Oct. 13, 1931. R. McKNIGHT 1,827,296

FILING APPARATUS

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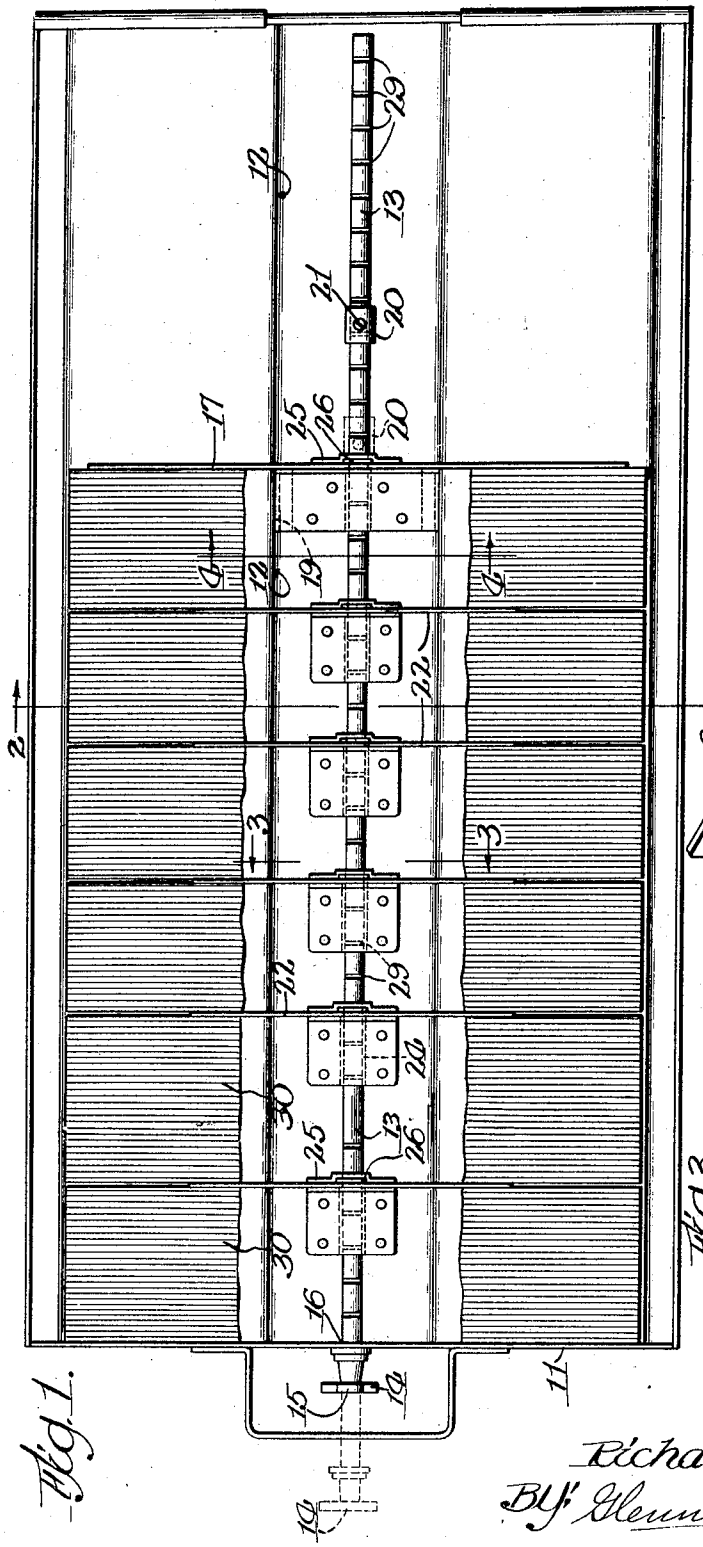


Fig. 1.

