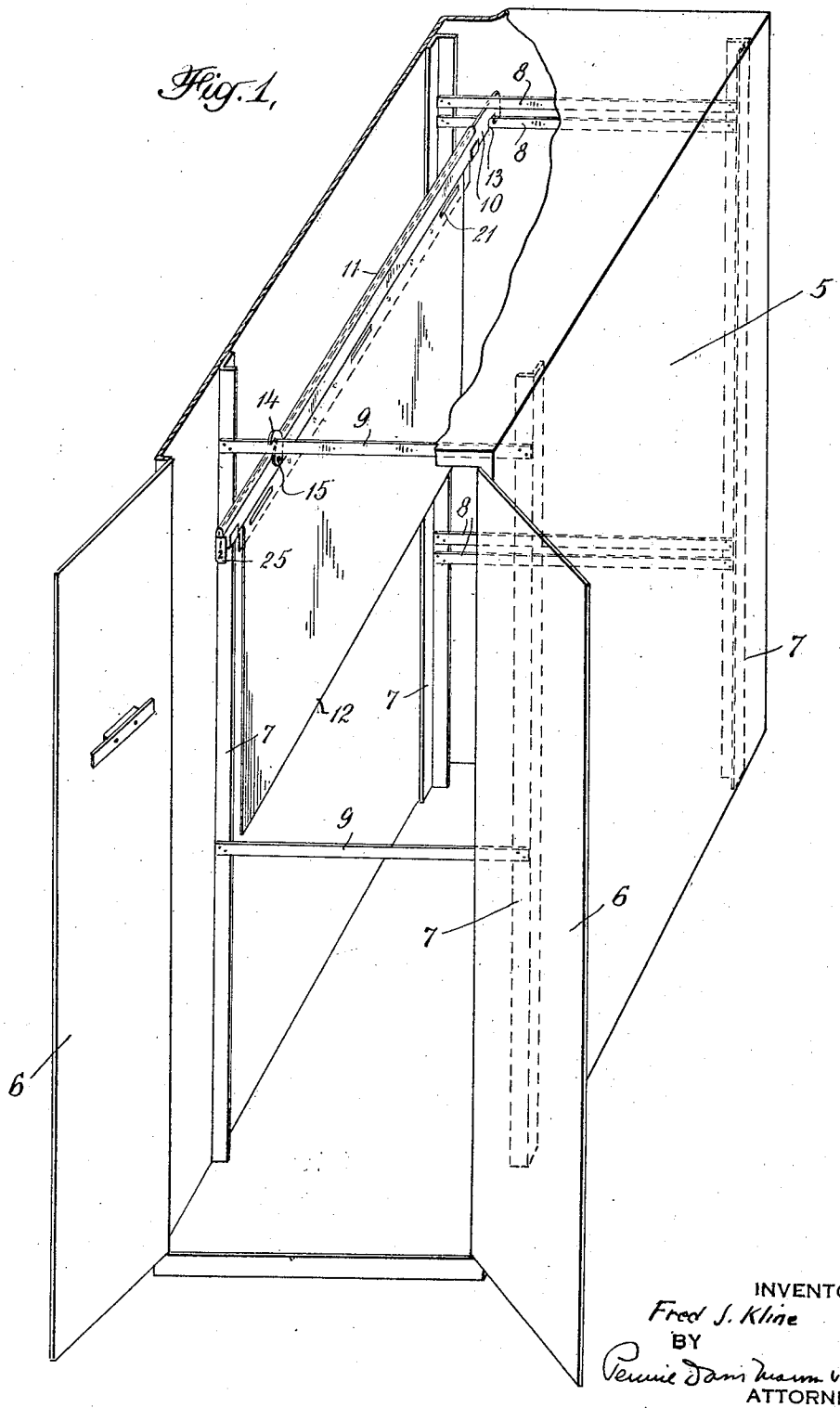
July 12, 1932. F. J. KLINE 1,867,159

FILING DEVICE

Filed Feb. 11, 1931 2 Sheets-Sheet 1

Fig. 1.

