H. G. CONRAD.

INTERLOCKING SECTIONAL STRUCTURE.

APPLICATION FILED FEB. 6, 1909.

946,111.

Patented Jan. 11, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

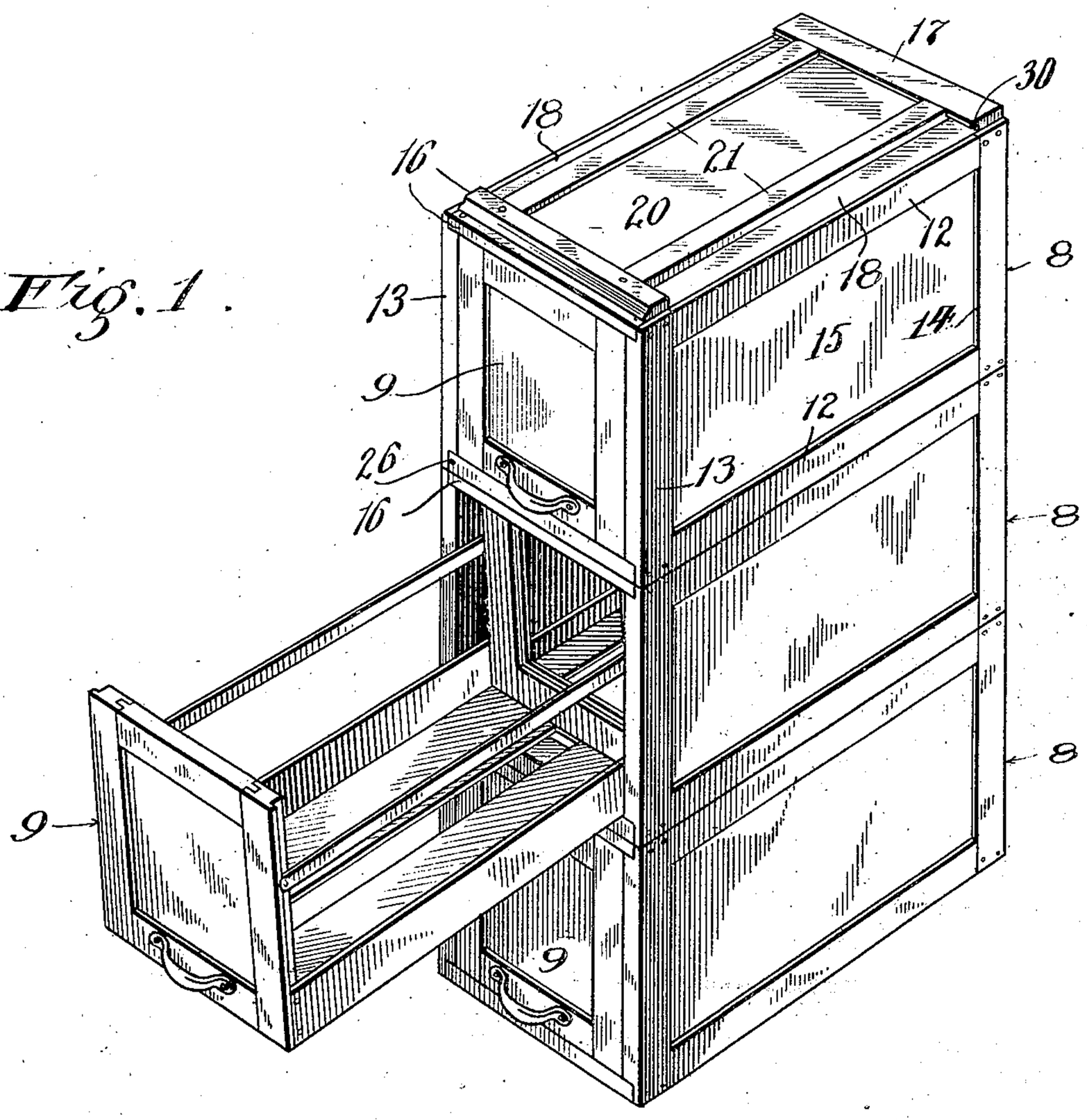
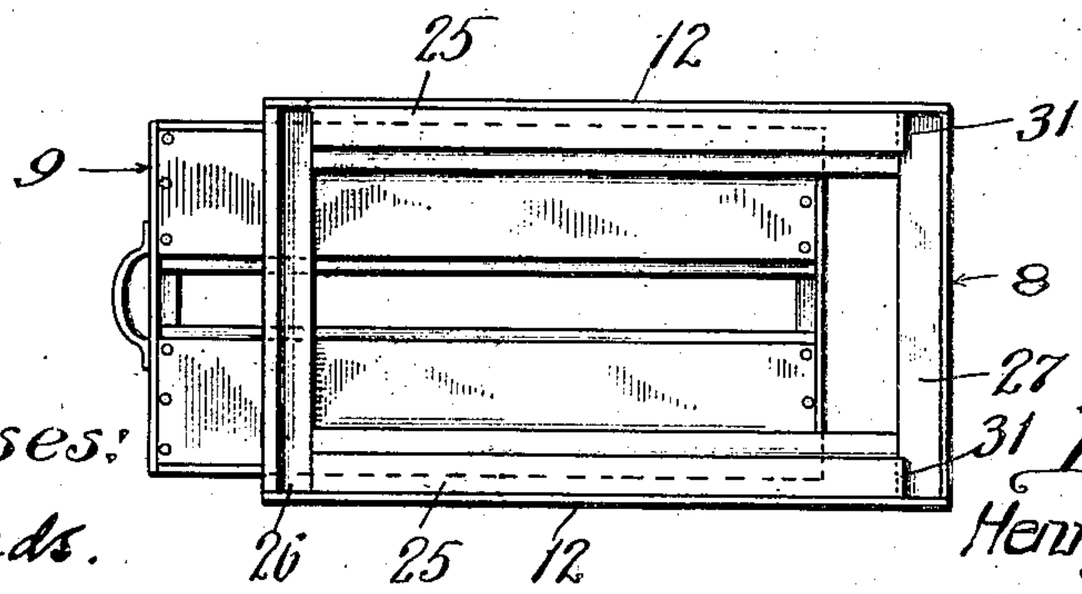


