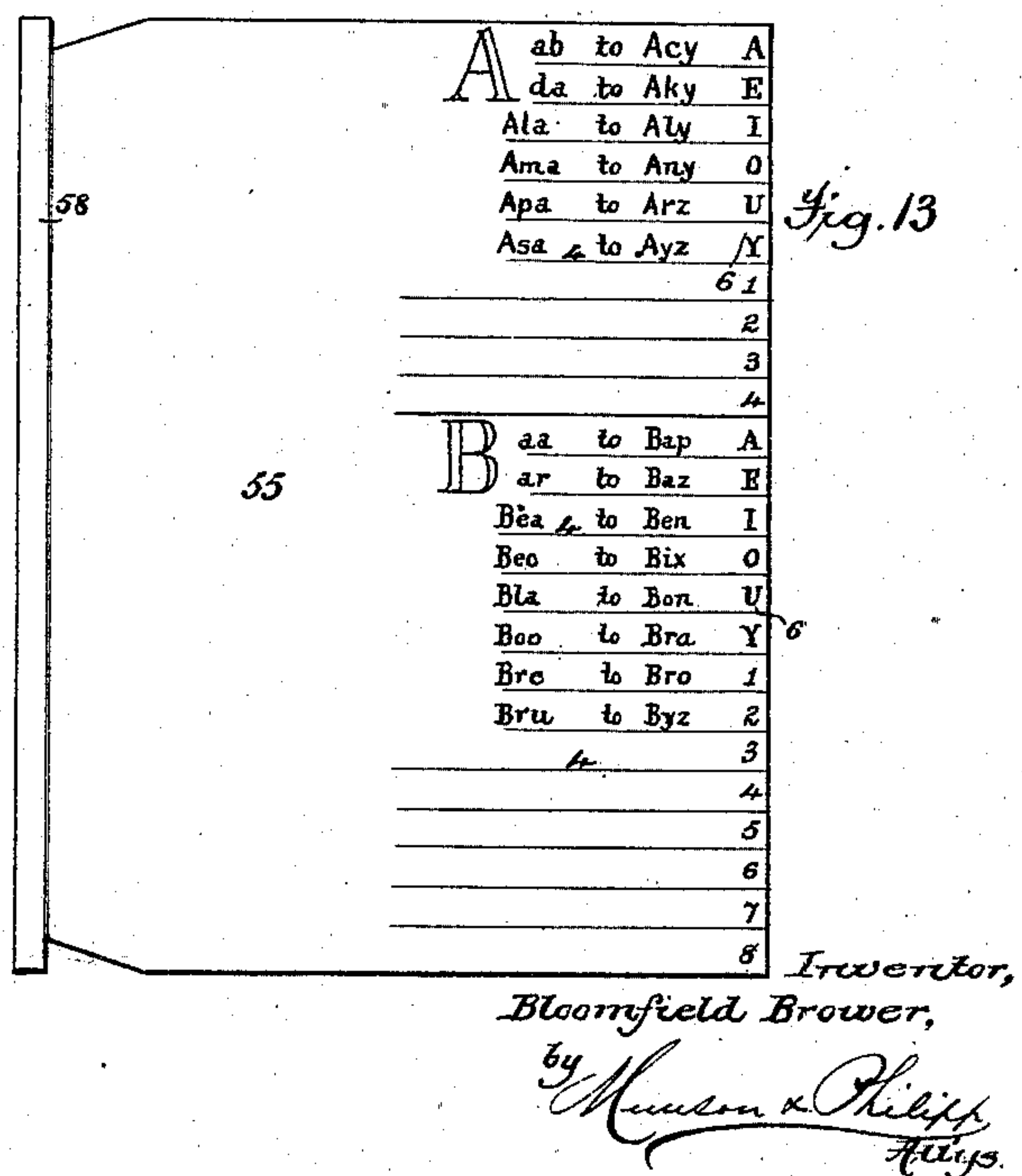
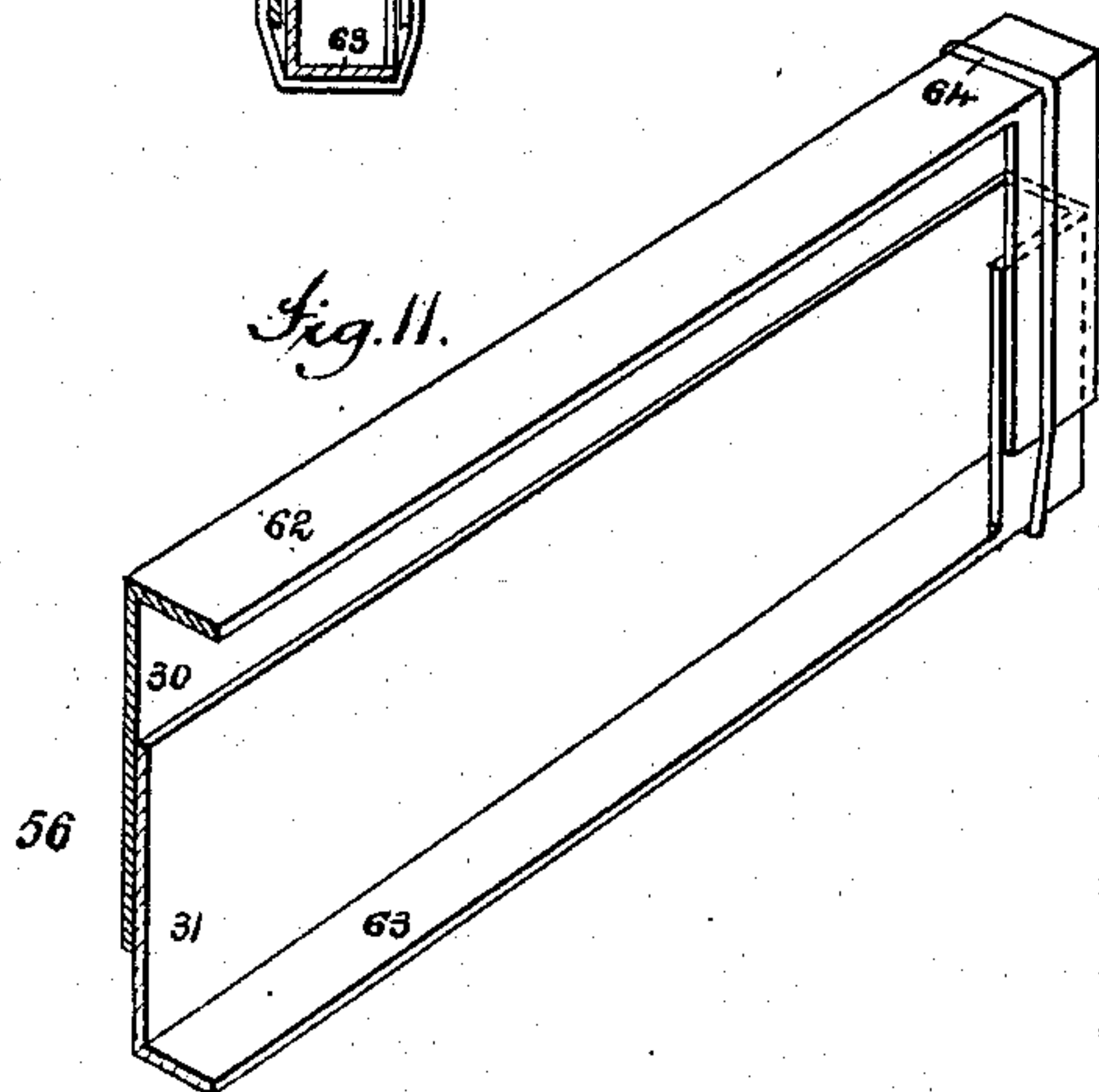
