J. T. QUIGLEY.

FILING AND INDEXING EQUIPMENT.

APPLICATION FILED JUNE 30, 1919.

1,433,847.

Patented Oct. 31, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

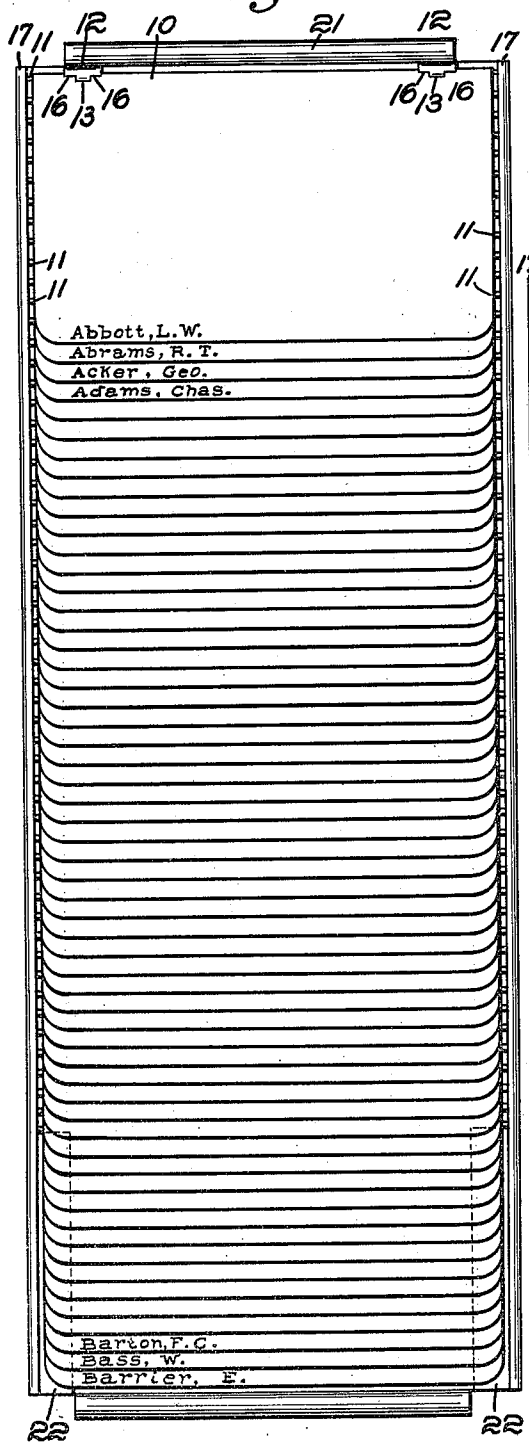
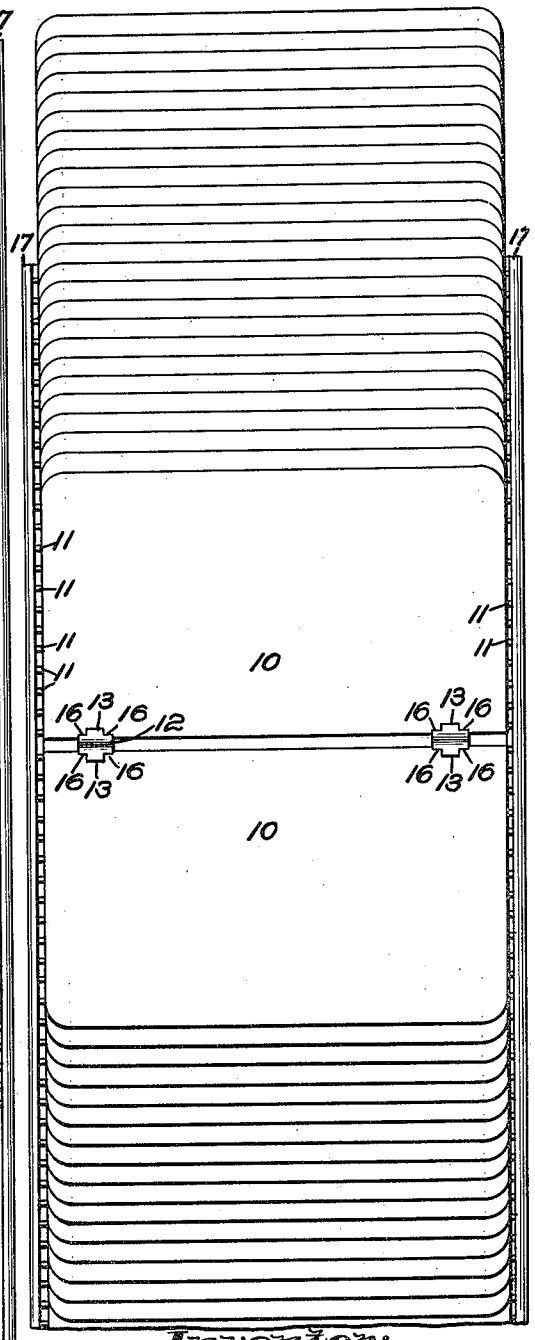


