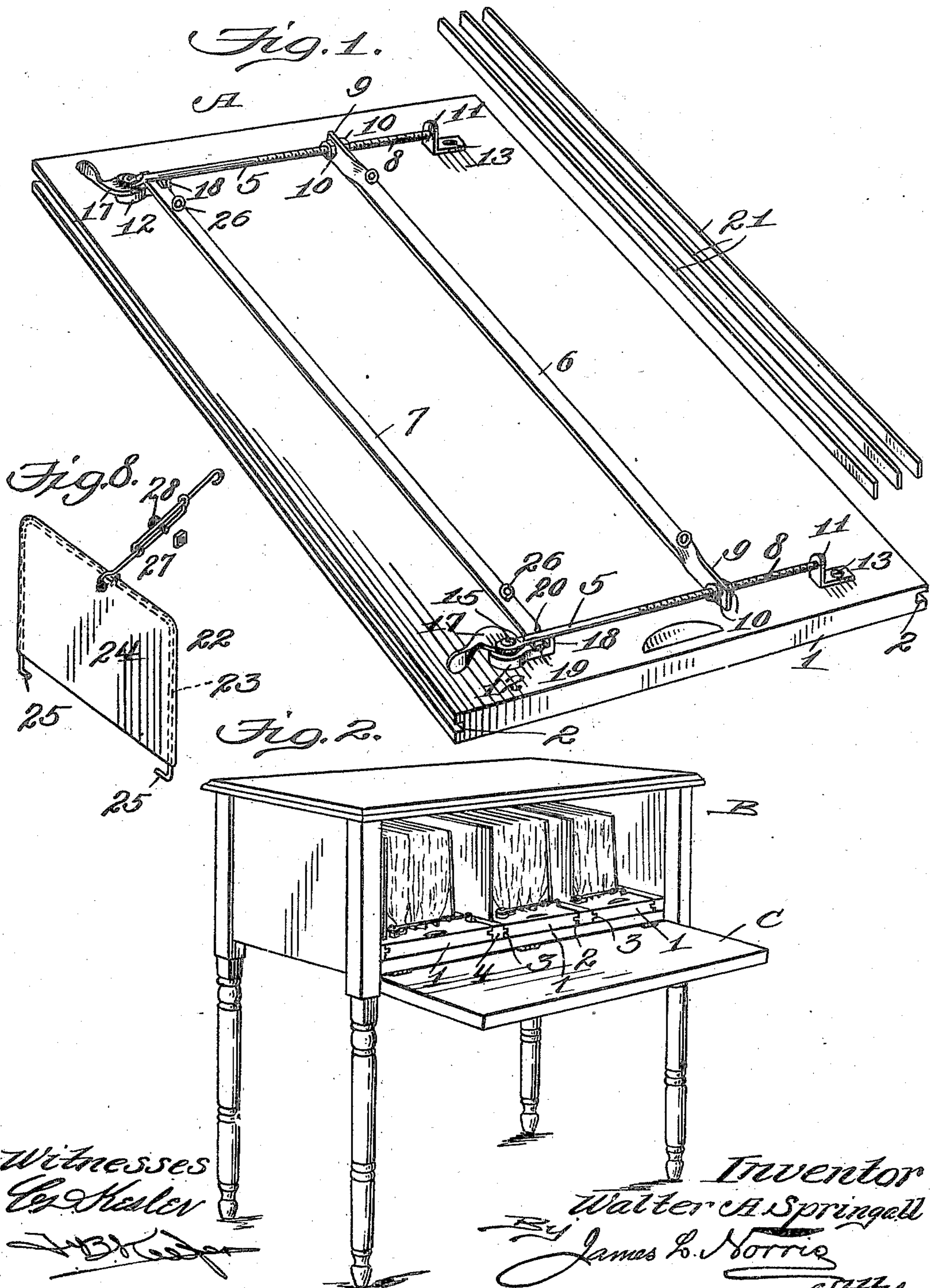


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PAPER FILE AND BINDER.
APPLICATION FILED MAR. 20, 1909.

947,654.