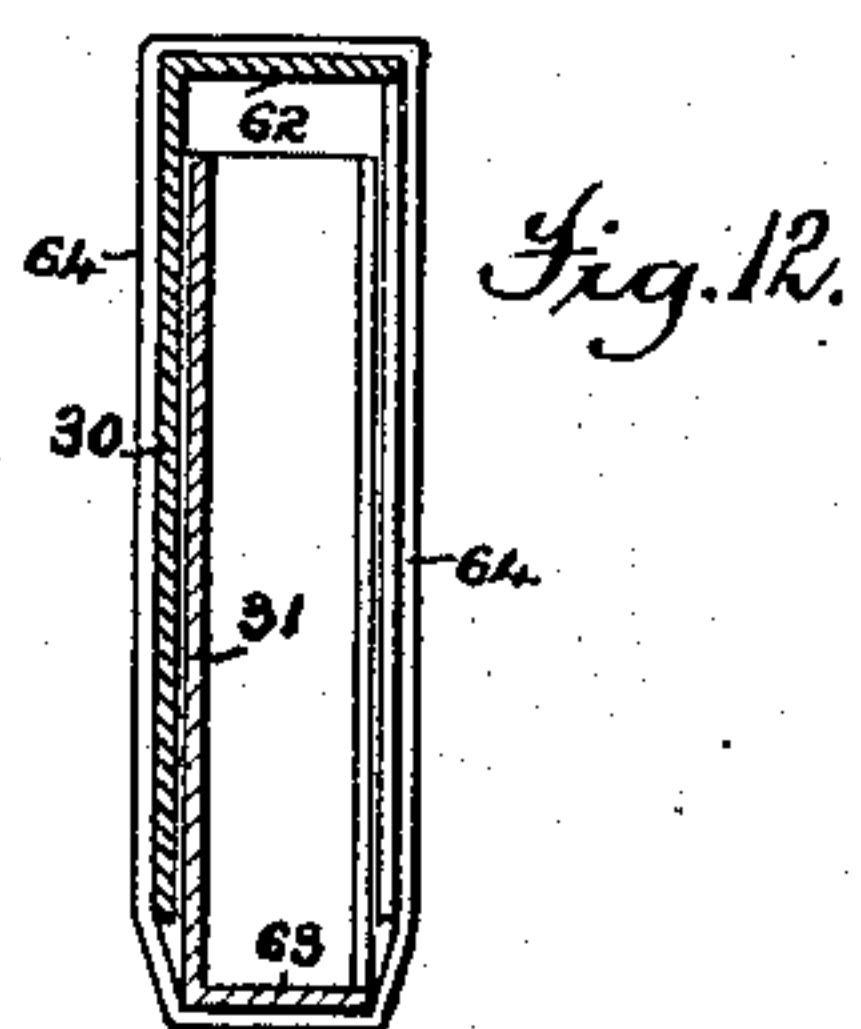
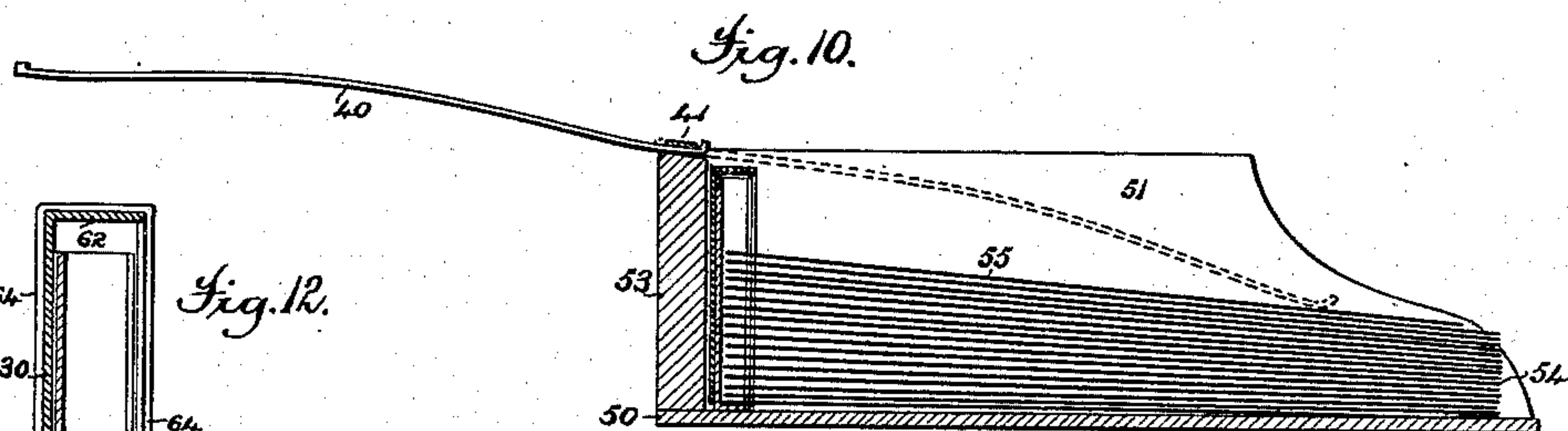