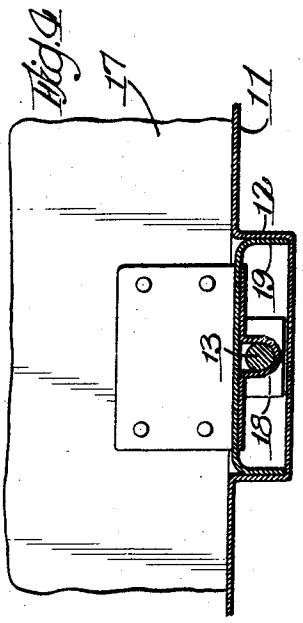


Fig. 4.

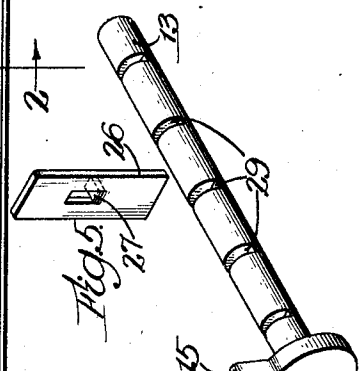


Fig. 5.

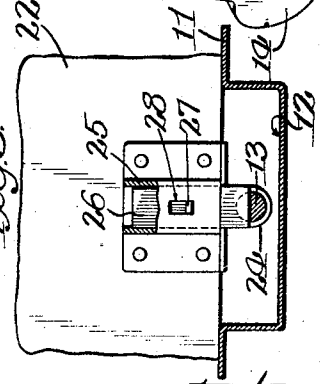


Fig. 3.

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Fig. 2.

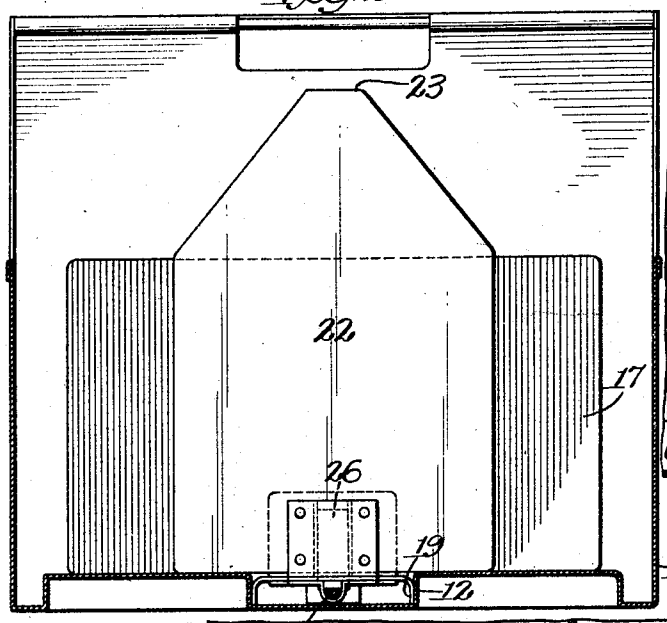


Fig. 10.

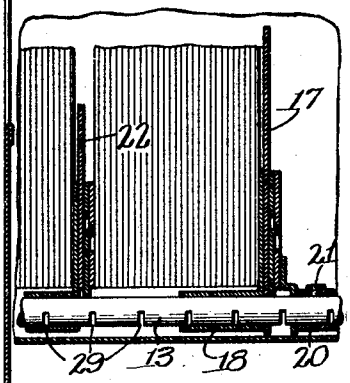


Fig. 6.

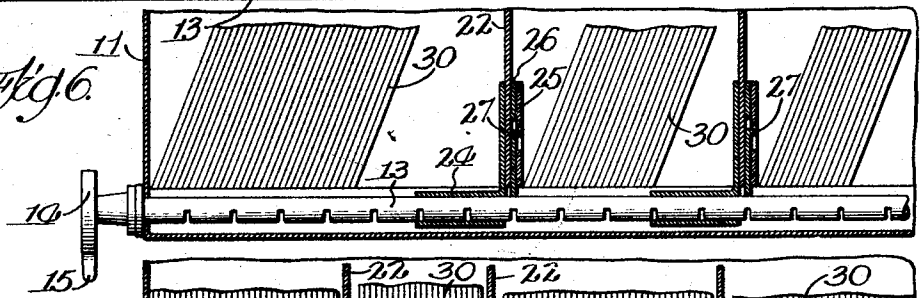


Fig. 7.