Patented Jan. 25, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

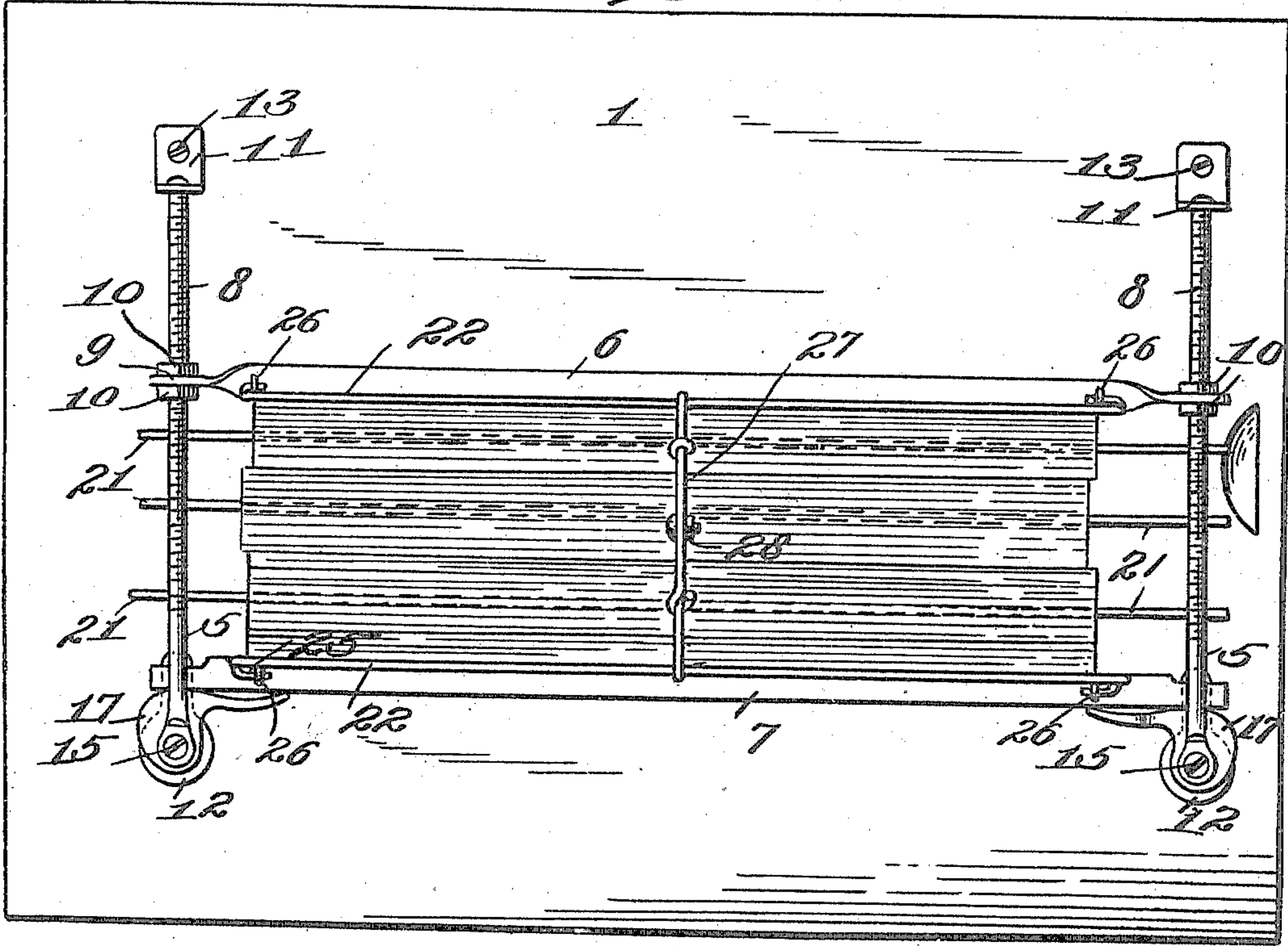


Fig. 4.