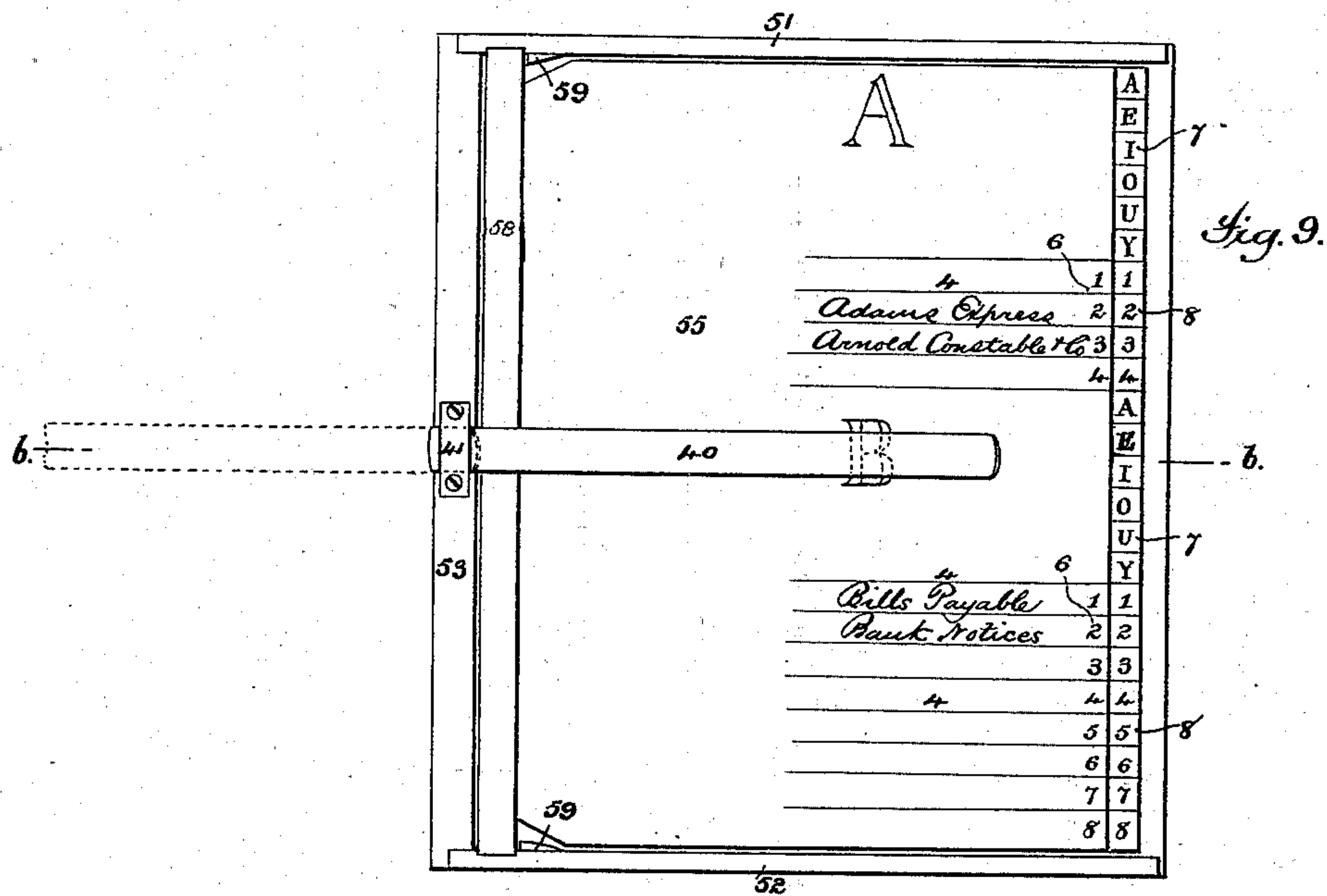
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UNITED STATES PATENT OFFICE.