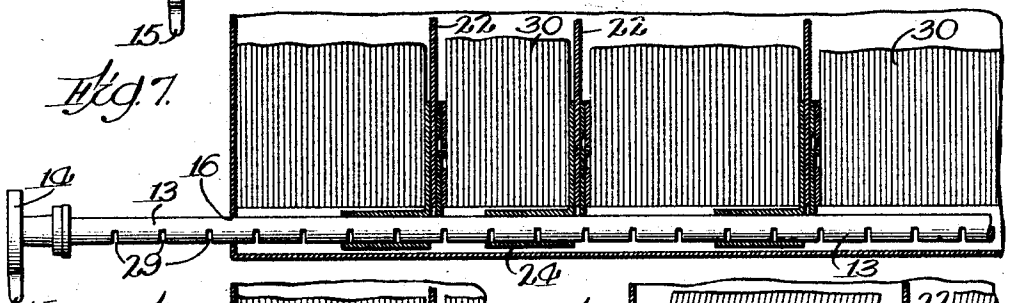


Fig. 8.

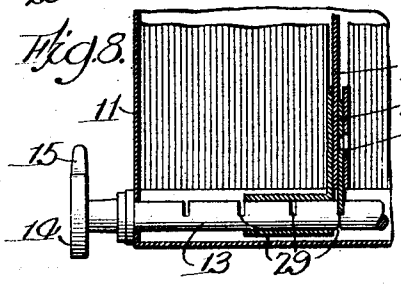
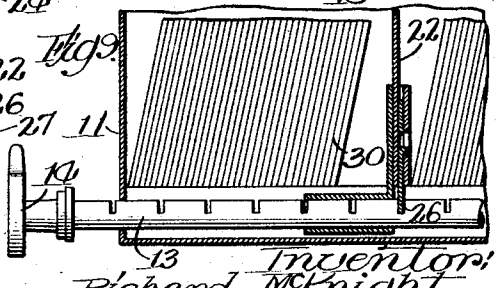


Fig. 9.



Inventor:
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Patented Oct. 13, 1931 1,827,296

UNITED STATES PATENT OFFICE

RICHARD McKNIGHT, OF CHICAGO, ILLINOIS

FILING APPARATUS

Application filed March 29, 1929. Serial No. 350,970.

This invention relates to devices for use in connection with vertical filing systems for papers, cards, sheet music, catalogs, records or anything which may be conveniently filed in this manner. While the term vertical has heretofore been used more or less generally for certain filing systems, it has usually been more or less erroneously applied as the articles to be filed, which for convenience will hereafter be designated as papers, have usually been free to lean over or assume a diagonal position due to the lack of proper compression in the holding devices. The present invention provides means whereby the papers may be held in a truly vertical position with sufficient compression to maintain them in proper filing position.

The objects of this invention are to provide an improved vertical filing system; to provide a system of this character having means for compressing the papers or other articles to be filed therein; to provide a filing apparatus in which one or more dividers and a follower block may be conveniently adjusted and held in adjusted position; to provide a rod-actuated compressor system for filing cabinets; to provide means to compress the entire contents of a filing drawer by pulling forwardly on a knob at the front of the drawer; to provide means for holding dividing plates in adjusted position; to provide a compressor system that may be readily applied to existing filing cabinets; and to provide such other novel features and improvements in construction as will appear more fully hereinafter.

