

Nov. 15, 1960

V. E. DEINLEIN
VISIBLE RECORD DEVICE

2,959,877

Filed April 27, 1956

3 Sheets-Sheet 1

FIG. 1.

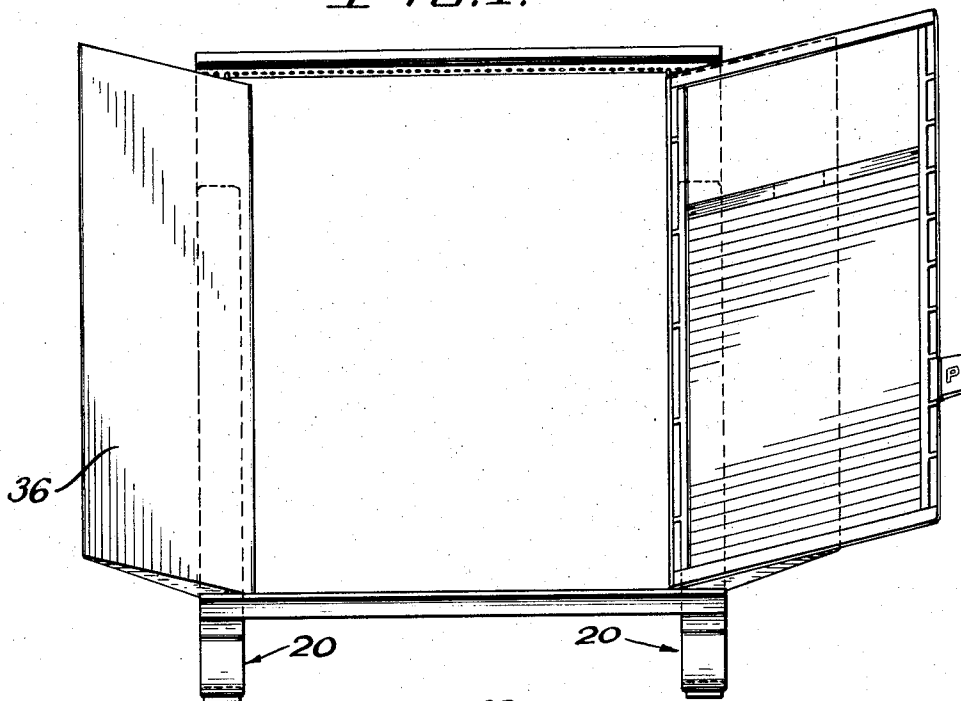


FIG. 2.

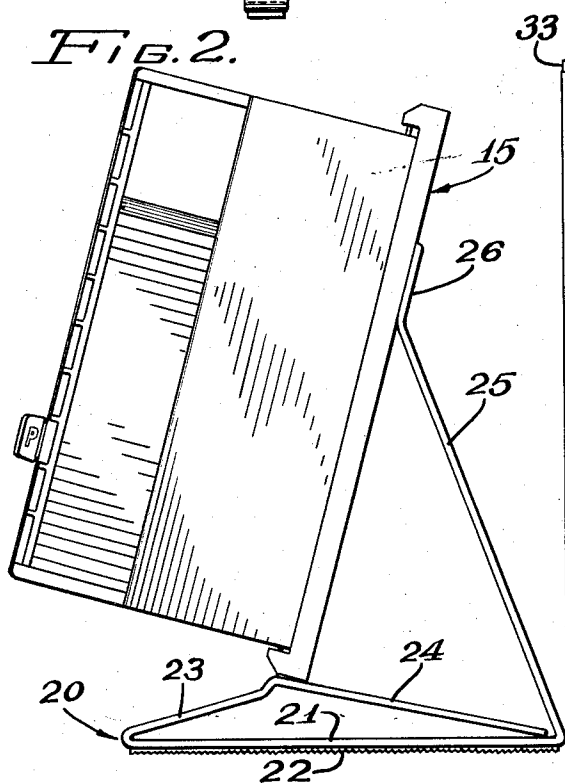
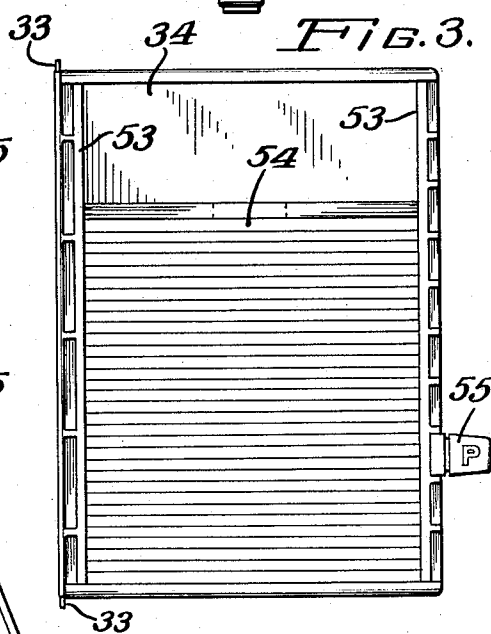


FIG. 3.