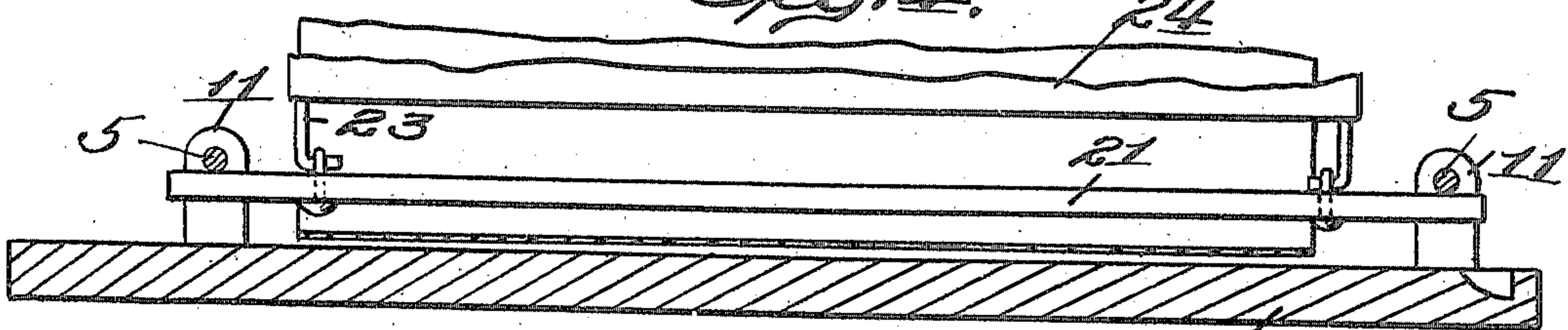


Fig. 5.

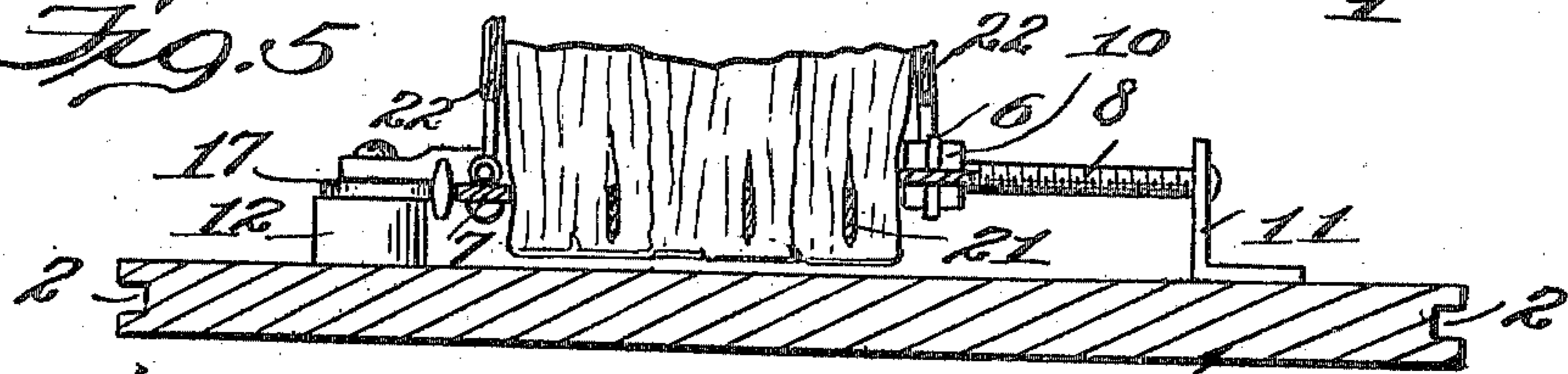
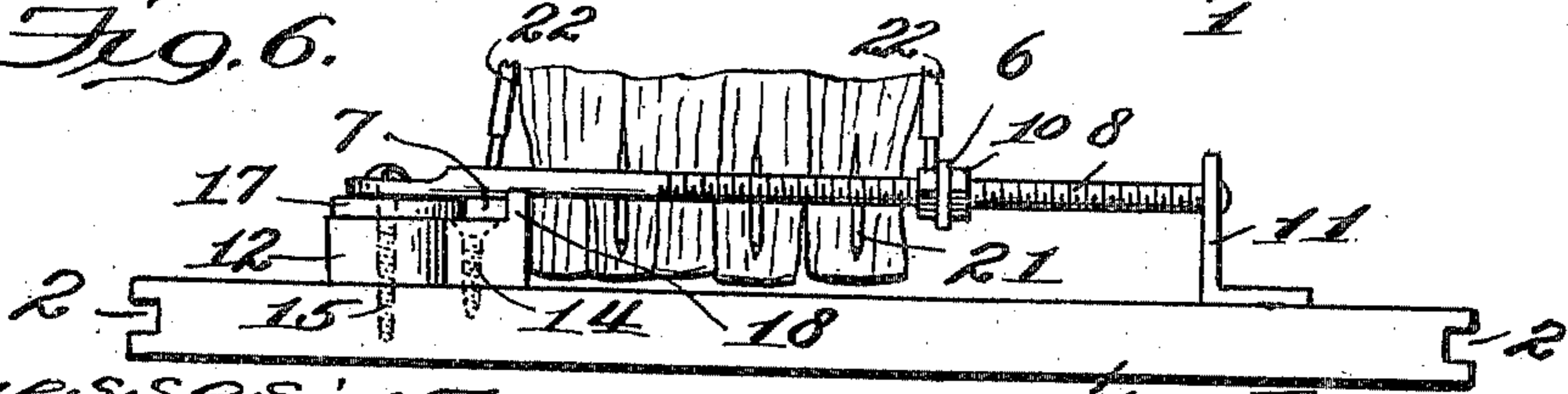