BLOOMFIELD BROWER, OF NEW YORK, N. Y.

LETTER-FILE.

SPECIFICATION forming part of Letters Patent No. 237,241, dated February 1, 1881.

Application filed December 1, 1879.

To all whom it may concern:

Be it known that I, BLOOMFIELD BROWER, of the city, county, and State of New York, have invented certain new and useful Improvements in Letter-Files; and I do hereby declare that the following specification, when taken in connection with the accompanying drawings, is such a full, clear, and exact description of the same as will enable others skilled in the art to make and use the same.

In said drawings, Figure 1 is a perspective view of a file or binder completely filled for use. Fig. 2 is a perspective view of a clamping-spring as attached. Fig. 3 is a sectional view of the same. Fig. 4 is a perspective view of a file or binder with its index raised out of the box or holder to better illustrate all the parts. Fig. 5 is a plan view of such file or binder with all the parts in working position. Fig. 6 is a transverse sectional elevation in the line *a* of Fig. 5. Fig. 7 is a perspective view of a clamping-spring. Fig. 8 is a perspective view of a segment of an index-leaf. Fig. 9 is a plan view of a file or binder filled for use and provided with a sliding clamping-spring. Fig. 10 is a transverse sectional elevation of the same on the line *b* of Fig. 9, with the clamping-spring in its outward position. Figs. 11 and 12 represent, by perspective and sectional views, the structure of an expansible binding-back. Fig. 13 represents a plan view of an index leaf or cover.

The class of letter-files or temporary binders to which the present improvements pertain consists, essentially, of a box or holder having a rigid or semi-rigid bottom, 50, sides 51 52, and a back, 53, (provided or not with a hinged or other closing-cover,) in which a series of superposed loose leaves, 54, are so retained that they may be swung or turned upward to facilitate the introduction or withdrawal of a paper or papers, rise and fall as the mass of papers placed between them is increased or diminished, and with their contents be bodily removed when desired.

The improvements forming the subject-matter herein are to some extent improvements upon those described in Letters Patent No. 169,665, granted November 9, 1875, and No. 192,109, granted June 19, 1877, and reissued, No. 8,277, granted June 11, 1878, but are ob-

viously applicable to letter-files and temporary binders of other constructions.

The invention embodies, first, an improved means for securing the index-leaves in the box or holder during their use as a file for papers; second, an expansible binding-back, whereby a greater or less quantity of papers may be accommodated and snugly packed; third, in combining with the index-leaves and their binding-back, box, or holder, a sliding clamping-spring; fourth, in an improved mode of attaching the clamping-spring to the box or holder or to the binding-back; fifth, in an adjusting-holder for the clamping-spring; sixth, in an improved construction and arrangement of the indices for the cover and index-leaves.

Proceeding now to a detailed description of the several improvements, it is remarked that, though one feature of the invention includes a specific construction of the cover 55, its indices, and those with which it coacts, the index-leaves 54 will for the present be considered as a series of loose superposed leaves, indexed or not in any common manner. Such index-leaves have heretofore been secured at their back by various devices to or in many forms of binding-frames, among others in a metal binding-back, as 56, which is composed of sheet metal in the form of a rectangular box with its front side so removed as to leave slight flanges at each end, behind which the ends of flexible strips, as 58, secured to the rear edges of the leaves, are sprung to hold the leaves in said back in such a manner that the leaves may rise and fall or be swung or raised up by the front edges, which back and its leaves are secured in the box or holder by sliding said back vertically into receptacles provided for its end by vertical strips 59 attached to the inner walls of the sides 51 52, all of which is fully explained in said patents.

The first improvement effected consists in a novel means for retaining these index-leaves in the box or holder during their use as a file for papers. This is accomplished by affixing to the back edge of each of said leaves one or more tags, as 2, provided or not with perforations, and by providing the back 56 of the box or holder with a corresponding number of vertical wire rods, a^3 , fixed to the said box or

holder so as to stand in a position to receive the said tags upon them, as in Figs. 4 to 6, whereby the index-leaves are so strung one upon the other that they may rise and fall as papers are introduced or withdrawn from between them and be swung up and down in such manipulation.

