Feb. 24, 1942. E. KERN 2,274,203

FILING EQUIPMENT

Filed May 23, 1940

Fig. 1

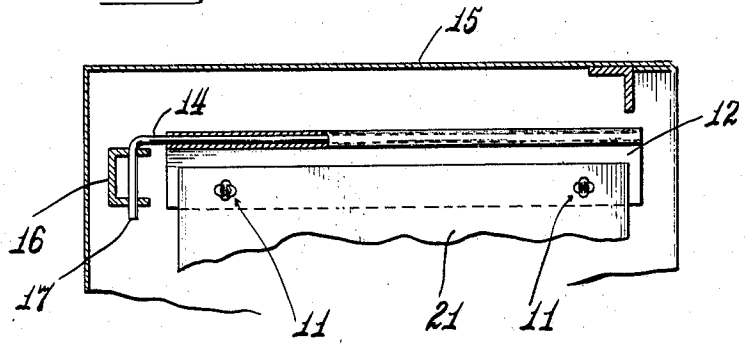


Fig. 2.

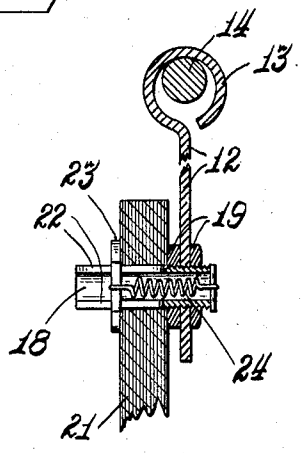


Fig. 3.

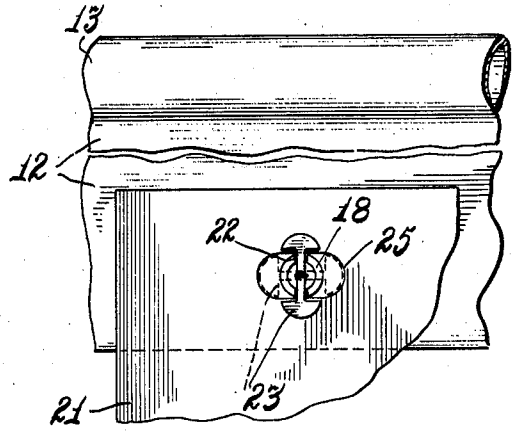
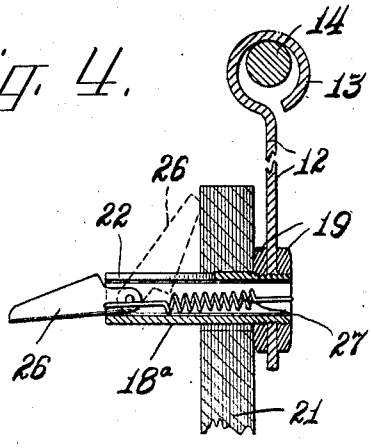


Fig. 4.



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FILING EQUIPMENT

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Application May 23, 1940, Serial No. 336,761

5 Claims. (Cl. 129—5)

This application is a continuation-in-part of application Serial No. 273,393, filed May 13, 1939.

The invention relates to filing equipment and more particularly to readily operable means adapted for detachably clamping together blue prints, samples or similar sheet material for vertical filing or display.

Drawings, blue prints, samples or the like, are more readily filed for safe keeping or displayed by detachably securing them to suspension elements. The elements are adapted to be removably mounted in vertical filing cabinets or on racks of a type similar to those specifically disclosed in Patents No. 1,867,158 and No. 1,867,159, both issued July 12, 1932.

It is an object of the present invention to provide suspension elements for use in vertical filing equipment with novel rotatably and yieldably mounted means easily and quickly operated to removably clamp sheets to said units.

Another object is to provide novel means for attaching sheets to a suspension element which is capable of ready manipulation, to effect insertion or removal of one or more of the sheets quickly.

Another object is to provide a suspension element with novelly constructed means arranged to support and securely clamp sheets thereto.

The foregoing and such other objects of the invention as will appear hereinafter will be more readily understood from a perusal of the following specification, wherein reference is had to the accompanying drawing, and where:

Fig. 1 is a fragmentary vertical sectional view of a filing cabinet including a filing unit embodying features of the invention.

Fig. 2 is an enlarged transverse sectional view of the filing unit shown in Fig. 1.

Fig. 3 is an enlarged fragmentary front elevational view of the unit shown in Fig. 2.

Fig. 4 is a transverse sectional view of a unit having another form of stud thereon.

In all figures, like numerals identify corresponding parts.