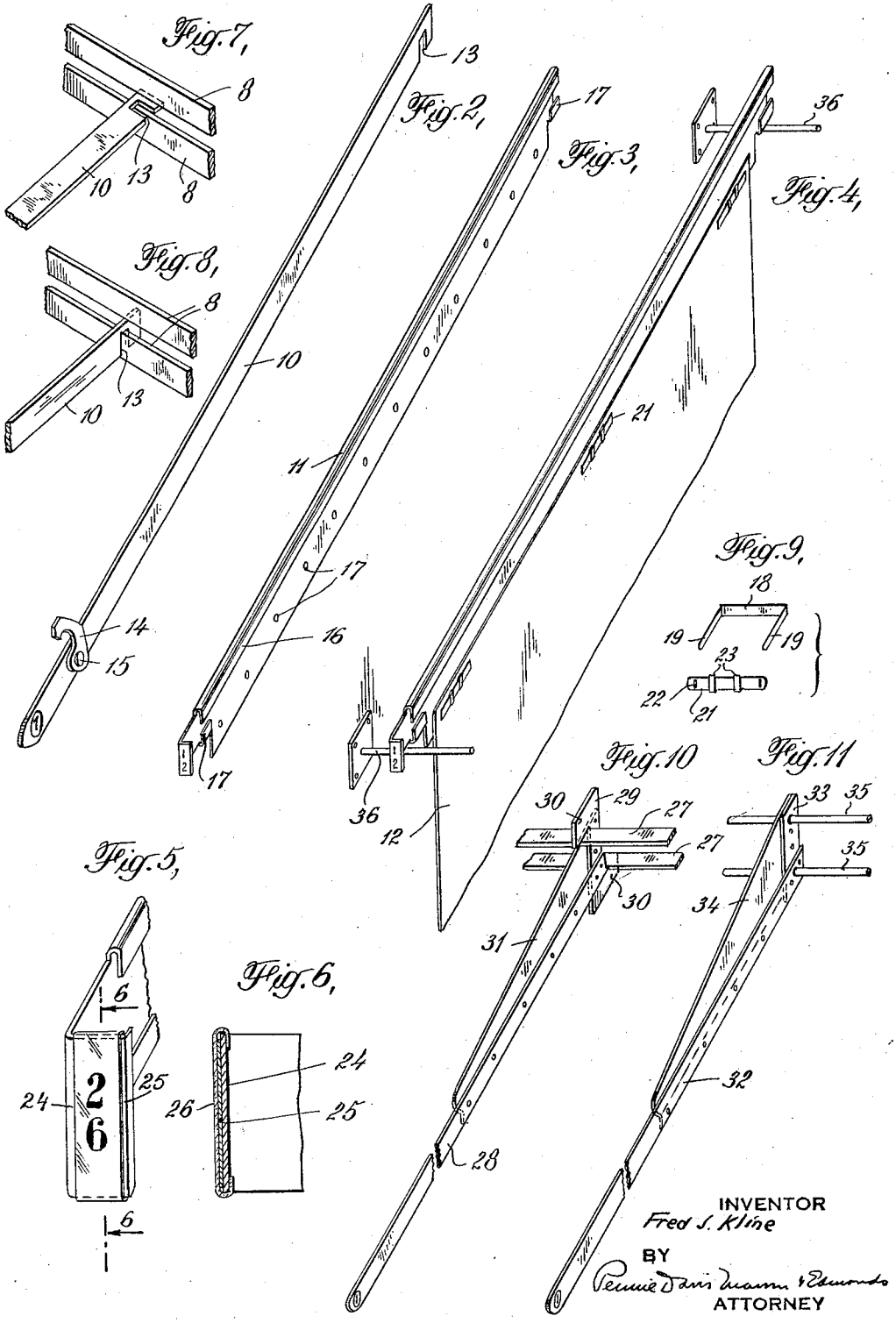


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UNITED STATES PATENT OFFICE

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FILING DEVICE

Application filed February 11, 1931. Serial No. 514,958.

This invention relates to filing devices and more particularly to convenient and inexpensive equipment for filing drawings, blueprints, maps and like material.

Drawings such as are used by architects, builders and engineers are not easily filed and maintained in accessible arrangement. Commonly such drawings are merely rolled and are disposed in a corner of the room where they are used. Thus they accumulate dust and dirt and are frequently torn or disfigured. Sometimes the drawings are stored flat in drawers, but it is practically impossible to index them satisfactorily, and they are not readily accessible. None of the available filing devices for such material has proved to be satisfactory.

It is the object of the present invention to provide a simple and effective filing device in which the drawings or like material are suspended and from which they can be removed quickly and conveniently, and particularly to afford a satisfactory storage receptacle for drawings and the like which can be installed in any convenient location and from which the contents can be withdrawn as required with a minimum of effort and delay.