The tags 2 may be attached centrally, as shown, or may consist of two or more series properly disposed. A proper number of the wire rods 3 will of course be disposed in like manner, and said rods may be placed in recesses, as 60, cut in the back-board 53, or stand the necessary distance in front of said back-board. These tags may protrude through recesses cut through the binding-back 56, the top and bottom flanges, 62 63, as shown in Fig. 4, of which will retain them vertically in place; or said binding-back may be omitted entirely, when the index-leaves will be retained in place by means of the tags alone. Thus used the leaves may be without the strips 58. The use of the tags removes the necessity for providing the strips 58.

A pack of index-leaves provided with the holding-tags 2 may, when properly filled with papers, be removed from the rods by sliding the tags over them; or, if the tags have been perforated by the rods in stringing the leaves as well as when perforated tags are used, the rods themselves may be made removable. When removed, index-leaves and their contents may be formed into a package by the strings, rubber bands, &c., a single fastening around the front ends sufficing when the back 56 is used, which will be supplemented by one or more such fastenings at the back end when such back is dispensed with; and in all cases a smooth back for labeling purposes, or to provide an even surface, is attained by simply cutting off the tags 2 after the package has been secured. When these tags 2 are used without the back 56 a means for retaining them in place is required, and this is provided in a simple manner by the action of a top plate, as 61, which may be secured in place so as to be readily removable, as in Fig. 5, or it may swing or slide in proper bearings and protrude forward as far as is necessary for the purpose.

Any form of spring for clamping the forward ends of the index-leaves may be employed, such as that described in the Patent No. 192,109, or the improved forms shown herein and hereinafter described.

Another feature of improvement is formed in the expansible binding-back, which will now be described.

Heretofore the binding-backs, as 56, have been made rigid, thereby limiting the extent to which the index-leaves may be expanded within them, and therefore arbitrarily delivering the quantity of papers that may be packed within the index-leaves. Practically it is found that a given class of matter desired to be held within and stored away in a single binder often exceeds the capacity of such binder by

reason of the size of its back 56 and the consequent limitation imposed by its rigid walls. This is remedied by making the means for sustaining the back edges of the index-leaves capable of expansion beyond its normal position, or that in which it remains when suited to the minimum capacity of the binder. To this end the binding-back 56 is composed in two sections, 30 31, (see Figs. 11 and 12,) one section being made to slide telescopically upon or within the other, so that the top and bottom flanges, 62 63, may approach each other and rest in a certain relation to adapt the back to its minimum capacity, or be moved away from each other to adapt said back to properly hold an increased volume of material placed between the index-leaves. These sections 30 31 may be moved in either direction by springs, as may be desired, a contracting-ring of rubber, as 64, well serving the purpose, or a system of lazy-tongs, folds, and the like may be employed. The wire rods 3 might be provided with an upper section, embracing or embraced by the lower section and spring seated thereon, or telescoping rods may be placed in the back 56. After the index-leaves have been filled so that the minimum capacity of the binding-back has been reached, the introduction of further material within the index-leaves will cause the said back to expand and accommodate itself to the increased quantity of such material.

Heretofore the clamping-spring used for holding down the otherwise free front edges of the index-leaves has been permanently secured to the back 53 of the box or holder, and has been arranged to swing in its movements onto and away from said index-leaves. Two improvements have been effected in this clamping-spring, one being formed in a construction enabling the clamping-spring, however attached, to slide back and forth over the index-leaves, and the other enabling the said spring to be attached at will to any point of the back 53 of the box or holder, as well as upon the binding-back 56.