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FIG. 4.

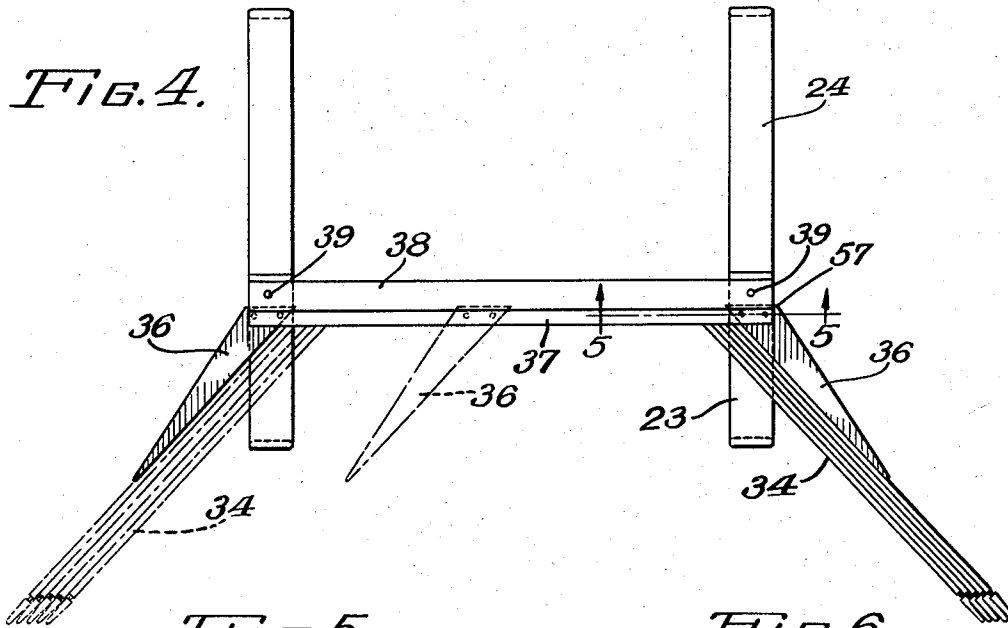


FIG. 5.

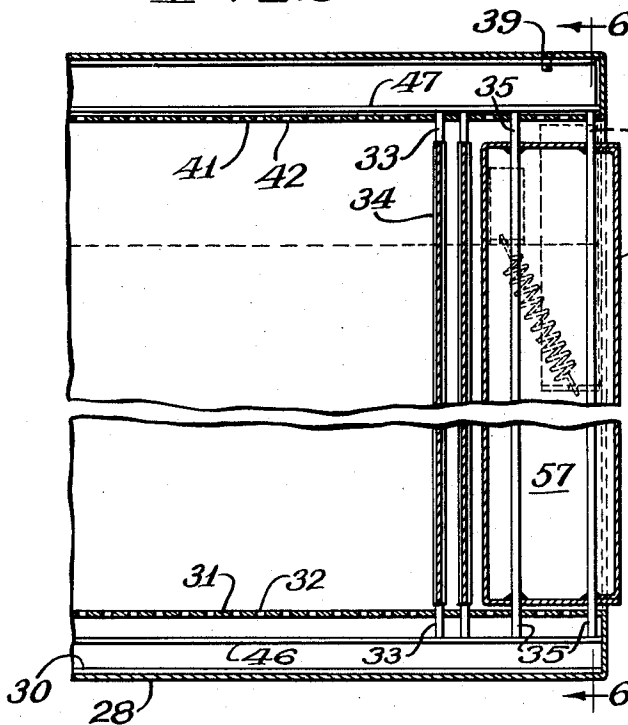
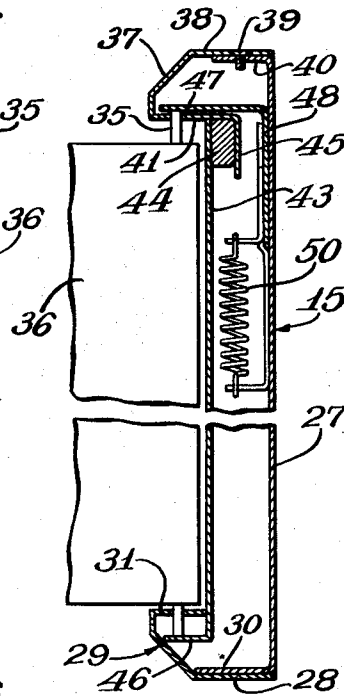


FIG. 6.