Other objects and advantages of the invention will be apparent as it is better understood by reference to the following specification and the accompanying drawings, in which

Fig. 1 is a view in perspective of an enclosure or filing cabinet embodying the invention;

Fig. 2 is a view in perspective of one of the elements of a filing unit;

Fig. 3 is a view in perspective of another element of the filing unit;

Fig. 4 is a perspective view showing the last mentioned element on suitable supports with a sheet suspended therefrom;

Fig. 5 is an enlarged detail in perspective showing the index at the end of the last mentioned element;

Fig. 6 is a section on the line 6—6 of Fig. 5;

Figs. 7 and 8 are views in perspective illustrating the manner in which one end of the filing unit is locked to its support in the cabinet;

Fig. 9 is a view in perspective of the two parts of a fastener adapted for use with the filing unit;

Fig. 10 is a view in perspective of a modified form of the filing unit element shown in Fig. 2; and

Fig. 11 illustrates another modified form of this element.

In carrying out the invention, I prefer to employ a cabinet 5 with end closures 6, although the filing device may be installed in any suitable or convenient enclosure. I provide within the cabinet or other enclosure a supporting frame comprising uprights 7 and transverse members 8 and 9. Preferably there are two pairs of transverse members 8 at the rear of the enclosure for reasons hereinafter indicated, and two single transverse members 9 at the front of the enclosure. Obviously one pair of transverse members 8 and one of the transverse members 9 may be omitted, or if the enclosure is sufficiently high additional transverse members may be included.

The frame as described affords a support for the filing units, each of which comprises a bar 10 and a member 11 slidable thereon to which the sheet or other material 12 to be filed is secured. The bar 10 is provided preferably with a notch 13 in a side edge at one end. It is adapted to be introduced between the transverse members 8 as indicated in Fig. 7, and then turned as indicated in Fig. 8 to lock the bar securely on the support. Near the opposite end of the bar I provide preferably a latch 14 pivoted at 15 and adapted to engage the transverse member 9 at the front of the enclosure. The bar affords a removable support for the member 11, but it remains normally within the enclosure. The member 11 is provided preferably with a down-turned flange 16 on its upper edge and upturned lugs 17 at opposite ends forming a guideway so that the member 11 may slide upon the bar 10. The member 11 is provided with a plurality of spaced openings 17 to receive suitable fasteners 18, for example such as those shown in Fig. 9, having tongues 19 which pass through the sheet 12 and are held by a keeper 21 with openings 22 to receive the

tongues 19 and sliding locks 23. Obviously any suitable fastening device may be used, that illustrated being, however, most convenient.

At its forward end the member 11 is provided with a flange 24 affording a support for an index 25 which may be covered conveniently by any suitable transparent material 26. Thus each of the members 11 may be numbered or otherwise indexed and a list of the drawings or other material suspended on each of the filing units may be maintained, so that all of the material is readily accessible.

It will be understood that to obtain access to any particular drawing or sheet suspended in the cabinet it is necessary merely to slide the corresponding member 11 outwardly from the supporting bar 10 and thus to remove it from the cabinet. It may be placed upon a table or other support for convenient examination and can be returned readily to the cabinet in its proper position when desired. A plurality of sheets 12 may be secured to each of the members 11 and the overlying sheets can be turned back to permit convenient examination of others. The filing device has, therefore, the maximum possible capacity, since all of the sheets are suspended in a flat condition. Any desired filing unit can be withdrawn without disturbing any of the material in the file. As indicated in Fig. 1, provision may be made for supporting two tiers of filing units. Provision may be made for one or more such tiers as desired by omitting or including suitable transverse supporting members 8 and 9.

In Fig. 10 of the drawings, I have illustrated a slightly modified form of the device which dispenses with the necessity for the transverse members 9. I provide transverse flat members 27 lying in horizontal planes in place of the members 8 of Fig. 1. A supporting bar 28 is connected at one end with a member 29 having oppositely directed arms 30. By turning the bar 28 one edge of the member 29 can be introduced between the transverse members 27 and then turned so that the arms 30 engage the transverse members 27 as indicated in the drawings. The bar 28 is thus firmly held and is adapted to receive a co-operating element of the filing unit such as the member 11. The bar 28 may be braced if desired by a plate 31. As indicated in the drawings, the upper part of the plate 31 is bent away from the bar 28 to avoid interference with the sheet supporting member 11.

A similar modification is illustrated in Fig. 11, in which the bar 32 is provided with an upwardly directed arm 33 and a brace 34. As indicated in the drawings, the upper part of the brace 34 is bent away from the bar 32 to avoid interference with the sheet supporting member 11. Openings are provided in the bar 32 and arm 33 to receive the rods 35. The rods may be supported on any suitable frame and the bar 32 is adapted to receive a member such as the member 11 of Fig. 3.