In the accompanying drawings illustrating this invention,

Figure 1 is a plan view of a drawer provided with my improved system;

Figure 2 is a sectional view taken on the line 2—2 of Figure 1;

Figure 3 is a detail sectional view taken on the line 3—3 of Figure 1;

Figure 4 is a similar view taken on the line 4—4 of Figure 1;

Figure 5 is a diagrammatic view of the compressor rod and one of the divider latches;

Figure 6 is a longitudinal sectional view indicating the position of papers or files before compressing;

Figure 7 is a similar view indicating the position of the files for compressing;

Figure 8 is a sectional detail showing one of the divider latches in locking position with the papers compressed;

Figure 9 is a similar view showing the divider moved inwardly to loosen the papers or relieve the compression; and

Figure 10 is a sectional detail of the follower plate and adjustable engaging member on the rod.

The filing drawer 11, as shown in these drawings, may be of any ordinary or preferred form of construction and made of either steel or wood, being provided with a channel or longitudinal depression 12 in the bottom thereof. Instead of the usual fixed rod for the follower block, I provide a longitudinally movable rod 13 which is provided at its outer end with a handle or knob 14 having a finger or pointer 15 on one side thereof. The rod moves through a hole or bearing 16 in the end of the drawer 11.

A follower plate 17 which preferably extends substantially across the drawer or is of approximately the same size as the papers to be filed has a bearing 18 for engagement with the rod 13, such bearing being made in any suitable manner and sufficiently long so that the follower plate will be held in substantially vertical position. This follower plate is also provided with a guide 19 which engages with the channel 12 for guiding the plate in its movement along the drawer. An adjustable collar or compression member 20 is secured to the rod 13 in any suitable manner, as by means of a set screw 21 and is adapted to engage with the follower plate to draw the plate forward when the papers are to be compressed.

One or more separating plates or dividers 22 coact with the rod 13 for holding the files or papers in properly adjusted position. These plates may be made of any desired size suitable for moving and holding the papers and may conveniently be pointed so that their upper ends 23 will extend abo

the papers or files in the drawer so that the plates may indicate numerically or alphabetical divisions if desired. Each plate has a bearing or sleeve 24 for engagement with the rod 13. Each of these plates also has a loop or keeper 25 for a vertically movable latch 26. These latches have tongues or projections 27 which extend through slots 28 in the keepers to prevent the latches from becoming disengaged while at the same time permitting sufficient longitudinal movement thereof. The rod 13 is provided with a plurality of notches or recesses 29 for receiving the latches 26 of the respective dividers 22. These notches are positioned on one side of the rod so that the latches will engage therewith when the notches are turned to one position but will be thrown out of engagement when the rod is turned to another position.

While the filing may be performed in various ways as for different articles, the operation of the device will usually be as follows. A plurality of divider plates will be arranged in spaced relation, for instance as shown in Figure 1 with the papers or articles to be filed as indicated at 30 placed between the holding members as shown in Figure 1. If the rod is turned with the notches up, the dividers will be held in their respective positions by the engagement of their latches with the notches. If it is desired to compress the papers or files, the rod 13 is turned until the notches disengage the latches and the rod is drawn forwardly by means of the handle 14. This causes the collar 20 to engage with the follower plate 17 and move it forwardly until all of the papers are compressed and held in vertical position. The rod is then shoved back to its initial or innermost position, the files being held in vertical compressed position by the friction of the papers and operating members in the drawer, or if desired the operator may hold one hand against the back of the follower plate 17 while pushing the rod in. The collar or movable projection 20 may be adjusted along the rod so that a limited movement will be sufficient for compression and also to prevent the follower plate from working too far back in the drawer.

If it is desired to relieve the tension for convenience in inserting new papers or files, the operator draws the rod 13 outwardly a short distance for instance as indicated in Figure 7, and then turns the notches up, the position thereof being indicated by the pointer 15. This brings the notches in position to be engaged by the latches 26 and by pressing the rod inwardly all of the dividers will be moved inwardly a corresponding distance. This increases the space between the first divider and the front of the drawer and relieves the compression so that the new files or papers may be readily placed in their proper positions between the guiding and supporting members.