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FIG. 7.

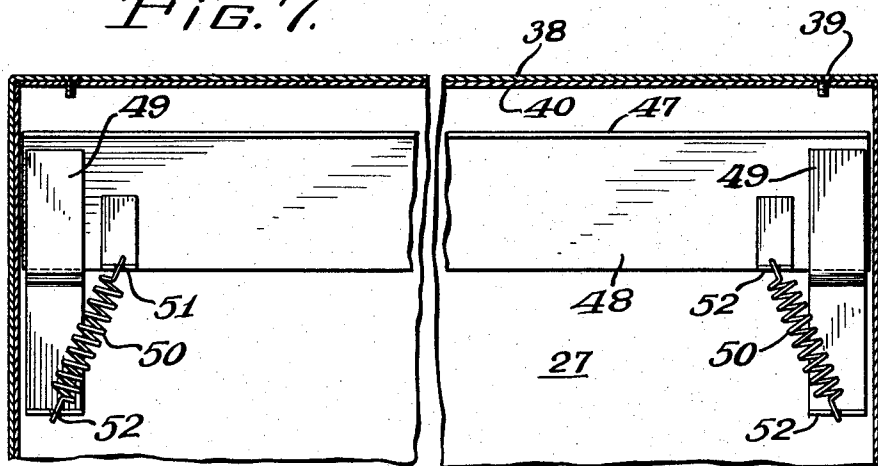


FIG. 8.

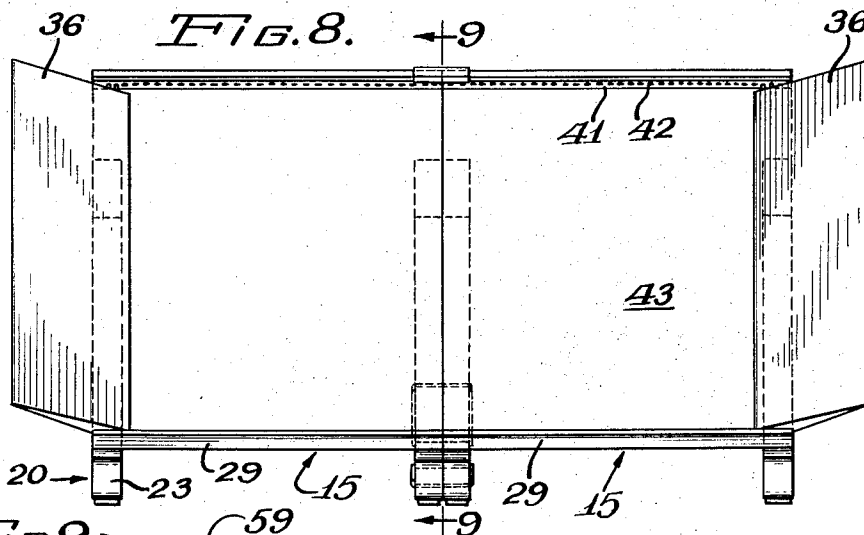


FIG. 9.

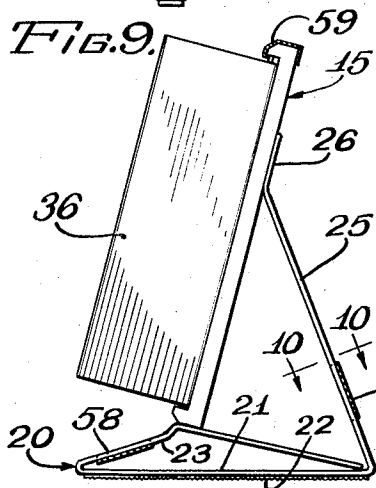


FIG. 10.



FIG. 12.

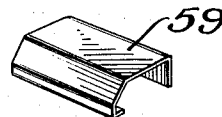
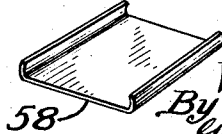


FIG. 11.