Fig. 6.



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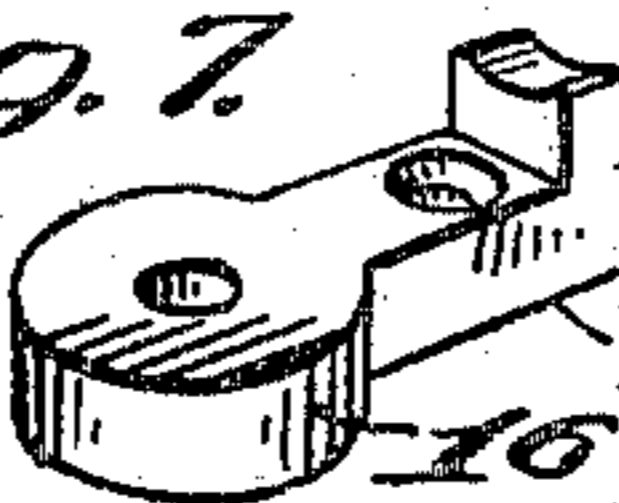


Fig. 7.

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UNITED STATES PATENT OFFICE.

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PAPER FILE AND BINDER.

947,654.

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To all whom it may concern:

Be it known that I, WALTER A. SPRINGALL, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented new and useful Improvements in Paper Files and Binders, of which the following is a specification.

This invention relates to new and useful improvements in paper files and binders and has more particular reference to a device especially constructed for holding papers in book or pamphlet form, such as catalogues, indexes and the like.

The ultimate purpose of the invention is to provide a paper file and binder in which the papers are unattached and at the same time are firmly and strongly held, and in which by manipulation of certain parts any desired book or paper may be readily removed and a new one substituted without affecting the other books or papers which are held in the device.

The invention aims as a primary object to provide a device constructed for the purpose stated in which a novel construction and relation of clamping elements is employed, comprising more particularly two parallel bars, the one being a stationary bar and the other being a relatively movable lateral feature of the invention the stationary bar by locking clamping devices. As a collateral feature of the invention the stationary bar is adjustable transversely of the binder base in order that the capacity of the binder may be varied.

The invention, while efficiently carrying out the purpose stated, attains the incidents of structural simplicity, inexpensiveness, strength and practicability.

In the accompanying drawings a preferred and advantageous embodiment of the invention is illustrated, the structural details of which are set forth at length in the following description, while in the claims appended at the end of the description the novel features by which the invention is distinguished from the prior art are recited in language of the proper determinative scope.

In the said drawings: Figure 1 is a perspective view showing a binder constructed in accordance with the present invention and showing also in detached relation certain retaining bars, the use of which is optional. The side covers are removed in this figure in order that the parts may be clearly shown. Fig. 2 is a perspective view showing a num-

ber of the binders assembled in a filing cabinet. Fig. 3 is a top plan view of the binder showing the relation of the aforesaid retaining bars. Fig. 4 is a longitudinal sectional view thereof. Fig. 5 is a central transverse sectional view thereof. Fig. 6 is an end elevation thereof. Fig. 7 is a detail perspective view of a stop for the movable clamping bar, two of such stops being employed, and Fig. 8 is a detail perspective view of a hinged side cover for the binder, the other cover being similarly constructed.

Similar characters of reference refer to corresponding views throughout the several views.

