No. 619,323. Patented Feb. 14, 1899.

F. MACEY.

FILE CASE FOR CARDS.

(Application filed Apr. 13, 1898.)

(No Model.)

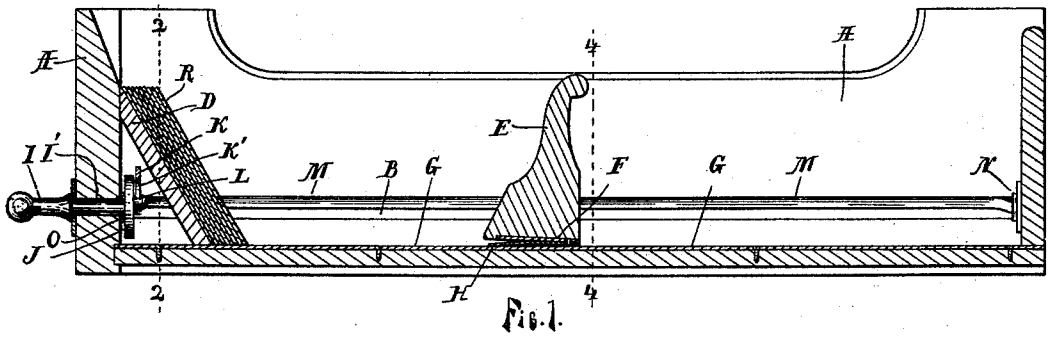


Fig. 1.

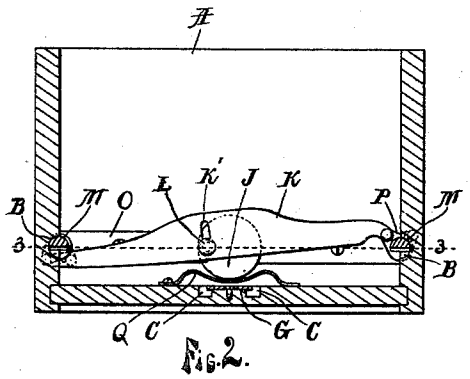


Fig. 2.

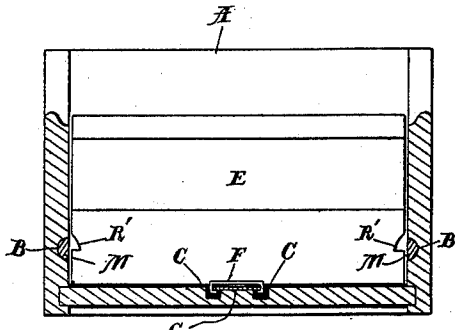
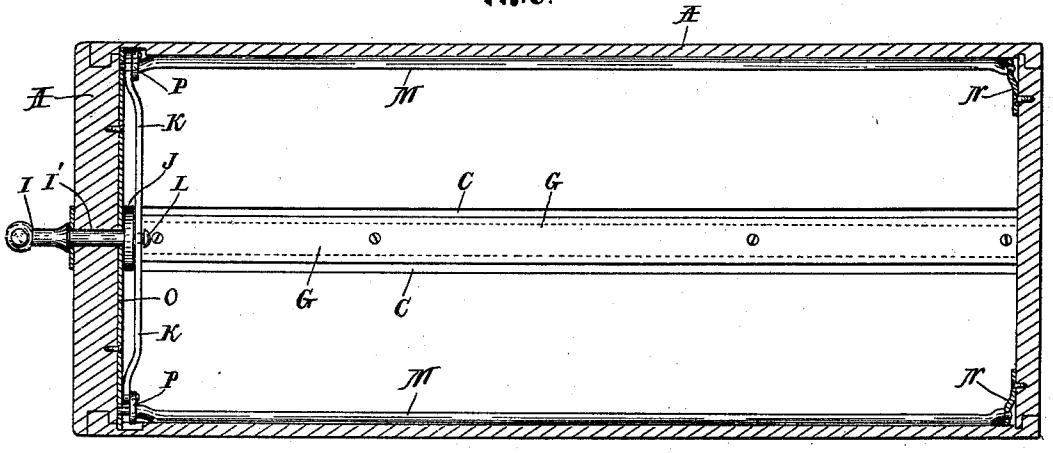


Fig. 4.

Fig. 3.



