

Abstract

A detachable metal binder designed to be detached from a file when needed by a user and a file having this detachable metal binder. A detachable metal binder in which a bottom plate (20a) is mounted on a spine (10a) of a cover (10) by means of a connecting pin (14) comprises restricting means (24) provided in each corner of the bottom plate (20a), the restricting means comprising a locking hole portion (24b) for locking a clamping portion (14c) of the connecting pin (14), a passing-through hole (24c) through which the clamping portion (14c) is allowed to pass, and a guiding opening (24a) for establishing a communication between the passing-through hole (24c) and the locking hole and allowing the movement of a shaft portion (14b) of the connecting pin (14) that connects an extended diameter head portion (14a) and the clamping portion (14c) thereof. A file comprising a cover (10) and a metal binder adapted to be mounted on a spine (10a) of the cover (10) in which the afore-mentioned restricting means (24) is provided in each corner of the bottom plate (20a) and in which a restriction opening (15) that allows the clamping portion (14c) of the connecting pin (14) to pass therethrough is formed in the spine (10a) at positions corresponding to the restricting means (24).

FIG.1

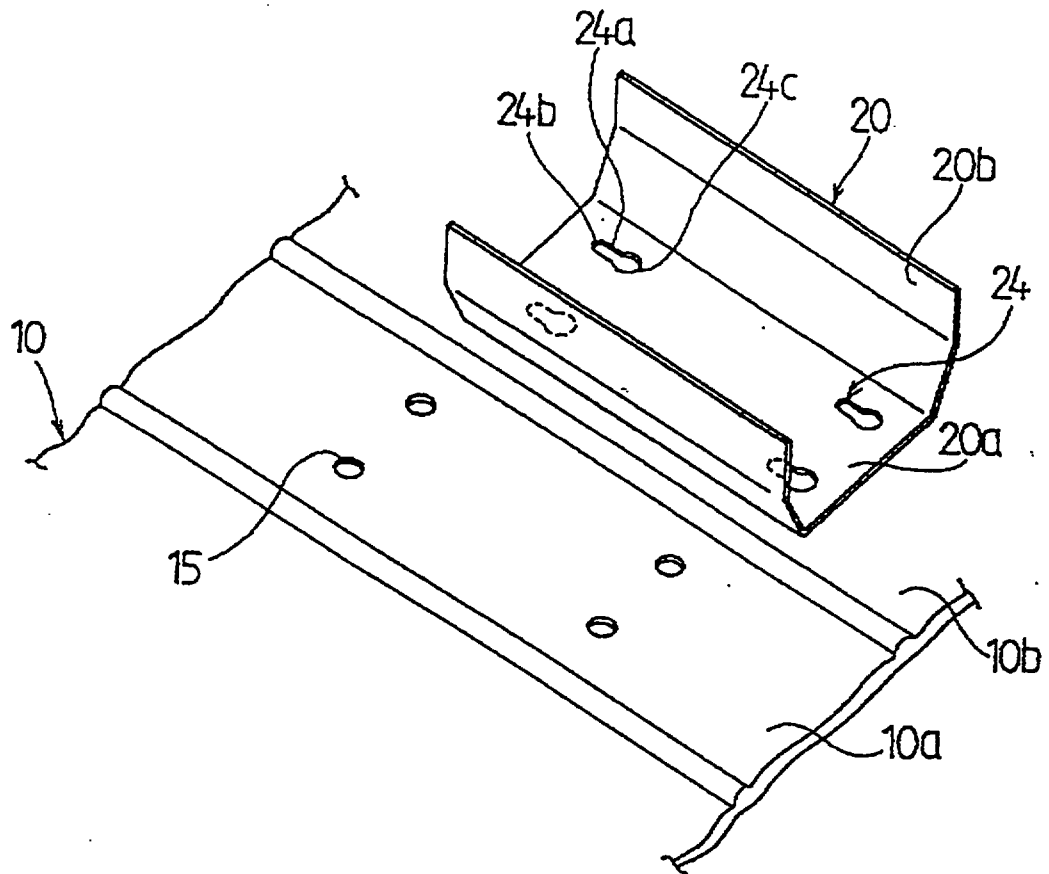


FIG.2

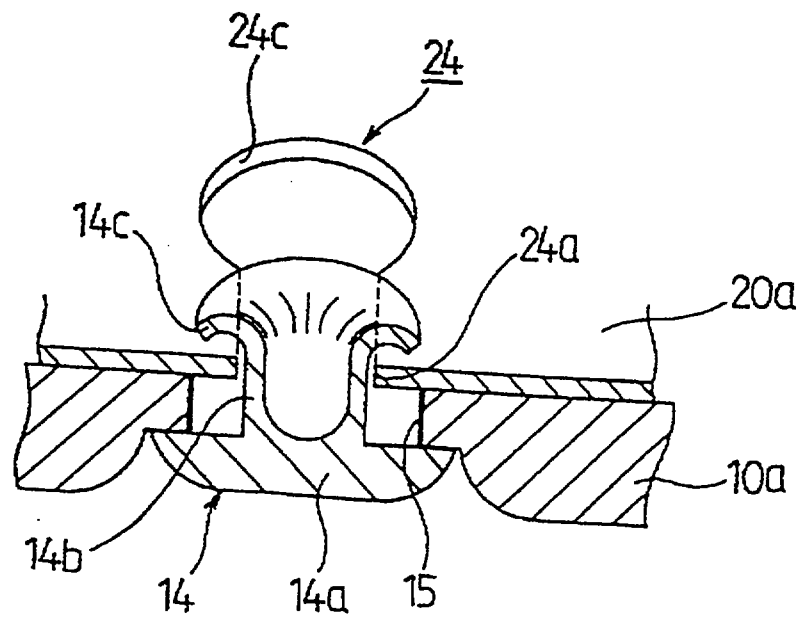


FIG. 3

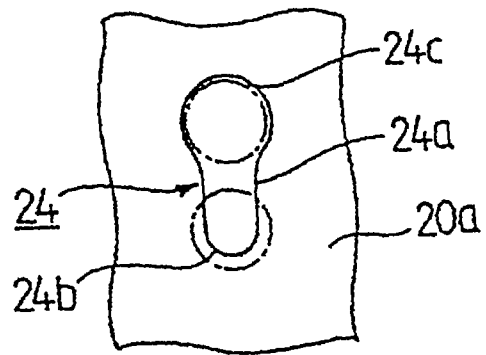


FIG. 4

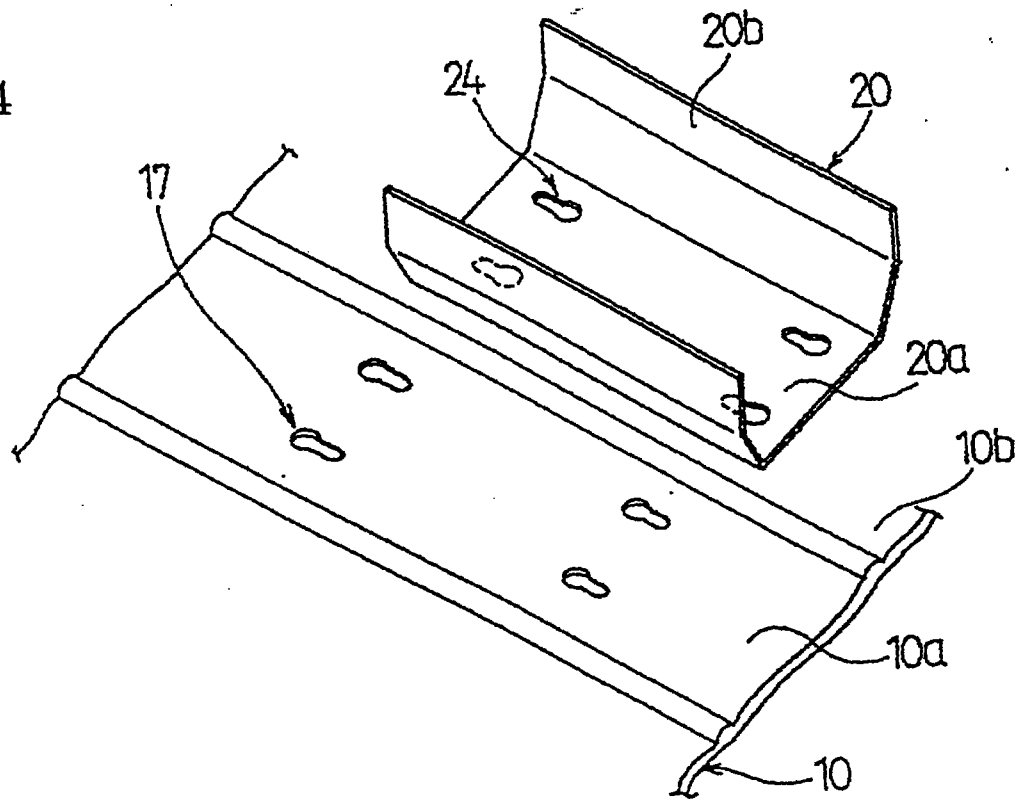


FIG.5

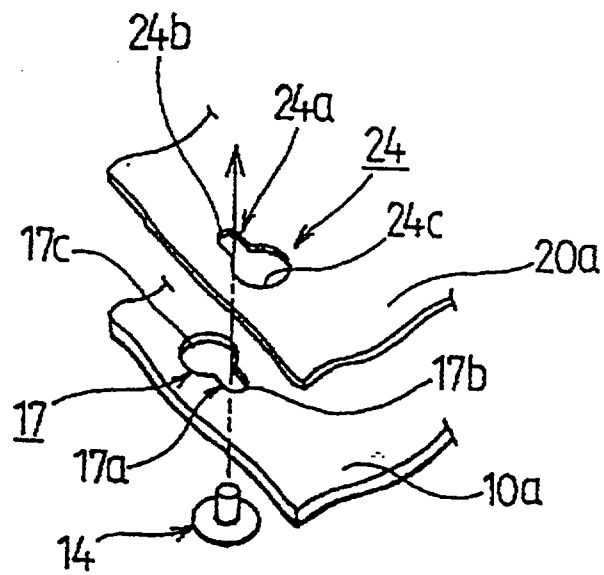


FIG.6

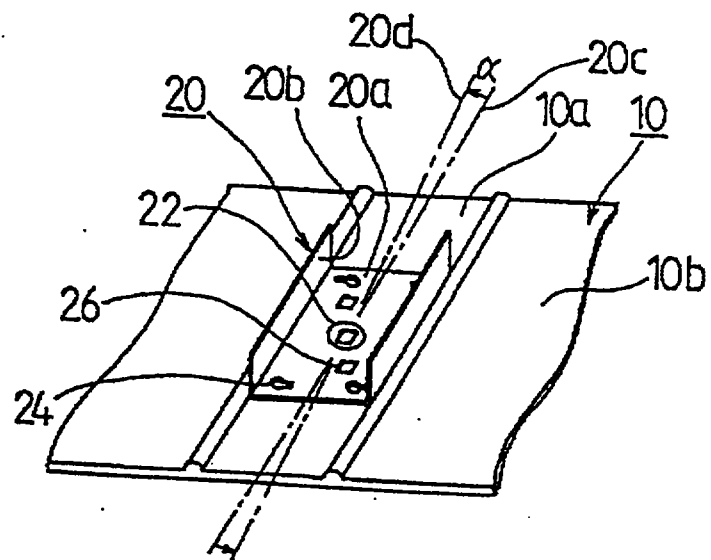


FIG.7

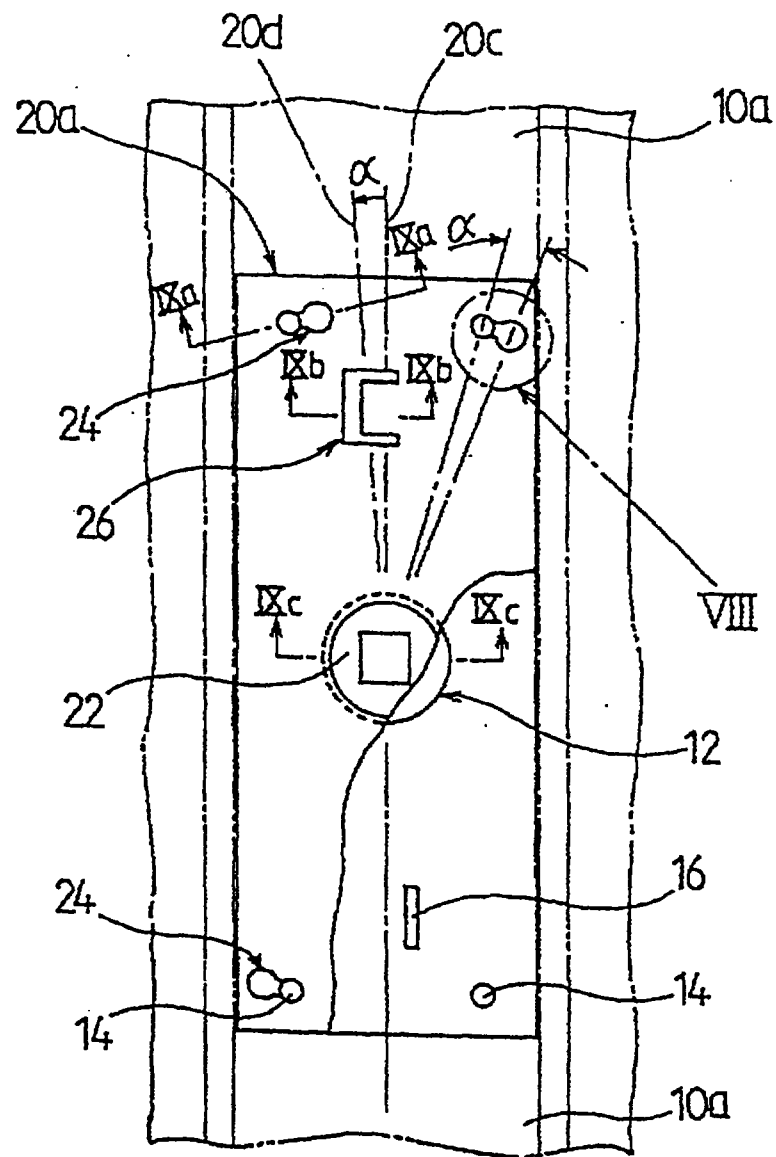


FIG.8

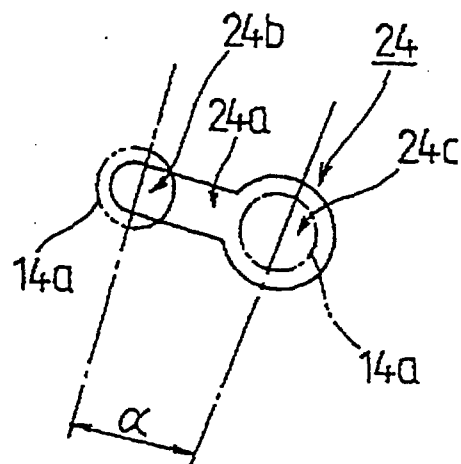