Fig. 2.



Inventor:
John T. Quigley
by Emery, Booth, Jenney & Varney.
Attys.

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2 SHEETS—SHEET 2.

Fig. 3.

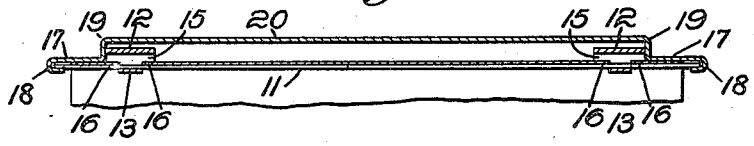


Fig. 5.

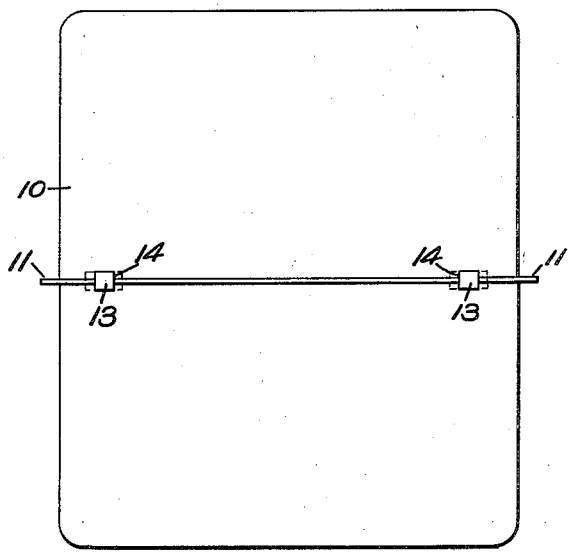


Fig. 4.

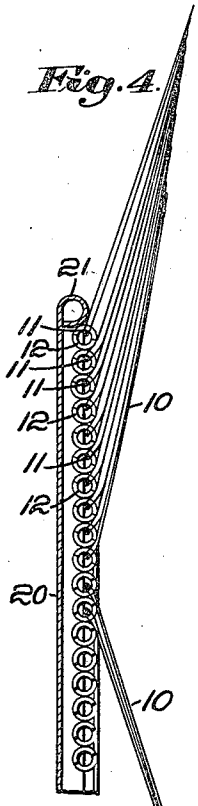


Fig. 6.