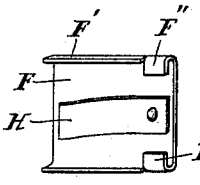


Fig. 7.

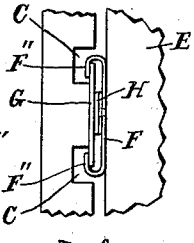


Fig. 6.

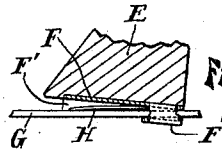


Fig. 5.

WITNESSES:

Joseph Irwin

Ella R. Hood

INVENTOR:

Frank Macey

By Moulton & Flanders

Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK MACEY, OF GRAND RAPIDS, MICHIGAN.

FILE-CASE FOR CARDS.

SPECIFICATION forming part of Letters Patent No. 619,323, dated February 14, 1899.

Application filed April 13, 1898. Serial No. 677,455. (No model.)

To all whom it may concern:

Be it known that I, FRANK MACEY, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in File-Cases for Cards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in file-cases for cards; and its object is to provide the same with certain new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of a device embodying my invention; Fig. 2, a transverse vertical section of the same on the line 2 2 of Fig. 1; Fig. 3, a horizontal section on the line 3 3 of Fig. 2; Fig. 4, a transverse vertical section on the line 4 4 of Fig. 1; Fig. 5, a detail of a portion of the follower and holding device; Fig. 6, a detail showing a rear view of the follower-holding mechanism, and Fig. 7 a detail of the clip and spring in perspective.

Like letters refer to like parts in all of the figures.

A represents any suitable drawer, case, or box having semicircular grooves B in its sides and parallel with its bottom and rectangular grooves C in its bottom, near the middle thereof. An inclined rest D extends across said case, near the front thereof, and an oppositely-inclined movable follower E is adjustable toward and from said rest within the case and is held in place when adjusted by means of a metal clip F, secured to the bottom of the follower and engaging the metal strip G, which is secured to the bottom of the case between the grooves C and projects laterally over the same a short distance. The clip F consists of a plate having its edges F′ folded downward to engage the edges of the strip G and a portion F″ of the downwardly-turned edges at the rear of said plate turned inward to embrace said strip and engage the under side of the same. Secured to the under side of the clip F is a flat spring H, adapted to engage and slide upon the upper surface of the strip G near the front of the follower.

A T-handle I, secured to the front of the case A, is provided with a stem I′, which extends through said front and has a disk J on its inner end, to which disk is attached the connecting-rod K by means of the crank-pin L, extending through the vertical slot K′ in said rod. Half-round rods M lie within the semicircular grooves B and are pivoted in the brackets N at one end and in the plate O, which extends across the front of the case at the opposite end. Crank-arms P are secured to the forward ends of the rods M and pivoted to the respective ends of the rod K, one of said arms normally extending upward at an angle of about forty-five degrees with the horizon, and the opposite arm extending downward in an opposite direction at the same angle. Thus when the rod K is shifted longitudinally the rods M will be rotated in opposite directions a quarter of a revolution and lie wholly within the grooves B, with their flat sides in the planes of the inner surfaces of the sides of the case, as shown in Fig. 4, or be turned with their flat faces downward or horizontal, one-half projecting into the drawer, as in Fig. 2. The rod K is shifted longitudinally to operate the rods M by turning the T-handle a quarter of a revolution, the crank-pin L moving upward in the slot K′ as the disk J is rotated until it reaches the upper end of said slot and the end of the rod K engages the rod M and forms a stop. When said disk is turned in the opposite direction to lock the cards, it is stopped when it reaches the bottom of the slot K′. The pivots of the rods M, the pivot of the disk J, and the bottom of said slot being in the same plane prevent further turning, and said rods cannot be turned except by the opposite motion of the disk and crank-pin. The direction of the T-handle indicates the position of the rods M, the cards being engaged by said rods when the T is in a horizontal position and disengaged therefrom when the same is in a vertical position. A friction-spring Q engages the under side of the disk J to retard the motion of the parts and prevent rattling.