Fig. 2.



Witnesses:

F. N. Alfreds.

W. L. Hall

Inventor:

Henry G. Conrad

by Poole & Broun

his Attys.

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2 SHEETS—SHEET 2.

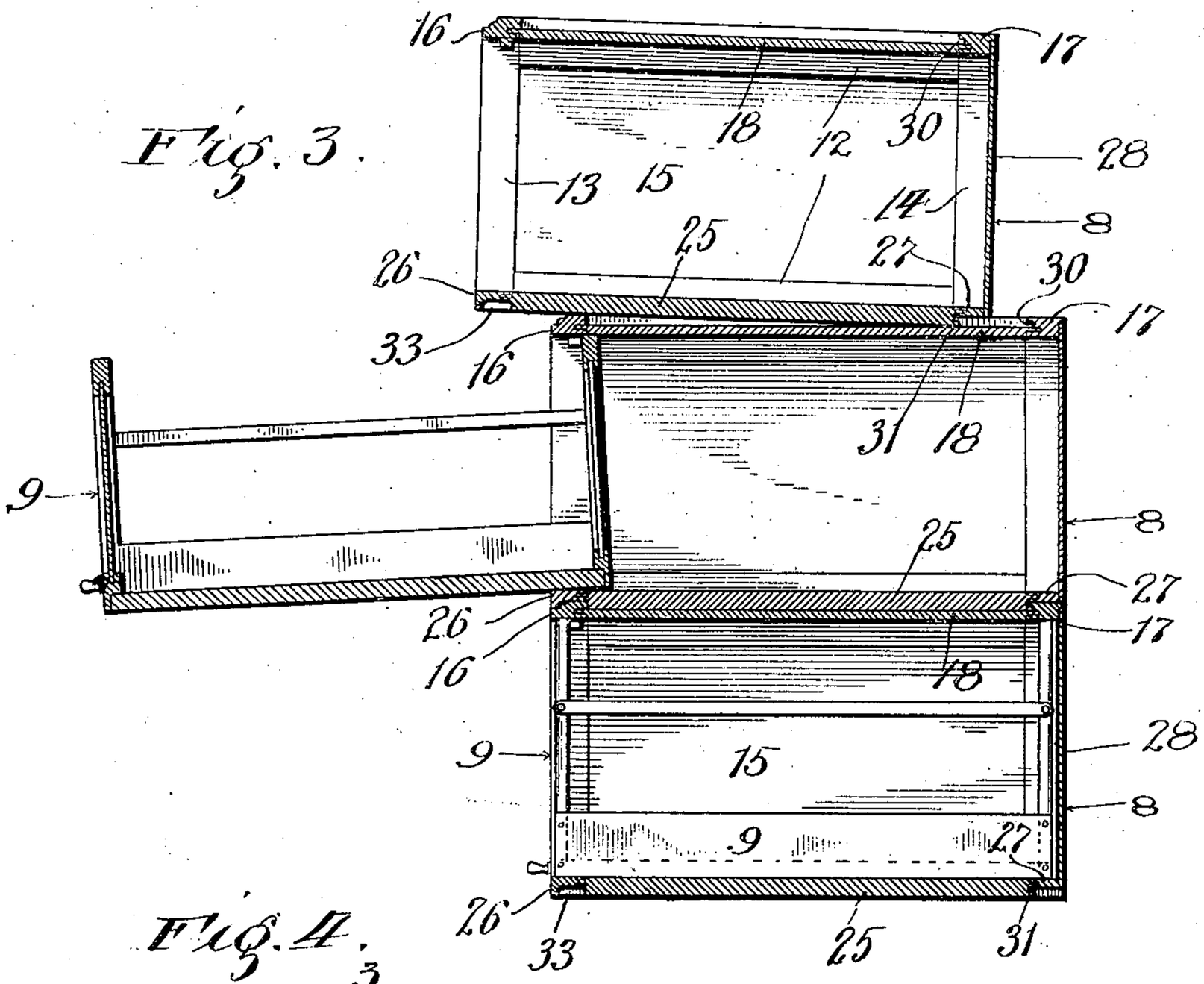

FIG. 3.

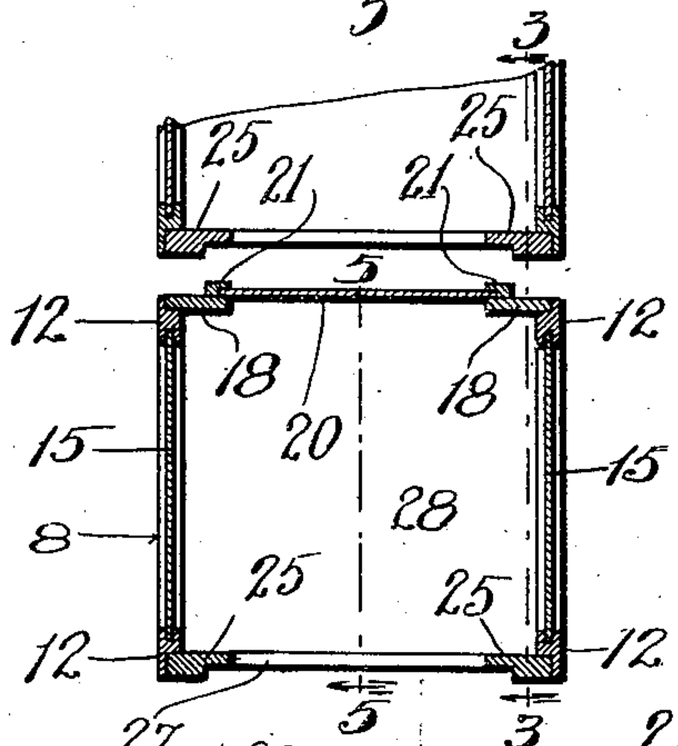

FIG. 4.