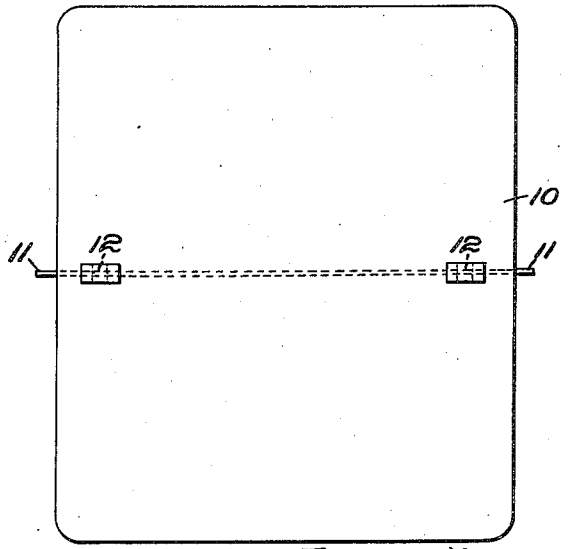
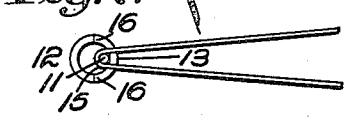


Fig. 2.



Inventor:
John T. Quigley.
by Emery, Booth, Janney & Varney Attys.

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UNITED STATES PATENT OFFICE.

JOHN T. QUIGLEY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO COSTMETER COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

FILING AND INDEXING EQUIPMENT.

Application filed June 30, 1919. Serial No. 307,549.

To all whom it may concern:

Be it known that I, JOHN T. QUIGLEY, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Filing and Indexing Equipments, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to filing and indexing equipments, and is more particularly concerned with equipments of the class in which the sheets are arranged in overlapping relationship, although in some aspects the invention is susceptible of more general application.

My invention will be best understood by reference to the following description, when taken in connection with the accompanying drawings of one illustrative embodiment thereof, while its scope will be more particularly pointed out in the appended claims.

In the drawings:

Fig. 1 is a front elevation of a filing and indexing equipment exemplifying my invention, showing the sheets depending;

Fig. 2 is an elevation of the equipment, showing some of the sheets upstanding and others depending;

Fig. 3 is a cross-sectional view on an enlarged scale in a plane containing the axis of one of the sheet hinges;

Fig. 4 is a vertical, sectional view of the equipment, showing some of the sheets upstanding and others depending, as in Fig. 2;

Fig. 5 is an elevation of a sheet-holder and sheet attached thereto, the latter being unfolded and having its inner surfaces presented to view;

Fig. 6 is a similar elevation, showing the outer faces of the sheet presented to view; and

Fig. 7 is an end elevation of the sheet and sheet-holder, on an enlarged scale.

Referring to the drawings, and to the embodiment of my invention which is illustrated therein, I have selected for exemplification a filing and indexing equipment comprising a series of overlapping sheets 10, which may be and are herein folded, thereby increasing their capacity. The folded sheet, moreover, lends itself more readily than a single sheet to the particular sheet-holding means herein exemplified. The overlapping margins of the sheets will be provided with suitable numerals, letters, words or other appropriate identifying symbols, serving as an index. One such set of identifications is exemplified in the drawing.

The sheets are herein carried by sheet-supporting and positioning means comprising a series of rods 11 received in the folds of the sheets, and one or more, herein a pair, of sheet-positioning elements 12, provided with ears or lugs 13 received in perforations 14 adjacent and preferably bisected by the line of the fold of the sheet. The ears or lugs 13 are provided with suitable openings 15, in which the rod 11 is received, as best shown in Fig. 3. In the present example, the members 12 are in the form of cylindrical tubes, and the openings 15 of the ears 13 are the cylindrical bores of the tubes. The members 12 herein present shoulders or abutments 16 (see Fig. 7), which are adapted to contact with the outer face of the sheet 10. The rod 11 is received within the fold; hence the sheet is received between the rod and the shoulders. Thus the sheet and sheet-holding means are securely interlocked, and cannot be separated from each other, except by withdrawing the rod 11 lengthwise from its place in the ears 13. Preferably, the relation between the ears 13 and the abutments 16 is such that the sheet can be opened out flat, as illustrated in Figs. 5 and 6.