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VISIBLE RECORD DEVICE

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5 Claims. (Cl. 40—102)

This invention relates to improvements in visible record equipment of the class comprising a plurality of record panels swingably mounted on a supporting stand.

More specifically, the present invention relates to units comprising a supporting stand having a pair of spaced, horizontally extending, retaining members pivotally receiving therein the pintles of record panels or frames in a linear series in close, spaced juxtaposition, with the pivotal axes of the panels inclined to the vertical so that adjacent panels may be swingably separated in opposite directions and caused to rest in inclined open-book form with the aid of end stop members, in which position record strips, or other indicia, mounted on the respective panels may be viewed.

It is an object of the present invention to provide units of the foregoing class which may be aligned and secured together to form a unitary stand having a capacity a plurality of times greater than that of the stand components which may be of a standard minimum capacity.

It is a further object of the present invention to provide novel shiftable inclined end stops for units or composite stands of the foregoing class whereby a pair of opposed end stops may be spaced from or toward each other to accommodate the number of frames mounted in proximity on the stand and thus enhance their function of providing a uniform and proper angle of observation for the frame content, and to prevent breakage of index tabs on the frames when they are pivotally displaced.

It is a further object of the present invention to provide the end stops and the swingable panels with pintle means constructed and arranged for engagement with retaining means of the stands also constructed and arranged in a manner whereby the said stops and swingable panels may be mounted in inverted position with equal facility and utility, enabling the supplier to maintain an inventory supply of one-half the number of said components which might otherwise be required.

It is a further object to provide stands of the foregoing class of an open frame construction with the panel supports spaced above the base of the unit, whereby the unit occupies, for example, a minimum of supporting table space and provides a useful working area beneath the swingably mounted panels and thus in close proximity to them.

The foregoing and other objects and advantages of the present invention, the economies thereof, and its construction and arrangement of parts, will be apparent from a consideration of the following specification and accompanying drawings, wherein:

Fig. 1 is a front elevational view of a desk stand comprising the present invention, and

Fig. 2 is a side elevational view thereof.

Fig. 3 is a face view of one of the component swingable panels of the assembly of Fig. 1.

Fig. 4 is a plan view of the unit of Fig. 1 with components additionally shown dotted, illustrative of the use and adjustability of the assembly.

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Fig. 5 is a fragmentary sectional view on the line 5—5 of Fig. 4.

Fig. 6 is a section on the line 6—6 of Fig. 5.

Fig. 7 is a fragmentary longitudinal view of a portion of the supporting stand illustrating the spring-pressed pintle-retaining mean thereof.

Fig. 8 is a front elevational view of a pair of stands such as shown in Fig. 1 combined into a single unit, and

Fig. 9 is a side elevational view thereof.

Fig. 10 is a section on the line 10—10 of Fig. 9.

Figs. 11 and 12 are perspective views of clamps employed for joining the components as illustrated in Figs. 8 and 9.

Referring to the drawings, the reference numeral 15 generally designates a panel mount secured to and supported at an incline by a special pair of standards 20—20 each formed of metal strips bent to form the intermediate base portion 21 (to which may be attached the corrugated rubber friction strip 22), the return angularly bent portion 23 and downwardly bent terminal portion 24; and the upwardly angularly bent riser portions 25 and 26. The terminal portions 26 and 24 are inclined normal to each other and thus support between them at an incline to the vertical, the panel mount 15, the terminals 26 being secured, as by welding, to the panel back component 27 and the standard terminal portion 24 being secured to the flange 28 of the bottom molding component 29 which embraces and is welded to the flange 30 extending forwardly of the bottom edge of back component 27.

The bottom molding component 29 further includes the return-bent flange 31 formed with a linear series of equispaced apertures 32 adapted to pivotally receive therein one of the pintles 33 of a record panel 34 or a pair of pintles 35 on the edge of an inclined end stop 36. A similar upper molding component 37 comprises a rearwardly projecting flange portion 38 adapted to be secured as by screws 39 to the flange 40 on back plate 27. The component 37 has a second or return-bent flange 41, parallel to flange 31, and is likewise formed with a linear series of equispaced apertures 42 aligned with the apertures 32, and also adapted to receive the pintles 33 and 35.