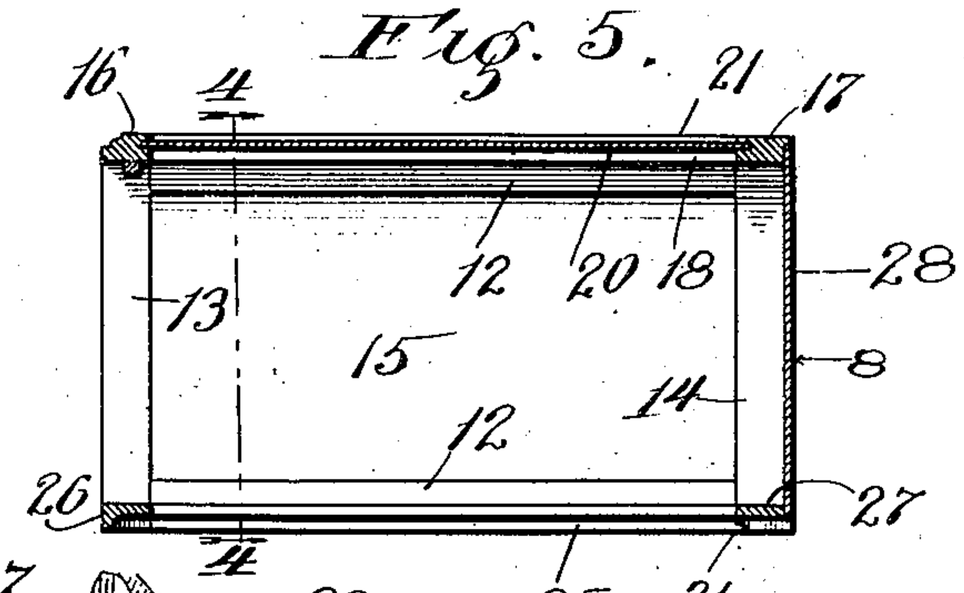

FIG. 5.

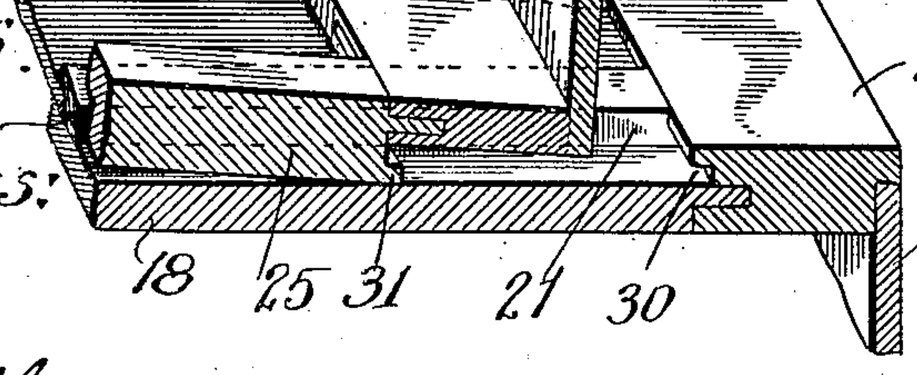

FIG. 6.

Witnesses:
P. H. Alfreds.
W. Hustall

Inventor:
Henry G. Conrad
by Robt. V. Brown
his Attys.

UNITED STATES PATENT OFFICE.

HENRY G. CONRAD, OF CHICAGO, ILLINOIS, ASSIGNOR TO AMBERG FILE & INDEX CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

INTERLOCKING SECTIONAL STRUCTURE.

946,111. Specification of Letters Patent. **Patented Jan. 11, 1910.**

Application filed February 6, 1909. Serial No. 476,366.

To all whom it may concern:

Be it known that I, HENRY G. CONRAD, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Interlocking Sectional Structures; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

This invention relates to improvements in interlocking sectional structures such as cases or receptacles whereby such cases or receptacles may be piled or stacked one upon the other in vertical arrangement in a manner to give structural continuity and stability to the pile or stack.

The invention is herein shown as applied to transfer file cases or receptacles in which the papers are filed in vertical arrangement in drawers that are slidingly mounted in the cases; the drawers of the transfer cases being made of the same general dimensions and arrangement as the drawers of a vertical main filing cabinet, whereby the papers may be transferred bodily to the transfer cases and occupy the same position therein in which they are filed from time to time in the filing cabinet.

The invention consists in the matters hereinafter set forth and more particularly pointed out in the appended claims.