The members 12 constitute sheet-positioning means which engage one another serially, as best shown in Fig. 4, thereby spacing the sheets and maintaining the overlapping margins of the latter in a proper degree of exposure for the presentation of their identifications. The ends of the rods 11 are mounted in suitable bearings, and to that end, I have herein provided a pair of guides 17 presenting opposed channels 18, in which the ends of the rods are received, as best shown in Fig. 3. The rods are free to slide lengthwise of these channels, thereby to permit the sheet-positioning elements 12 to move freely lengthwise of the channels, and rest against one another. Herein the rods 11 are resilient, and preferably they are made of tempered steel wires, whereby they may be bowed to reduce their lengths sufficiently to allow their ends to be withdrawn from the channels 18. By this means, any sheet and sheet-holding means may be

removed from its place without disturbing any other, and may be reintroduced into the same place, or at any other point, by simply opening the index at the proper point and separating the sheets and sheet-holders to permit the reintroduction of the one which is removed.

Movement of the sheets lengthwise of the rods is herein limited by the provision of a pair of shoulders 19, between which the members 12 are received, as best shown in Fig. 3. In the present example, the channels 18 and the shoulders 19 are formed by a panel 20 conveniently formed of sheet metal bent into the desired form to present the channels and shoulders. The panel is herein provided with suitable stops 21 (see Fig. 4) and 22 (see Fig. 1), to limit movement of the sheets and sheet-holding means lengthwise of the channels.

Thus it is evident that the described sheet-positioning means accurately positions the sheets in both directions, while still permitting the sheets to be swung about parallel axes. The rods themselves constitute hinges about whose axes the sheets may be swung to and fro with reference to the members 12. On the other hand, the latter constitute hinges about whose axes the sheets and rods may be turned, without reference to the turning movement of the sheets about the axes of the rods. This will be evident from an inspection of Fig. 4.

In practice, it is found that the described construction presents many advantages, among them being first the accuracy with which the sheets are held both longitudinally and transversely of the rods; second, the flat opening of the sheets; third, the lack of any tendency of the rods to sag, even in the case of flexible rods of great length; and fourth, the fact that it is impossible for a given sheet and its rod to be removed, except intentionally, because it is practically impossible to bend the wire to reduce its length, except when the sheet is presented substantially flat-wise,—that is to say, in the position shown in Figs. 2 and 4. If, on the contrary, the sheet is swung to a position substantially at right angles to the plane of the panel 20, it is found that a strong outward pull on the sheet fails to bend the wire sufficiently to allow its ends to become detached from the channels. This is a decided advantage, because it enables the sheets to be handled roughly when in use, yet without danger of their becoming accidentally detached from the panel.

Having thus described one embodiment of my invention, but without limiting myself thereto, what I claim and desire by Letters Patent to secure is:

1. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of overlapping sheets supported by said rods, respectively, and means interlocking with said support intermediate said channels and interlocking with said sheets to limit movement of the latter lengthwise of said rods.

2. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of overlapping, perforated sheets supported by said rods, respectively, and means received in the perforations of said sheets to limit movement of the latter lengthwise of said rods.

3. A file comprising, in combination, a support presenting a pair of opposed channels and a pair of opposed shoulders, a series of rods whose opposite ends are received in said channels, a series of overlapping sheets supported by said rods, respectively, and means received between said shoulders to limit movement of said sheets lengthwise of said rods.

4. A file comprising, in combination, a support presenting a pair of opposed channels and a pair of opposed shoulders, a series of rods whose oposite ends are received in said channels, a series of overlapping perforated sheets supported by said rods, respectively, and means received between said shoulders and in the perforations of said sheets to limit movement of said sheets lengthwise of said rods.

5. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of overlapping sheets supported by said rods, respectively, and means carried by said rods and interlocking with said support intermediate said channels and interlocking with said sheets to limit movement of the latter lengthwise of said rods.

6. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of overlapping sheets supported by said rods, respectively, and means receiving said rods therein and interlocking with said support intermediate said channels and interlocking with said sheets to limit movement of the latter lengthwise of said rods.

7. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of overlapping perforated sheets supported by said rods, respectively, and means received in the perforations of said sheets and in turn receiving said rods, and limiting movement of said sheets lengthwise of said rods.