Much inconvenience in manipulating a swinging spring has been found to exist practically, principally arising from the necessity of raising the spring to clear one of the sides 51 or 52—an annoying operation, and one which frequently repeated soon impairs the efficiency of the spring. To obviate this defect said clamping-spring 40 is now so secured to its holder that it may slide back and forth over the cover 55 and index-leaves 54, as is indicated by Figs. 1, 9, and 10. A simple construction of this form of it is shown in said Figs. 9 and 10, and it consists of a recessed plate, 41, or such plate bridging a recess in the back 53 of the box. Another construction is shown in Figs. 1 and 2, where the said spring slides in a similar recess formed between the top plate, 21, of its adjusting-holder 20 and a cap-plate, 42, both plates 41 and 42 being so inclined that when the spring is in its fore-

most position its spring-power is effective. This spring might slide in a recess similarly provided in or on the top plate, 62, of the binder 56. Such a spring may be conveniently moved back and forth to permit the index to be examined and its contents added to or subtracted from, and may be wholly withdrawn when it is desired to remove the index-leaves with the material contained within them, or to bind the same in the back 56 for storage. When the construction of springs shown in Figs. 9, 10 is used its plate 41 may serve the purpose of the plate 61, as used in combination with the rods 3, as in Fig. 5, as might the plate 42 of the form shown in Fig. 1. It has been common to permanently attach these clamping-springs at some point, usually a central one, which is not in all cases the most convenient one, which method also involves the furnishing each binder with a spring and the necessity of annoying expense in repair when breakage occurs.

A further improvement consists in constructing this spring so as to be removable, and so that it may be attached at any desired point, and may be interchangeably used upon several binders, and in case of breakage be readily supplanted by a new one. To provide for this removability the spring is attached to an adjusting-holder, 20, that is composed of a spring-metal plate bent so as to provide top and bottom plates, 21 22, which plates are adapted to spring over the top and bottom edges of the back 53 of the box or holder, as in Fig. 1, or over the top and bottom edges of the binding-back 56, as in Figs. 4, 5, and 6.

Any form of the clamping-spring 40 may be used in connection with this holder. Thus its top plate may have a supplemental or cap plate, as 42, or be otherwise provided with a recess, within which the clamping-spring 40 may slide; or the said spring 40 may be attached to the top plate, 21, of the holder 20 by means of a pivotal rivet, 23, so that the spring may swing as described in the aforesaid patent No. 192,109.

The adjusting-holder 20 may be made in sections telescopically arranged, so as to be adapted to any size of box-back or binding-back and to the telescopic form of the latter, and when the tags 2 are used in connection with the index-leaves and rods 3 the clamping-spring holder 20 may be adjusted so that its top plate, 21, will form the cap-plates for said rods.

Other improvements relate to the method of indexing the leaves 54 and cover 55, which will now be described.

As commonly constructed the index-cover 55 has been cut away so as to expose the indexed edges of the series of index-leaves 54, as in Fig. 1, and in the before-mentioned patents. Such arrangement is practically defective, since in the use of the file, when the leaves 54 are filled or partially filled with material placed between them, the said leaves

are to a degree distorted, or so twisted as to throw one or more index-letters out of sight, or the same are covered by protruding edges of some of their contents. It is therefore in that case and at all times desirable that the location of any particular index upon an index-leaf may be readily ascertained. This is accomplished by the present improvements, one feature of which is to be found in the provision upon the cover 55 of the indices corresponding with those upon the edges of the index-leaves 54, as is shown in its simplest form, Fig. 4. The body of index-leaves 54 are cut away in the usual manner, and the edges thereof provided with indices, as 5, while the cover 55 is provided with a duplication of such indices, as 6, properly arranged along its edge. The indices 5 and 6 (shown as composed of alphabetical letters) may, of course, be figures, words, or any other symbol. This cover is furthermore provided with lines 4, delineated upon its surface, which lines lead to the points at which the several leaves constituting the body of the index-leaves 54 are cut away to expose their indices. The index-characters carried by the cover act as pointers, indicating the point to be sought along the vertical front face of the body of index-leaves at which the leaf corresponding with the pointer may be readily found, whether the characters on said index-leaf be covered or not by protruding contents. The lines 4 serve not only this purpose, but divide the index-cover into properly-determined spaces, within which may be names or arbitrary characters, or where labels indicating contents may be pasted, which names, characters, or labels then become pointers.

The lines and indices on the cover may be used separately or together, but for general use should be used together. When the alphabetical characters are used upon the body of leaves 54 and the lines 4 are used upon the cover the lines may be used as guides, within which subjects-matter may be written, printed, or pasted, and thus act as pointers.