The paper file and binder which forms the subject matter of the present invention is designated generally by the letter A and for convenience a number of such binders may be filed away in a suitable cabinet, as B, as shown more particularly in Fig. 2. This cabinet has a hinged front wall, as C, which, when dropped, extends horizontally and provides a shelf upon which the binders may rest when in use. The cabinet B may thus be converted into a sort of a desk. The details of the binding device are mounted upon a base, as 1, which is in turn mounted to slide into and out of the cabinet B and accordingly has its side faces constructed with longitudinal grooves, as 2, which receive guide ribs, as 3, the latter being provided on stationary cleats, as 4, between which the bases 1 slide. This arrangement is recited simply to show the readiness with which the binders and the papers held thereby can be disposed systematically in a filing cabinet of suitable form. Obviously when it is desired to use the binder, the base 1 is withdrawn from the cabinet and placed upon the shelf C.

The binder structure proper includes a pair of transversely arranged end bars, as 5, and a pair of clamping bars, one of which, as 6, is relatively stationary and the other of which, as 7, is transversely movable toward and away from the bar 6. The latter is in turn connected to the bars 5 for transverse adjustment in any suitable manner, an advantageous connecting and adjusting means being shown in the drawings. The bars 5 have corresponding portions thereof threaded, as at 8, and the bar 6 has its major portion disposed in a horizontal plane but has its end portions turned into a perpendicular plane, as at 9, and formed with an open-

ing which loosely surrounds the threaded portions 8. The bar 6 may be thus set at any desired position between the ends of the threaded portions 8 and for the purpose of holding said bar at the positions to which it may be moved, locking nuts, as 10, are employed, the latter having threaded engagement on the portions 8 and bearing against each side of the ends 9 on the bar 6. Each bar 5 is stationary and has one end fixed or otherwise secured to an angular bracket, as 11, and its other end secured to a block, as 12. The brackets 11 and blocks 12 are arranged on corresponding sides of the base 1, the former being attached to said base by screws, as 13, and each of the latter by two screws, as 14 and 15. The screws 14 pass through the shanks of the blocks and the screws 15 pass through enlargements, as 16, at the outer ends thereof, the enlargements 16 affording an efficient seat for cam shaped clamping levers as 17, which are held pivotally upon said blocks by means of the screws 15, the latter serving also to fix the other ends of the bars 5. The blocks 12 are formed at their inner ends with upturned lugs, as 18, which constitute stops to limit the inward movement of the movable bar 7. The latter has reduced extended end portions, as 19, which rest upon the shanks of the blocks 12 and which engage the lugs 18 as stops. The extensions 19 also afford shoulders, as 20, at the ends of the bar 7 which also engage the lugs 18 and hold said bar against lengthwise displacement when the device is in use.

In certain cases where it is desired to keep periodicals permanently in a binder or for any material length of time, it may be of advantage to use retaining bars, as 21. The bars 21 are of substantially the same length as the bars 6 and 7 and are fitted between the leaves of the books or periodicals to be held and their end portions project under the bars 5, as shown more particularly in Figs. 3, 5 and 6. These bars are unattached, being simply placed loosely in the books or periodicals with their end portions engaged loosely under the bars 5, and the use of the bars 21 is, as before stated, purely optional.

The bars 6 and 7 are preferably constructed of flat metallic strips which are arranged in horizontal planes. In this manner the binding pressure is placed upon the narrow edges of said bars and exerts its force in the direction of their greater thickness. The bars, therefore, will not bend or give. The bars 21, however, when they are used, are arranged in vertical planes and the binding pressure exerts its force in the direction of their lesser thickness and consequently the bars 21 will give or yield and the books may be held as tightly as desired, the bars 21 not in any way interfering with the clamping action of the bars 6 and 7.