As shown in said drawings:—Figure 1 is a perspective view of an interlocked stack or pile of transfer cases embodying my invention. Fig. 2 is a bottom plan view of one of the transfer cases. Fig. 3 is a vertical section of a number of cases arranged in a stack, the section being taken on the line 3—3 of Fig. 4. Fig. 4 is a transverse section of parts of two adjacent transfer cases, partially separated, the section being taken on line 4—4 of Fig. 5. Fig. 5 is a longitudinal section taken on line 5—5 of Fig. 4. Fig. 6 is a perspective detail, illustrating the manner of interlocking an upper case with a lower case.

As shown in the drawings, 8, 8 designate the filing cases or receptacles as a whole, and 9, 9 the drawers thereof. The construction of the drawers follows generally the construction of the sliding drawers of the usual vertical filing cabinet, with the exception that they may be made lighter and more skeletonized by reason of the relative infrequent use of the device.

The construction of the transfer cases 8 may follow the preference or taste of the builder in the general features thereof, excepting as to the parts on the upper and lower walls thereof which constitute the interlocking connection between the cases or units. As herein shown, the side walls of the case comprise open frames consisting of upper and lower horizontal members 12, 12 and vertical front and rear members 13 and 14, respectively, and a central panel 15 made of any suitable thin material, as cardboard, a thin veneer and the like, thus giving to the side walls a panel effect. The top wall of the case embraces also an open frame made of front and rear transverse members 16 and 17, respectively, and side members 18, 18 which are joined at their ends to the transverse members by tongue-and-groove connection, as illustrated in Figs. 3 and 6, and are rabbeted at their side margins into the upper horizontal members 12 of the side walls. The central part of the top wall consists of a panel 20 of any suitable material, as cardboard or the like. Said central panel 20 lies at its side margins over the inner edges of the side strips 18 of the top wall frame and is held in place thereon by strips 21, 21 lying thereover and rabbeted at their inner margins to receive the side margins of the panel sheet. The end margins of the top wall panel enter grooves in the transverse members 16 and 17 of the top wall frame, as clearly shown in Fig. 5. The bottom wall of the case embraces two side members 25, 25 which are rabbeted into the lower horizontal members 12 of the side frames, as shown in Fig. 4, and are attached at their ends to front and rear lower transverse members 26 and 27, respectively, which are attached at their ends to the vertical members 13 and 14 of the side walls. The rear wall of the casing consists, as herein shown, of a thin sheet 28, of cardboard or other suitable material, which is attached to the rear vertical members of the side wall frame and the rear members of the top and bottom wall frames.

Referring now to the interlocking devices by which the casings are locked together when stacked or piled, the same are made as follows: It will be observed that when

an upper case rests on a next lower case, the end cross members 26 and 27 of the bottom wall of the upper case rest flat on the end cross members 16 and 17 of the top of said next lower case, as clearly shown in Fig. 3. The side members 25 of the bottom of an upper case also rest upon the corresponding members 18 of the top wall of the next lower case. The rear cross members 17 of the top wall are provided on their forward margins at their ends, laterally outside of the strips 21 as herein shown, with horizontally arranged short undercut notches or grooves 30 and the side members 25 of the bottom walls, which extend below the planes of the transverse end members of the walls, are provided at their rear ends with tongues 31 adapted to enter said notches or grooves 30 when the cases are assembled. The tongue-and-groove connection of the adjacent upper and lower walls of the connected cases are so arranged that the tongues enter the grooves or notches 30 by a rearward movement of the upper case, the bottom of which in this instance carries the tongue, relatively to the top of the lower case, which in this instance, carries the groove 30. In other words, such connection of the tongue-and-grooves parts is effected by merely resting the upper case on a lower case and sliding the upper case rearwardly to engage the tongues with the grooves. It will be evident that the same interlocking connection of an upper and a lower case will be effected by a reversal of the position of the grooves 30 and tongues 31, with the same advantage of bringing the parts into interlocked relation by movement of the upper case rearwardly.

The interlocking connection described holds the upper case from rising away from the lower case without first moving the upper case forwardly to disengage the tongue from the groove.