FIG. 9

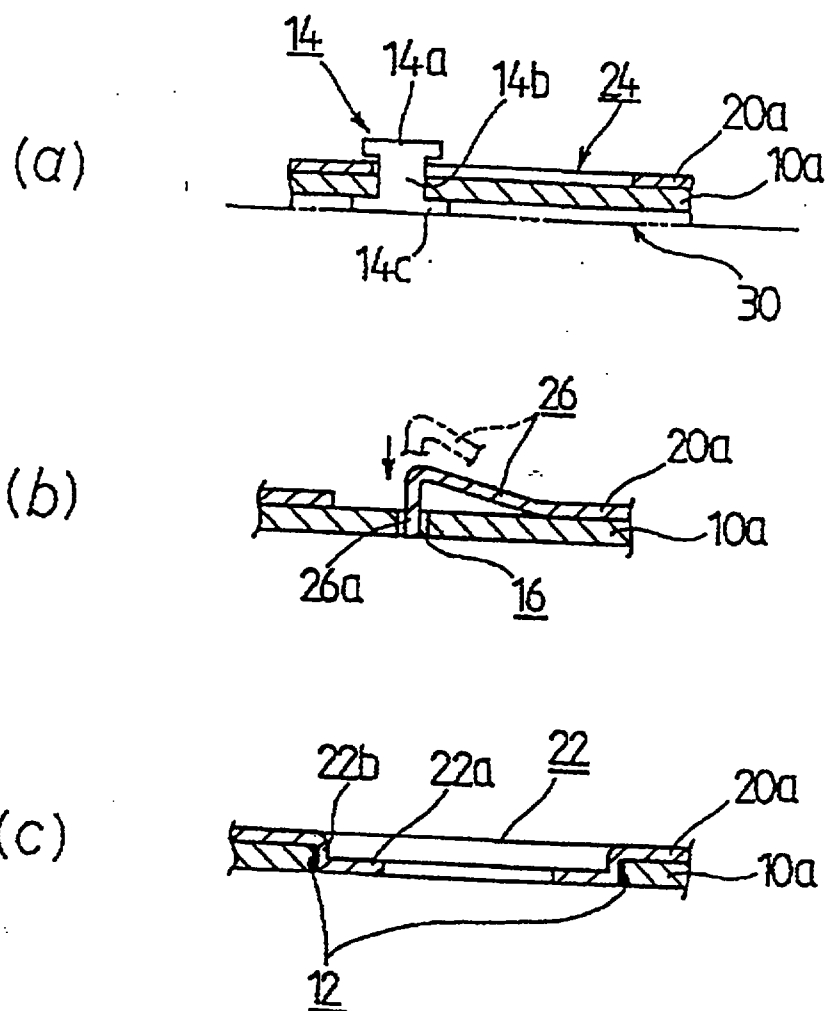
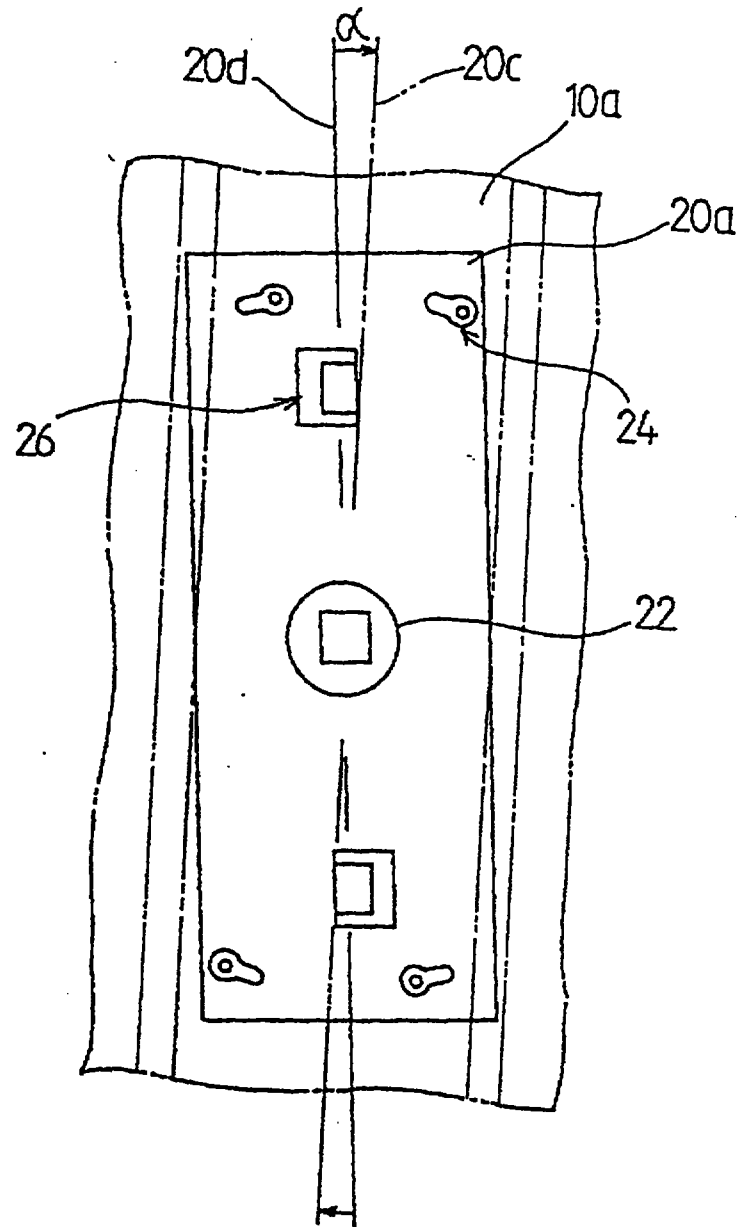


FIG.10





Claims of the Amendment

[Accepted by International Administrator on April 24, 1997 (24.02.97): The claims of 1 - 6 in the original application are amended; other claims are not amended. (P. 3)]

1. A detachable metal binder in which a bottom plate is mounted on a spine of a cover by means of a connection pin is characterized by comprising:

a restriction means provided in each corner of said bottom plate providing a locking hole portion for locking a clamping portion of said connection pin, a passing-through hole through which said clamping portion is allowed to pass, and a guide-opening for establishing a communication between said passing-through hole and said locking hole and allowing the movement of a shaft portion of said connection pin that connects an extended diameter head portion and said clamping portion thereof, and further a rotation means provided in said bottom plate and consisting of a cylindrical portion which projects into said cover from the center of said bottom plate.