R represents the series of cards to be filed,

having notches R′ in their sides adapted to be engaged by the rods M when said rods are turned so that one-half projects into the case and with their flat sides downward and that part of their convex sides which is still within the groove lying next the upper half of the same, the notches being formed with their lower sides horizontal to engage said flat sides and prevent the removal of the cards from the case. The lines of the axes of the pivots of the rods M lie in the center of their flat sides and in the plane of the inner surface of the case sides, so that when the rods are turned with their flat faces perpendicular they fill the grooves B, their convex sides lying next the concave of the groove and their flat sides in the plane of the inner surfaces of the sides of the case, and a smooth inner surface is presented to the edge of the cards, and said cards may be removed and replaced without hindrance. The follower is moved along the strip G as desired by pressing downward on the front of the follower or tipping it forward, thus compressing the spring H, which holds the forward side raised, and releases the clip from the strip G, which has been prevented from sliding thereon by the engagement of the forward angle of the portion F″ with the under side of the strip G and the engagement of the rear angle of the clip with the upper side of the same. In this construction it is not necessary to cut away large portions of the cards to allow the retaining-rods to pass through, as is commonly done, it being necessary to cut only small notches in the ends, and by placing the retaining-rods in grooves in the side walls of the case I eliminate all obstruction to the removal of the cards when unlocked, the engagement of the convex sides of the rods with said grooves also serving to support and strengthen the rods at all times and prevent their being bent or getting out of place.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent, is—

1. In a case having longitudinal grooves in its sides, a series of cards in said case, rods pivoted in said case and adapted to be rotated to project from said grooves to engage said cards, and to lie within said grooves when said cards are released, substantially as described.

2. In a case having longitudinal grooves in its sides, and a series of cards in said case, half-round rods pivoted to turn in said grooves and lying with their flat sides in the plane of the inner surfaces of the sides of the case when turned out of engagement with said cards, and with said sides in a horizontal position when in engagement with the cards, substantially as described.

3. In a case having longitudinal half-round grooves in its sides, half-round rods pivoted to rotate in said grooves, the lines of the axes of the pivots of said rods being in the centers of the flat sides of the rods and in the planes of the inner surfaces of the sides of the case, substantially as described, whereby the convex sides of the rods move close to the concave surface of the grooves and the rods are held from springing out of line thereby, substantially as described.

4. In combination with a case and a series of cards within the same, rods pivoted to the end walls of said case and extending along the side walls and adapted to engage and retain the cards, a crank-arm secured to one of said rods and extending upward, a crank-arm secured to the opposite rod and extending downward, a rod pivotally connecting said cranks, and means for moving said rod longitudinally, substantially as described.

5. The combination of a case, a series of cards having notches in their ends, rods pivoted to the case and adapted to engage said notches, a crank-arm on one of said rods extending upward, and a crank-arm on the opposite rod extending downward, a rod pivotally connecting the outer ends of said cranks, a handle on the front of the case and having a stem passing through the same, a disk on the inner end of said stem, and a crank-pin engaging a slot in said rod, substantially as described.

6. In combination with a case, and a series of cards in the same, an inclined adjustable follower in said case, a longitudinal strip secured to the middle of the bottom of the case, a clip secured to said follower to engage said strip, and a spring secured to said follower to raise the forward side of the same, whereby the angles of the clip engage the longitudinal strip and prevent the movement of the follower, substantially as described.

7. In combination with a case having grooves in its bottom near the middle, a longitudinal strip secured to said case-bottom, between said grooves and projecting over the same, an inclined follower in said case, a clip secured to the bottom of said follower and having downwardly-turned flanges to engage the edge of said strip, and downwardly and inwardly turned portions near the rear thereof to embrace said strip, and a spring secured to said clip to raise the front of said follower and engage the forward angle of the inwardly-turned portion with the bottom of said strip, and the rear edge of the clip with the top of the same, substantially as described.

8. The combination of a case having half-round grooves in its sides and rectangular grooves in its bottom, a series of cards having notches in their ends, half-round rods in the grooves in the sides of the case, an upwardly-extending crank-arm on the forward end of one of said rods, and a downwardly-extending crank-arm on the opposite rod, a rod having a vertical slot near its middle pivoted to the ends of said crank-arms, a handle extending through the front of the case, a disk on the inner end of said handle, a crank-pin on said disk engaging the slot in said rod, a friction-spring engaging said disk, a longi-

tudinal strip secured to the case-bottom between the rectangular grooves, an inclined follower having notches in its ends, a clip secured to the bottom of said follower and engaging said strip, and a spring to raise the forward end of the follower, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK MACEY.

Witnesses:
L. E. FLANDERS,
JOSEPH KIRWIN.