Carried by and secured to the upper molding component 37 is a panel facing 43 secured to the spacing bar 44 carried by the depending leg 45. This facing panel at its lower edge is formed with a forwardly projecting flange 46 projecting parallel to and spaced from molding flange 31, and provides an abutment limiting the degree to which the pintles 33 and 35 can project through apertures 32, and in this case less than the free length of said pintles.

For securely positioning the record panels 34 and end stops 36 in the assembly, there is provided a spring-pressed plate 47 extending parallel to the apertured flange 41 and adapted to act against pintles 33 and 35 projecting thereto. This plate 47 is integral with and carried by the leg 48 adapted to reciprocate parallel to backing plate 27 within the slideways 49 carried by plate 27, and urged downwardly in the slideways by means of the tension springs 50, each secured at one end to the leg 48 as at 51 and at the other end to the slideway 49 as at 52, as appears in Fig. 7.

The record panels 34, previously referred to, are of generally conventional construction in that they comprise a body of metal which has along its lateral edges, and on both faces, channel forming flanges 53 secured to the body portion and extending longitudinally thereof, and adapted to receive between them flexible record or index strips 54. The flanges at one edge of the panel secure a rod terminating in the pintles 33 at the top and bottom

of panel 34 of equal length. The distance between the tip of one pintle 33 and the opposed panel edge is substantially equal to the distance between fixed apertured flanges 31 and 41, and thus by projecting one pintle 33 within an aperture 42 in flange 41, against the action of spring-pressed plate 47, to the limit of the adjacent edge of panel 34, the lower pintle 33 may be projected through an aperture 32 in flange 31 to the limit of the imperforate abutment member 46.

In the absence of abutment member 46, the panel 34 would drop to the limit of its lower edge and would necessitate the use of an upper pintle of greater length than the lower pintle to hold the panel 34 in pivotal engagement. In the present case, with the pintles of equal length, the stop 46 prevents such disengagement of the upper pintle. The advantage of the indicated arrangement, and of having pintles 33 of equal length, is that the panel 34 is invertible. That is to say, a panel 34 may be engaged in the upright position shown in Fig. 3, or it may with equal facility be engaged in inverted position, the only change necessary being the insertion of a proper index letter in the tab 55 secured to the outer longitudinal edge of panel 34. This is of important economical advantage, as it will be observed from the illustration of Fig. 3 that the outer longitudinal edge is divided into an even number of spaces to which index tabs may be secured, as by welding, the illustration showing ten positions. Ordinarily, a manufacturer or distributor would have to supply or stock such panels 34 in sets of ten, one for each index tab position. However, by using the present arrangement wherein the panels are fully invertible it will be apparent that in this instance they need be only in sets of five.

Reference has heretofore been made to inclined end stops 36 which are in general provided for stands of the class described in fixed position. In accordance with the present invention, these end stops may be relocated as desired to the best advantage. For this purpose each end stop 36 which may be either of solid or of hollow sheet metal construction, as indicated by the section of Fig. 5, comprises a unit of wedge or obtuse triangle shaped transverse section carrying a pair of rods disposed adjacent and aligned parallel to the base 57 of said section, said rods each projecting from the top and bottom of the panel. These pintles 35, of which there may be more than two, are spaced so that they will enter an equal plurality of apertures in the parallel flanges 31 and 41 and hold these stops against rotation and at an obtuse angle to the face 43 of the easel-like mount 15.

The ability to shift these end stops 36 makes it possible to employ as many record panels 34 as desired, within the capacity of the unit, with equal utility. Thus, for example, when employing a single unit, and with less than its full capacity of panels 34, one end stop 36 may be shifted, as indicated by the dotted line position of Fig. 4. The ability to accomplish this permits the holding of frames or panels 34 at a proper angle for observation and to prevent breakage of index tabs 55 when the frames are pivotally displaced.

As pointed out with respect to the panels 34, the pintles 35 projecting from both the top and bottom edges of end stops 36 are also all of equal length, so that the end stops are invertible, and only one type of end stop need be manufactured and stocked, instead of separate right and left hand ones as might otherwise be the case where pintles of unequal length are employed.

This ability to shift the position of the inclined end stops also makes possible expansion, rather than contraction, of capacity. Thus, as indicated by Figs. 8 and 9, two or more units may be joined in coplanar alignment by suitable spring clips. For example, a pair of units may be brought into lateral abutment and secured together by means of one or more clips 58 engaged about the standard portions, such as at 23 and 25. This is possible since the standards were originally disposed flush

with the opposed lateral edges of the mount portion 15. Similarly, a resilient metal clip or clamp 59 conformed to the shape of top molding 37 may be engaged over the abutting end portions of said molding portions of two adjacent units, to form a unitary assembly of double or more capacity, and in such case, as shown in Fig. 8, end stops 36 are required at only the extreme or opposed sides of the assembly.