With this arrangement it will be seen that all of the papers or files in the respective divisions are securely held in position, and if desired the divider plates 22 may be marked so that they will also act as index members. By means of this arrangement, all of the papers in one division may be removed and then returned to the same division, or other papers inserted if desired. This apparatus provides interdivisional mechanism for holding or supporting the files in the most satisfactory manner and also provides means whereby the compression and distribution of the contents of the drawer may be controlled from outside thereof. The compression of the files or papers at the bottom is a desirable feature as it tends to hold them even and neat and also tends to increase the filing capacity of the drawer. This compression of the papers at the bottom of the drawer will prevent their slipping or crumpling so that one paper or file will not work under the others as is more or less common with the usual filing systems now in use.

Changes may be made in the various parts or construction of my improved apparatus in order to adapt the same for different conditions or for different filings without departing from the scope or intent of this invention as set forth in the following claims in which I claim:

1. A filing apparatus comprising a receptacle for receiving the articles to be filed, movable compression means within the receptacle for supporting and pressing articles filed therein, and longitudinally movable actuating means operable from without the receptacle for actuating the compression means.

2. A filing system comprising a drawer, a longitudinally movable rod mounted in said drawer, a handle for moving said rod, a follower plate having a bearing engaging with said rod, and a projection on the rod for engagement with the plate whereby the plate will be drawn forwardly when the rod is pulled out.

3. The combination with a drawer, of a longitudinally movable rod mounted therein, a handle for moving said rod, a follower block slidably mounted in the drawer, said block having a bearing engaging with the rod, and a member which is adapted to be adjustably secured in various positions on the rod for engagement with the block to actuate the same.

4. In a filing system, the combination of a drawer, a longitudinally movable rod mounted in said drawer, a handle for actuating the rod, one or more dividing plates arranged transversely of the drawer, and connecting means for connecting the plates at times with the rod whereby the plates may be

slid longitudinally of the drawer by means of the rod.

5. In a filing apparatus, the combination of a drawer, a longitudinally movable rod mounted in the drawer, a compressor plate, means on the rod for actuating the compressor plate, a plurality of divider plates, and coacting means for locking the divider plates at predetermined times to the rod.

6. The combination of a drawer, a reciprocable rod mounted in the drawer and having notches therein, vertically arranged divider plates having bearings on the rod and catches on said plates for engagement with said notches.

7. The combination with a drawer, of a reciprocable rod mounted therein and having a plurality of notches on one side thereof, a handle for reciprocating said rod, a plurality of transversely arranged dividers having bearings engaging with said rod, keepers on said dividers, and latches slidably mounted in said keepers and adapted to engage with the notches in the rod, the arrangement being such that when the rod is turned with the notches upwardly the latches will engage therewith and when the rod is turned with the notches downwardly the latches will not engage with the notches.

8. In a filing apparatus, the combination of a drawer or receptacle for receiving the articles to be filed, a rod slidably and rotatably mounted in the drawer and projecting through the front thereof, said rod having a plurality of recesses along one side, a handle on the front end of the rod having means for indicating the position of the recesses in the rod, a follower block slidably mounted in the drawer and having a bearing on said rod, an adjustable collar on the rod for engagement with the block, a plurality of divider plates having bearings engaging with the rod, and catches on said plates for engagement with the recesses in the rod.

9. In combination, a filing channel, dividers therein, and a rotatable and longitudinally movable rod in the lower portion of the drawer, the rod and dividers having interlocking means arranged to be engaged and disengaged by the rotary movement of the rod, and said rod having a compressing abutment on its inner end.

10. In combination, a filing drawer, dividers therein, a longitudinally movable rod in the lower portion of the drawer, and means for releasably interlocking the dividers and rod to permit the movement of the dividers with or independently of the rod, the dividers having extended bearing sleeves fixed thereto and guided on the rod.

11. A filing apparatus comprising a receptacle for receiving the articles to be filed, slidable compression means within the receptacle for engaging the lower portions of the articles within the receptacle and longitudinally movable means adapted to be actuated from without the receptacle and coacting with the compression means for sliding the same.

RICHARD McKNIGHT.