8. A file comprising, in combination, a support presenting a pair of opposed chan-

nels, a series of rods whose opposite ends are received in said channels, a series of overlapping, perforated sheets supported by said rods, respectively, and sheet-positioning means received in the perforations of said sheets and presenting openings in which said rods are received on one set of faces of said sheets, said means presenting abutments on the opposite set of faces of said sheets, the latter being thereby locked between said abutments and said rods.

9. A file comprising, in combination, a support presenting a pair of opposed channels and a pair of opposed shoulders, a series of rods whose opposite ends are received in said channels, a series of overlapping, perforated sheets supported by said rods, respectively, and sheet-positioning means received in the perforations of said sheets and presenting openings in which said rods are received on one set of faces of said sheets, said means presenting abutments on the opposite set of faces of said sheets, the latter being thereby locked between said abutments and said rods, said means being received between said shoulders and limited thereby as to movement lengthwise of said rods.

10. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of overlapping sheets supported by said rods, respectively, and means interlocking with said support intermediate said channels and interlocking with said sheets to limit movement of the latter lengthwise of said rods, said means engaging one another serially and positioning said sheets lengthwise of said channels.

11. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of overlapping sheets supported by said rods, respectively, and means interlocking with said support intermediate said channels and interlocking with said sheets to limit movement of the latter lengthwise of said rods, said rods being adapted to permit said sheets to be swung about the axes of said rods.

12. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of folded, overlapping sheets whose folds receive said rods, respectively, and means interlocking with said support intermediate said channels and interlocking with said sheets to limit movement of the latter lengthwise of said rods.

13. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of folded, perforated, overlapping sheets whose folds receive said rods, respectively, and means interlocking with said support intermediate said channels and received in the perforations of said sheets to limit movement of the latter lengthwise of said rods.

14. A file comprising, in combination, a support presenting a pair of opposed channels, a series of rods whose opposite ends are received in said channels, a series of folded, perforated, overlapping sheets whose folds receive said rods, respectively, and means interlocking with said support intermediate said channels and received in the perforations of said sheets to limit movement of the latter lengthwise of said rods, said means presenting openings in which said rods are received within the folds of said sheets and presenting abutments without the folds of said sheets, the latter being thereby locked between said abutments and said rods.

15. The combination of a perforated sheet, and sheet-holding means comprising a rod, means received in the perforation of said sheet and loosely attached to said rod, and means which loosely receives the last-mentioned means and positions the same and said sheet irrespective of the lengthwise position of said rod.

16. The combination of a perforated sheet, and sheet-holding means comprising a rod, means received in the perforation of said sheet and receiving said rod, means which receives said rod and positions the same lengthwise, and means which receives the second-mentioned means and positions the same and said sheet lengthwise of said rod but irrespective of the lengthwise position of the latter.

17. The combination of a perforated sheet, and sheet-holding means comprising a rod, means received in the perforation of said sheet, receiving said rod on one side of said sheet and provided with an abutment on the other side of said sheet, the latter being thereby held between said abutment and said rod, and means which loosely receives said abutment and positions the same and said sheet irrespective of the lengthwise position of said rod.

18. The combination of a perforated sheet, and sheet-holding means comprising a rod, means received in the perforation of said sheet and attached to said rod, and means provided with opposed shoulders between which the last-mentioned means is received and positioned in the direction of the length of said rod.

19. The combination of a perforated sheet, and sheet-holding means comprising a rod, means received in the perforation of said sheet and receiving said rod, and means provided with shoulders between which the ends of said rod are received and shoulders by which the last-mentioned means is posi-

ioned in the direction of the length of said rod.

20. The combination of a perforated sheet, and sheet-holding means comprising a rod at one side of said sheet, means received in the perforation of said sheet receiving said rod and provided with an abutment at the other side of said sheet, abutments between which the ends of said rod are received, and abutments which cooperate with the first-mentioned abutment and position the latter in the direction of the length of said rod.

In testimony whereof, I have signed my name to this specification,

JOHN T. QUIGLEY.