Sheets filed in vertical filing cabinets must, due to their being suspended adjacent one of their edges, be clamped or otherwise held securely to their hanger or suspension element while at the same time, such mounting or clamps must be capable of easy and quick manipulation to afford removal or insertion of sheets with the least possible effort. It is to this end that the instant clamps are designed and, as best shown in Fig. 1, said clamps, indicated generally at 11, preferably are arranged in pairs on a slidable suspension element 12. The element 12 may be of any practical construction but, as illustrated, preferably includes a substantially tubular upper margin 13 whereby it may be freely slid onto or off from a hanger arm or rod 14. In use, a plurality of filing units, each consisting of a hanger arm 14 and a suspension element 12, preferably are pivotally mounted in a readily accessible position within a filing cabinet 15. In the exemplary arrangement illustrated in Fig. 1, a support 16, mounted in said cabinet, preferably comprises a channel member having its flanges apertured to receive the down-turned end portion 17 of the hanger arm 14, to provide independent horizontally movable suspension units.

The clamp 11, best illustrated in Figs. 2 and 3, includes a projection or retaining stud 18 which is firmly secured at one end to the element 12, preferably by nuts 19. Sheets 21, to be suspended, are suitably apertured adjacent one edge to be received over the stud. The stud illustrated is tubular and has diametrically aligned longitudinal slots 22 extending inwardly from its free end.

An elongated or non-circular clamp plate 23, slidable in the stud slots 22, is arranged to be drawn tightly against the sheets 21 by a spring 24 contained within the stud. Upon moving the plate outwardly against the action of said spring and then turning it substantially a quarter of a revolution, as shown in dotted lines in Fig. 3, sheets may be placed on or withdrawn from the stud. In this disclosure the sheets preferably have horizontally elongated apertures 25 to permit unrestricted passage of the sheets over the elongated clamp plate 23 when the latter is in its dotted line position.

In the disclosure in Fig. 4, the tubular stud 18a has a single longitudinal slot 22 extending inwardly from its free end and a clamp finger 26 pivotally mounted adjacent said end. As illustrated, the clamp finger may be moved into substantial parallelism with the stud and be held in such position by a toggle spring 27 thereby affording the addition or removal of sheets 21. The sheets are securely held to the suspension element 12 by swinging the clamp finger upwardly into a position against the sheets substantially as shown in dotted lines. Consequently, the sheets are adequately held to prevent their inadvertent removal from the stud.

Although the disclosures embody different means for securely clamping and retaining sheets to a suspension element or other support, it is apparent: that, each embodies an inexpensive

structure readily operable to afford quick and easy insertion or removal and efficient clamping of such sheets; and that, the disclosures are illustrative rather than restrictive. It is, therefore, not desired that the invention be limited to the precise disclosures but, that the invention embrace such modifications and variations in details structure as will fall within the spirit of the invention and the scope of the appended claims.

I claim:

1. In a suspension unit, an element, a tubular stud fixedly mounted at one end on said element adapted to receive a plurality of sheets each having an opening to register with the stud, said stud being longitudinally slotted at its free end, a movable member on the free end of said stud adapted when in one position of adjustment to align with the openings in said sheets to permit their insertion or withdrawal over said stud and when in another of its positions to prevent such insertion or withdrawal, and a spring mounted within the tubular stud to maintain said member in said aligned position and when said member is moved into its other position to pull it along the longitudinal slot tightly against the sheets on said stud and prevent displacement of said sheets.

2. In a suspension unit, an element, a tubular stud fixedly mounted on said element adapted to receive a plurality of sheets each having an opening to register with the stud, a movable member on the free end of said stud adapted when in one position of adjustment to align with the openings in said sheets to permit their insertion or withdrawal over said stud and when in another of its positions to prevent such insertion or withdrawal, and a spring mounted within the tubular stud to maintain said member in said aligned position and, when said member is moved into its other position, to pull it tightly against the sheets on said stud and prevent displacement of said sheets.

3. In a suspension unit, an element, a longitudinally slotted tubular projection on said element adapted to receive a plurality of sheets each having an elongated opening therein to register with said projection, and a spring controlled elongated clamp on said projection, said clamp being adapted when in one position to align with the elongated openings to permit insertion or withdrawal of sheets and when in another position to be out of alinement with said openings and co-act with the slot in the projection and tightly clamp the sheets against the element.

4. In a suspension unit, an element, a tubular stud on said element, said stud being adapted to receive apertured sheets thereon, axially rotatable means on said stud movable into clamping position against sheets thereon, and a spring in said stud operatively associated with said means to retain the latter in either of a plurality of positions.

5. In a suspension unit, an element, a tubular stud on said element, said stud being adapted to receive apertured sheets thereon, means pivotally mounted on said stud movable into clamping position against sheets thereon, and a toggle spring operatively associated with said means to retain said means in either of a plurality of positions.

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