In order to lock the upper case from forward or releasing movement, the following construction is provided at the front end of the interlocked cases: The front transverse member 26 of the bottom of the upper case is cut away to provide a downwardly and rearwardly opening elongated recess 33 to receive the front member 16 of the top wall of the next lower case, said recess 33 being of such depth as to receive the part of the member 16 extending above the side members 18. The said recess 33 opens to the rear margin of the under side of the end member 26 and the side members 25 at the bottom wall of the upper case abut at their rear ends against the rear side of said transverse member 26. Thus it will be seen that when the transverse end member 16 of the top wall enters the recess 33, as clearly shown at the bottom portion of Fig. 3, the forward ends of the side members 25 of the bottom wall abut against the rear side of the transverse member 26 of the adjacent top wall. Thus the upper case is prevented from being moved forwardly to release it from the next lower case until the front end of the upper case is raised above the level of the locking strip 16. In order to release the interlocking connection between two cases, therefore, the front end of the upper case is first raised in the manner indicated at the top portion of Fig. 3, and said case is then pulled forwardly in a manner to withdraw the tongues 31 from the grooves 30.

In order to afford an interlocking connection between an upper and a lower case to prevent relative sidewise movement, the side members 25 of the bottom wall of the upper cases are shown as provided at the inner marginal parts of their lower sides with longitudinal rabbets which fit over and outside of the strips 21 at the top of the next lower case. Said interfitting upper and lower strips prevent lateral displacement of an upper case and also constitute guides to guide an upper case to its interlocking position.

An advantage of the construction and arrangement shown is that when a case is to be released and removed the entire releasing movement thereof is forward from its normal or interlocked position. Thus a stack of cases may be set closely against a vertical wall or the like without requiring movement of the stack away from the wall to effect or release the interlocking connection.

The construction described affords an exceedingly rigid interlocked connection of the several cases of a stack to hold them together as a substantially rigid structure. Moreover, the construction is an exceedingly simple one and adds but little to the cost of the filing devices.

It will be understood that the details of construction are capable of variation within the scope of the invention and I do not wish to be limited to the exact details except as hereinafter made the subject of specific claims.

I claim as my invention:—

1. An interlocking sectional structure comprising a plurality of sections stacked one on the other, said sections having interlocking connections comprising a part at the rear end of a sub-section provided with forwardly opening grooves and a part at the rear end of a superposed section provided with rearwardly directed tongues for engagement with said grooves, and interlocking parts at the forward ends of said sections arranged to normally hold a superposed section from shifting forwardly on the sub-section and thereby hold said tongue and grooved parts interlocked.

2. An interlocking sectional structure comprising a plurality of sections stacked one on the other, said sections having interlocking connections comprising a transverse member at the rear end of the upper wall of a sub-section provided with forwardly opening notches or grooves, side members on the bottom wall of a superposed section provided with tongues arranged to enter said grooves, and a transverse member at the front end of the sub-section arranged to engage the front ends of said side members to hold said superposed section from forward displacement and thereby hold the tongues and grooves interlocked.

3. An interlocking sectional structure comprising a plurality of sections stacked one on the other, said sections having interlocking connections comprising a part at the rear end of the sub-section provided with forwardly opening grooves and a part at the rear end of the superposed section provided with rearwardly directed tongues for engagement with said grooves, and interlocking parts at the forward ends of said sections arranged to normally hold a superposed section from shifting forwardly on a sub-section and thereby hold said tongue and grooved parts interlocked, and means on the adjacent superposed walls acting to hold the superposed section from lateral displacement relatively to the sub-section.

4. An interlocking sectional structure comprising a plurality of sections stacked one on the other, said sections having interlocking connections comprising a transverse member at the rear end of the upper wall of a sub-section provided with forwardly opening grooves, side members on the bottom wall of a superposed section provided with tongues arranged to enter said grooves, and a transverse member at the front end of the sub-section arranged to engage the front ends of said side members to hold the superposed section from forward displacement and thereby hold the tongues and grooves interlocked, the sub-section being provided on its top wall with longitudinally arranged strips adapted for engagement with the tongue bearing members to hold the sections from relative lateral displacement.

In testimony, that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 4th day of February A. D. 1909.

HENRY G. CONRAD.

Witnesses:
JOSEPH SUESS,
ARTHUR J. AMBERG.