A single file may be adapted to contain matter to be indexed under one or more letters, so that a set of files necessary to cover the alphabet may be from, say, ten to twenty-four in number, in which case the special improvement in arrangement of the indices for each file becomes advantageous. One of such a set of files is particularly illustrated by Fig. 9. This file is adapted to contain matter to be indexed under two letters, as A and B, and the appropriate number of the body of index-leaves 54 are subdivided into vowels, as 7, and numerals, as 8. That portion of the cover 55 which is opposite to the set of vowels 7 is left blank, or may be provided with lines 4, if desired; but in addition to such lines that part of the cover opposite to the numerals 8 has such indices upon its edge, which indices, together with the lines 4, operate as has been described, said lines having the proper arbitrary index or special matter placed upon or between them.

Another method of indexing the covers of these single members of a set of files is illustrated in Fig. 13, which shows the use of a multiple-letter system, such as the two, three, 5 or more letters following the first or index letter of a name; but the three-letter system is preferred. This arrangement also comprises the use of lines 4 and numerals 8 for special or arbitrary filing, as for special correspondents. 10 The spaces between the parallel lines in such system are used to write or paste the names of special correspondents or other arbitrary names, and the indices on the edge of the cover act as pointers. This provision for special cor- 15 respondents is a prominent and very desirable feature, keeping, as it does, such correspondents in their alphabetical order, yet by themselves, relieving at same time the balance, so that all can be referred to readily and quickly. 20 An important improvement has been effected by constructing each cover so as to be reversible—that is, by providing it with distinct systems of indexing upon its opposite sides—so that either system may be used at one's op- 25 tion. This is well illustrated by Figs. 9 and 13, the two showing the opposite sides of the same cover. A file supplied with such a cover may be used with the one system or the other by simply detaching the cover 55 and adjusting it with the desired side uppermost. A cover constructed with one side plain, as in Fig. 1, and the other as in Fig. 4 may be similarly used. In fact, the cover may bear on opposite sides any differing systems. 35 The provision upon the cover 55 of lines 4, pointing to the cut-away or stepped portions of the index-leaves 54, is also important, as it furnishes ample space within which to write or print a long name or title, whose line 4 40 points directly to its corresponding cut-away portion of the index, whether the latter be plain or have an arbitrary symbol upon it, which symbol may or may not be duplicated upon the edge of the cover. By this construction a name or title too extensive to be delineated upon the index parts of the leaves 54 45 may be written or printed in large size upon the cover, and serve the same purpose as if placed upon the index parts of the leaves themselves. Thus any undue cutting away of 50 the index-leaves or other abridgment of their holding capacity is avoided.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the recessed binding-back 56, having top and bottom flanges, and index-leaves 54, having tags 2, of the back 53 and rod 60, substantially as described.

2. The combination, with the index-leaves 60 54, of an expansible binder for their back edges, consisting of overlapping sections arranged to move telescopically to and from each other, substantially as described.

3. The combination, with the index-leaves 65 54, of a binder for their back edges constructed of spring-actuated overlapping sections, whereby said sections are elastically seated and positively guided, and the binder is adapted to expand and contract telescopically, substantially as described. 70

4. The combination, with the holder or binder for the index-leaves and a supporting-recess with which it is provided, of a spring, 40, arranged to slide in said recess in being 75 applied to and removed from contact with said leaves, substantially as described.

5. The combination, with the box-back or binding-back, of the adjustable holder for the clamping-spring, substantially as described. 80

6. The combination, with the body of stepped indexed leaves 54, of the cover 55, the edge of which is removed to expose the indices carried by the leaves, provided along its front margin with a duplication of the said indices, substantially as described. 85

7. The combination, with the body of stepped indexed leaves 54, of the cover 55, the edge of which is removed to expose the indices carried by the leaves, provided upon its face with 90 pointing-lines 4, substantially as described.

8. The combination, with the body of indexed leaves 54, of the cover 55, the edge of which is removed to expose the indices carried by the leaves, provided along its edge 95 with a duplication of the indices carried by the leaves, and upon its face with the pointing-lines 4, substantially as described.

9. The combination, with a body of indexed leaves, 54, of the reversible cover 55, provided 100 on opposite faces with differing indexes, substantially as described.

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

BLOOMFIELD BROWER.

Witnesses:

JOHN V. BROWER,
GEO. H. GRAHAM.