2. A detachable metal binder in which a bottom plate is mounted on a spine of a cover by means of a connection pin is characterized by comprising:

a restriction means provided in each corner of said bottom plate providing a locking hole portion for locking a clamping portion of said connection pin, a passing-through hole through which said clamping portion is allowed to pass, and a guide-opening for establishing a communication between said passing-through hole and said locking hole and allowing the movement of a shaft portion of said connection pin that connects an extended diameter head portion and said clamping portion thereof, and further a rotation means provided in said bottom plate and consisting of a cylindrical portion which projects into said cover from the center of said bottom plate, and

a locking means consisting of an elastical locking piece and provided between said restriction means on one edge side of said bottom plate and said rotation means and/or between said restriction means on the opposite edge side of said bottom plate and said rotation means in order to enable said connection pin to lock said bottom plate in a locking position of said locking hole portion.

3. A file with a detachable metal binder consisting of a cover and a metal binder attached in a spine of said cover, which is characterized by comprising:

a connection pin including a shaft portion, an extended diameter head portion formed in one edge of said shaft portion, and a clamping portion provided



in the opposite edge of said shaft portion,

said metal binder comprising a restriction means provided in each corner of the bottom plate and consisting of a locking hole portion for locking a clamping portion of said connection pin, a passing-through hole through which said clamping portion is allowed to pass, and a guide-opening for establishing a communication between said passing-through hole and said locking hole portion and allowing the movement of a shaft portion of said connection pin, and a rotation means provided in a center of said bottom plate for attaching said metal binder to a spine rotatably, and

said spine comprising a restriction opening which allows a clamping portion of said connection pin to pass therethrough and is formed at positions corresponding to said restriction means.

4. A file with a detachable metal binder consisting of a cover and a metal binder attached in a spine of said cover, which is characterized by comprising:

a connection pin providing a shaft portion, an extended diameter head portion formed in one edge of said shaft portion, and a clamping portion provided in connection pin of shaft portion,

said metal binder comprising a restriction means provided in each corner of the bottom plate of said metal binder and consisting of a locking hole portion for locking a clamping portion of said connection pin, a passing-through hole through which said clamping portion is allowed to pass, and a guide-opening for establishing a communication between said passing-through hole and said locking hole portion and allowing the movement of a shaft portion of said connection pin, and

said spine comprising a restriction opening being formed in substantially the same shape as said restriction means and provided at positions corresponding to said restriction means in the opposite direction to enable said connection pin to be attached and detached to said spine.

5. A file with a detachable metal binder consisting of a cover and a metal binder attached in a spine of said cover, which is characterized by comprising:

a connection pin including a shaft portion, an extended diameter head portion formed in one edge of said shaft portion, and a clamping portion provided in the opposite edge of said shaft portion,

said metal binder comprising a rotation means provided in a center of the bottom plate of said metal binder to rotatably attach said metal binder to said spine, a restriction means provided in each corner of said bottom plate, and



consisting of a locking hole portion for locking a clamping portion of said connection pin, a passing-through hole through which said clamping portion is allowed to pass, and a guide-opening for establishing a communication between said passing-through hole and said locking hole portion and allowing the movement of a shaft portion of said connection pin, and a locking portion provided in said bottom plate for locking said bottom plate in said position when said bottom plate is arranged at a position in which a clamping portion of said connection pin is locked in said locking hole portion, and

said spine comprising a passing-through opening provided in said spine at positions corresponding to said locking hole portion of said bottom plate when said bottom plate is arranged in said position, and a locking hole provided at positions corresponding to said locking portion for locking said bottom plate in said position by cooperating with said locking portion when said bottom plate is arranged in a position in which a clamping portion of said connection pin is locked in said locking hole portion, and a circular opening for accommodating said rotation means rotatably and provided in said spine at positions corresponding to said rotation means, and

said guide-opening allowing a relative movement of said connection pin and said bottom plate so that said passing-through hole is able to accommodate said connection pin when said bottom plate is rotated by a certain angle from said locking position.

6. The file with the detachable metal binder as claimed in Claim 5, wherein said rotation means, said restriction means, and said locking means may possibly be formed respectively by an extruding process, an punching process, and an bending process for the bottom plate of the metal binder.