The manner of use will be readily apparent from the foregoing description. The bar 6 is set at any desired position upon the bars 5 in accordance with the determined filing capacity and the pamphlets or other books are placed in the positions shown in Fig. 5, with their backs resting upon the base 1. Certain of said pamphlets may be held by the retaining bars 21 while the others may be placed loosely in the position stated. The levers 17 are then turned inwardly, thereby forcing the bar 7 toward the bar 6 and causing the bars to exert a strong clamping pressure upon the books. This arrangement will be best understood by reference to Fig. 5. The handle portions of the levers 17 lie against the bar 7 when said levers are in their operative positions, as shown in Fig. 3. The working cam portions of said levers are so shaped that when the handle portions thereof lie against the bars 7, the levers will be locked against accidental displacement, the major axis of the cam being co-incidental with the axis of the bars 5, so that the resistance or pressure which is placed upon the levers 17 exerts its force along the lines of dead center. When it is desired to remove any of the books or periodicals, the levers 17 are simply turned outwardly, that is, from the position of Fig. 3 to the position of Fig. 1. The bar 7 is then released and the pressure upon the books is withdrawn. The books may then be removed and others substituted. To move any of the books held by the retaining bars 21, the said bars are moved longitudinally until one of their end portions is free from the bar 5 under which it projects and the book thus held may be lifted from the device with a vertical tilting movement.

It is preferred to employ in connection with the binder two side covers, one of which is shown in detail in Fig. 8. The side covers are designated generally as 22, and each comprises a U shaped wire frame, as 23, and a sheet metal plate as 24, which has its edge portions bent about the frame 23. The depending legs of the latter have inturned portions, as 25, at their lower ends, the portions 25 being engaged as hinge or pivot pins in eyes 26 which are provided on the bars 6 and 7. The covers 22 are connected by a bar, as 27, which is formed of adjustably related and connected sections. The sections of the bar 27 are held at desired positions by the binding action of a bolt and nut fastening, as 28. For convenience, the bar 27 may be pivoted at one end to one of the covers 22 and its other end is formed as a hook for engagement in an opening in the other cover 22.

The device, as previously stated, is of special advantage in connection with books and periodicals, but it is obvious that it may also be advantageously employed in connec-

tion with loose leaves, or wherever it may be necessary or advantageous to bind a set of papers together in such manner that other papers may be added and certain of those held by the device may be removed, without disturbing the arrangement of the papers which it is desired to retain in the binder.

Having fully described my invention, I claim:

1. In a paper binding device, in combination, two parallel clamping bars, the one being relatively stationary and the other being movable toward and away from the stationary bar, cam lever means for operatively moving the second bar toward the stationary bar and means for effecting a transverse adjustment of the latter to desired positions.

2. In a paper binding device, in combination, two parallel clamping bars, one of which is relatively stationary and the other of which is movable between fixed limits toward and away from the stationary bar and means for effecting a transverse adjustment of the latter to desired positions.

3. In a paper binding device, in combination, two parallel clamping bars, the one being relatively stationary and the other being freely movable toward and away from the stationary bar, fixed stops for limiting the inward movement of the movable bar and means for transversely adjusting the stationary bar to vary the capacity of the filing device.

4. In a paper binding device, in combination, two parallel clamping bars, the one being relatively stationary and the other being freely movable toward and away from the stationary bar and having reduced extended end portions affording end shoulders and fixed stops to limit the inward movement of the movable bar and arranged to engage said end portions and also to engage said shoulders and hold the movable bar against lengthwise displacement.

5. In a paper binding device, in combination, two parallel clamping bars, the one

relatively stationary and the other freely movable toward and away from the stationary bar, blocks upon which the ends of the movable bar loosely rest, a cam lever pivoted to the outer end portion of each block and engaging the end portions of the movable bar, and a stop lug provided at the inner end of each block and absolutely limiting the inward movement of the movable bar.

6. In a paper binding device, in combination, two stationary parallel end bars, two longitudinally disposed parallel clamping bars, means upon the transverse bars for holding one of the clamping bars stationary at selected positions to which it may be transversely adjusted and means for causing transverse movement of the other clamping bar between fixed limits toward and away from the stationary bar.

7. In a paper binding device, in combination, two stationary parallel end bars, each having a portion thereof threaded, two longitudinally disposed parallel clamping bars, a pair of nuts upon the threaded portion of each transverse bar and arranged to engage the opposite sides of the end portions of one of the clamping bars and means for causing transverse movement between fixed limits of the other clamping bar.

8. In a paper binding device, in combination, a pair of transversely disposed end bars, a pair of longitudinally disposed clamping bars, one of the clamping bars being relatively stationary and the other clamping bar being transversely movable and having its end portions projecting under the end bars, and means for moving the transversely movable bar and for holding the same in clamping relation.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WALTER A. SPRINGALL.

Witnesses:

J. R. DAVIS,
C. J. THOMSON.