April 30, 1957 K. C. HAVENS 2,790,259

PICTURE FRAME

Filed Aug. 4, 1954

FIG. 1

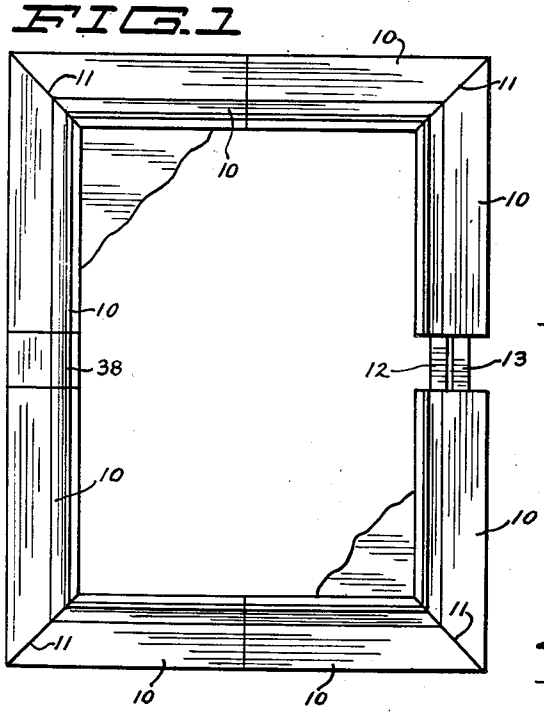


FIG. 2

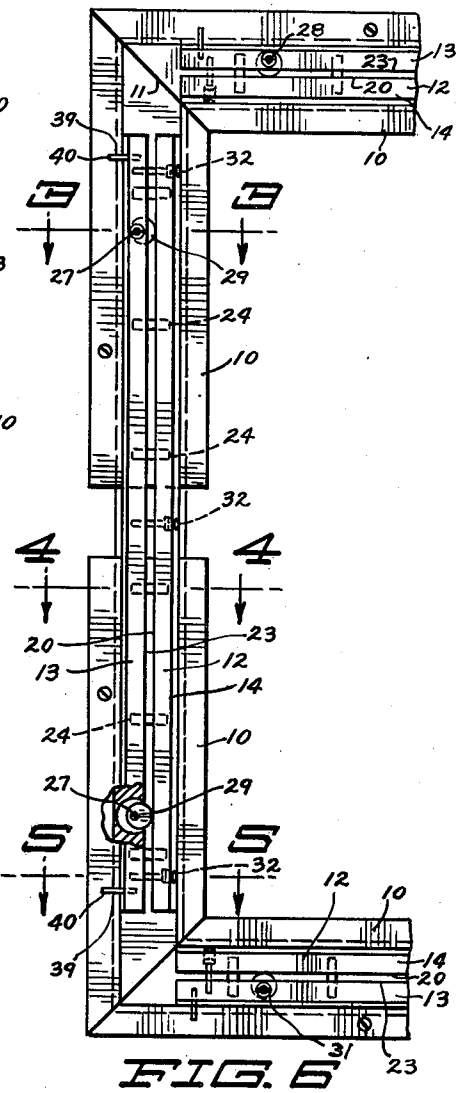


FIG. 3

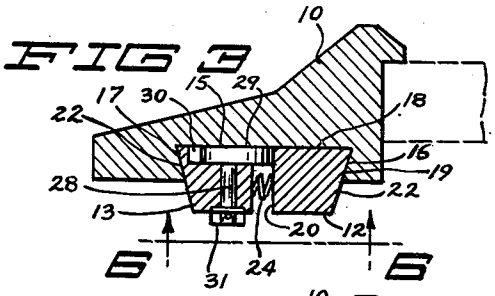


FIG. 4

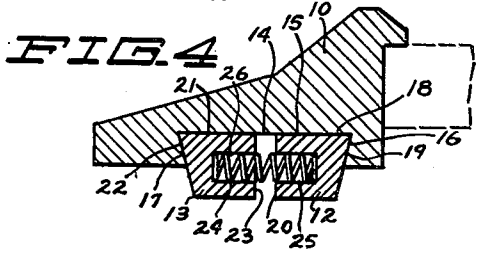


FIG. 5

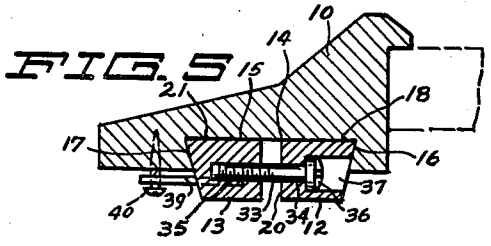
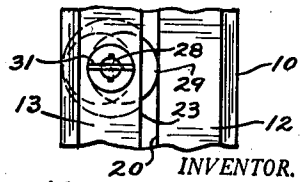


FIG. 6



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PICTURE FRAME

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10 Claims. (Cl. 40—155)

The invention herein has relation to a distensible frame for pictures constituted as new and improved side and end frame units each of which is longitudinally adjustable.

In the accompanying drawing forming a part of this specification,

Fig. 1 is a front elevational view of a picture frame made according to the invention, a detachable frame member of a frame unit at a side of the picture frame being omitted;

Fig. 2 is an enlarged fragmentary rear elevational view, partially in section and partially broken away, of the picture frame as it would appear from behind the right side of the disclosure of Fig. 1;

Fig. 3 is an enlarged transverse sectional view, taken on line 3—3 in Fig. 2;

Fig. 4 is an enlarged transverse sectional view, taken on line 4—4 in Fig. 2;

Fig. 5 is an enlarged transverse sectional view, taken on line 5—5 in Fig. 2; and

Fig. 6 is an elevational view detailing parts of the picture frame as they would appear from the position of line 6—6 in Fig. 3.

As shown, each of side and end frame units of the picture frame includes a pair of alined frame members, each denoted **10**, and frame members **10** at each of the corners of the picture frame are rigidly joined to each other, as at **11**. All of the frame members **10** are in a single plane, and all of the frame units, each including alined frame members, are of similar construction.