Although the stand illustrated is shown disposed at a slight, i.e. about 10°, incline to the vertical or about 80° to the horizontal, other angles of inclination may be employed; for example, inclination of 17° or 38° to the horizontal, or any other angle depending on the use to which the equipment is to be put.

Although I have described and illustrated the preferred form of structure, it will be understood by those skilled in the art that modifications may be made in the details thereof without departing from the spirit of my invention as comprehended by the following claims.

I claim:

1. Visible record equipment comprising a mounting panel, a stand supporting said panel at an incline, a pair of spaced parallel horizontally extending brackets projecting normally from said panel each formed with an aligned series of equispaced pintle receiving apertures, a plurality of record frames endwise disposed between said brackets each including thereat opposed laterally projecting pintles journaled in an opposed pair of said bracket apertures swingably engaging said frames thereto, and end stop members for limiting swingable movement of said frames at an angle to said mounting panel, said end stops comprising a base portion disposed between said brackets and parallel to said mounting panel, a wing portion inclined thereto, and a plurality of pintles aligned in a plane parallel to said base portion projecting from each of the opposed ends thereof and disposed within said bracket apertures removably supporting said end stop members at a fixed incline to said mounting panel.

2. Visible record equipment comprising a mounting panel, a stand supporting said panel at an incline, a pair of spaced parallel brackets projecting normally from said panel each formed with an aligned series of equispaced pintle receiving apertures, a plurality of record frames endwise disposed between said brackets each including thereat opposed laterally projecting pintles of equal length journaled in an opposed pair of said bracket apertures swingably engaging said frames thereto, end stop members for limiting swingable movement of said frames at an angle to said mounting panel, said end stops comprising a base portion disposed between said brackets and parallel to said mounting panel, a wing portion inclined thereto, and a plurality of pintles adjacent to and aligned in a plane parallel to said base portion projecting an equal length from each of the opposed ends thereof and disposed within said bracket apertures removably supporting said end stop members at a fixed incline to said mounting panel, an abutment bar parallel to and spaced outwardly of one of said apertured brackets limiting the passage of said pintles therethrough to less than their lengths, and a second spring pressed bar parallel to and disposed outwardly of the other of said apertured brackets yieldably displaceable to the full length of the pintles thereat.

3. Visible record equipment comprising a mounting panel, a stand supporting said panel at an incline, a pair of spaced parallel horizontally extending brackets projecting normally from said panel each formed with an aligned series of equispaced pintle receiving apertures, a plurality of record frames endwise disposed between said brackets each including thereat opposed laterally projecting pintles journaled in an opposed pair of said bracket apertures swingably engaging said frames thereto, and a divergent pair of end stop members of obtuse triangle snapped cross-section for limiting swingable movement of said frames at an angle to said mounting panel, said end stops including a spaced pair of pintles aligned

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in a plane parallel to the bases of said end stops projecting laterally from each of the opposed ends thereof of equal length invertibly disposed within said bracket apertures removably supporting said end stop members at a fixed incline to said mounting panel.

4. The combination with visible record equipment comprising a mounting panel, a stand supporting said panel at an incline, and a pair of spaced parallel horizontally extending brackets projecting normally from said panel, each formed with an aligned series of equispaced apertures for receiving the pintles of and swingably mounting thereby a plurality of record frames, of a pair of opposed inclined end stops for arresting angular movement of said frames at an acute angle to said mounting panel, and spaced pairs of oppositely extending pintle means carried by said end stops engageable in said bracket apertures arranged for removably positioning said end stops between said brackets at selected positions longitudinally thereof at a fixed incline to said mounting panel.

5. Visible record equipment comprising a plurality of units aligned in coplanar endwise abutting relationship, each unit comprising a planar mounting panel, a stand supporting said panel in an elevated position at an incline to the vertical comprising a spaced pair of foot components supporting the bottom edge of said panel and inte-

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gral riser components secured rearwardly of said panel, and apertured brackets extending transversely of and to the opposed side edges of the panel for removably and swingably supporting pintle carrying record frames, an end stop member carrying spaced pairs of pintles at its opposed ends removably engaged between said brackets in fixed angular inclination to said mounting panels adjacent the outermost ends of said aligned panels, and separable clamp means engaging said units in said aligned relationship.

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