In Fig. 4, I have illustrated convenient brackets 36 which may be secured to the outer wall of the cabinet or to the wall of the building to receive and support the member 11 with the sheet 12 suspended therefrom, whereby the sheet may be readily examined. A number of the members 11 may thus be supported for convenient and ready reference to the sheets.

The device as described affords a simple, compact and convenient filing system which is extremely flexible, inasmuch as it may be employed for the storage of any number of sheets or like material up to the full capacity of the space. The additional filing units may be added as necessary in expanding the file to meet the needs of any particular business. Furthermore, the elements may be arranged conveniently in any available space to permit hanging of the filing units.

Various changes may be made in the details of construction and arrangement of the parts without departing from the invention or sacrificing any of the advantages thereof.

I claim:

1. In a filing device, a filing unit comprising a bar and a member having a downturned flange on its upper edge to engage the bar and slidably supported thereon and having a plurality of openings to receive fasteners whereby sheets and like material are secured thereto, spaced supports for the bar and means on the bar to engage the spaced supports.

2. In a filing device, a filing unit comprising a bar and a member having a downturned flange on its upper edge to engage the bar and slidably supported thereon and having a plurality of openings to receive fasteners whereby sheets and like material are secured thereto, spaced supports for the bar and means on the bar to detachably engage the spaced supports.

3. In a filing device, a filing unit comprising a bar and a member slidably supported thereon and having a plurality of openings to receive fasteners whereby sheets and like material are secured thereto, spaced supports for the bar and means on the bar to detachably engage the spaced supports, including a pivoted latch whereby the bar may be released.

4. In a filing device, a filing unit comprising a bar having a notch at one end and a member slidably supported on the bar and having a plurality of openings to receive fasteners whereby sheets and like material are secured thereto, spaced supports for the bar, one of the supports being adapted to engage

the notch and means on the bar to engage the other support.

5. In a filing device, a filing unit comprising a bar having a notch at one end and a member slidably supported on the bar and having a plurality of openings to receive fasteners whereby sheets and like material are secured thereto, spaced supports for the bar, one of the supports being adapted to engage the notch and means on the bar to detachably engage the other support.

6. In a filing device, a filing unit comprising a bar having a notch at one end and a member slidably supported on the bar and having a plurality of openings to receive fasteners whereby sheets and like material are secured thereto, spaced supports for the bar, one of the supports being adapted to engage the notch and means on the bar to detachably engage the other support, including a pivoted latch whereby the bar may be released.

7. In a filing device, a filing unit comprising a bar and a member having a down-turned flange to engage the bar and a plurality of openings to receive fasteners whereby sheets and like material are secured thereto, spaced supports for the bar and means on the bar to engage the supports.

8. In a filing device, a filing unit comprising a bar and a member having a down-turned flange to engage the bar and a plurality of openings to receive fasteners whereby sheets and like material are secured thereto, and means at one end thereof to receive an index, spaced supports, the bar being provided with means to engage the supports.

9. In a filing device, a filing unit having a plurality of spaced openings to receive fasteners whereby sheets and like material are secured thereto, and means at one end and disposed angularly with respect to the plane thereof to receive an index.

10. In a filing device, a filing unit having a notch at one end and a pivoted latch at the other, and a plurality of spaced openings to receive fasteners whereby sheets and like material are secured thereto.

11. In a filing device, a filing unit comprising a bar having a notch at one end and a pivoted latch at the other and a member slidably mounted on the bar and having spaced openings to receive fasteners whereby sheets and like material are secured thereto.

12. In a filing device, an enclosure, supports at opposite ends thereof and a filing unit comprising a bar having means to engage the supports and a member having a down-turned flange on its upper edge to engage the bar and slidably mounted on the bar and having spaced openings to receive fasteners.

13. In a filing device, an enclosure, supports at opposite ends thereof and a filing unit comprising a bar having means including a pivoted latch to engage the supports and a member slidably mounted on the bar and having spaced openings to receive fasteners.

14. In a filing device, an enclosure having an opening at one end, supports at the opposite ends thereof and independently a plurality of filing units mounted thereon each unit comprising a bar and a member slidably mounted thereon and removable endwise through the opening.

15. In a filing device an enclosure having an opening at one end, supports at the opposite ends thereof and a plurality of filing units, each comprising a bar and a member slidably mounted on the bar and having a plurality of openings to receive fasteners, mounted thereon and the slidably mounted members being removable endwise through the opening independently of the bars.

In testimony whereof I affix my signature.

FRED J. KLINE.