Each of the duplicate frame units includes, in addition to alined frame members **10**, spaced apart, parallel, first and second elongated gripping bars, represented **12** and **13**, respectively, each having its opposite end portions situated in elongated channels **14** within and extending longitudinally of rearward surfaces of alined frame members, respectively. Stated differently, an intermediate portion of each gripping bar **12**, **13** is situated between free ends of alined frame members of each frame unit, and the opposite end portions of the corresponding gripping bars **12**, **13** are within the elongated channels **14**, **14** of different frame members, respectively. The elongated channels of each frame unit are of equal width.

Each elongated channel **14** is of configuration as clearly disclosed in Figs. 3 to 5. The base of each elongated channel is bounded or defined by a flat surface **15** disposed forwardly of and parallel to the rearward surface of the corresponding frame member **10**. At its inner and outer sides each elongated channel is bounded or defined by flat side surfaces, indicated **16** and **17**, respectively, which extend longitudinally of the corresponding frame unit. Each inner flat side surface **16** slants rearwardly and outwardly from the inner side edge and each outer flat side surface **17** slants rearwardly and inwardly from the outer side edge of the flat surface **15** to the rearward surface of the corresponding frame member **10**. The flat side surfaces **16**, **17** bounding or defining the opposite

sides of each elongated channel are in parallel planes and at equal angular relation to the flat surfaces **15**.

The first elongated gripping bar **12** of each frame unit is bounded or defined at its forward side by a flat surface **18** engageable with and slidable over flat surfaces **15**, **15** bounding or defining the bases of elongated channels **14**, **14** in the corresponding frame members **10**, **10**, and at its inner side by a flat side surface **19** which slants rearwardly and outwardly from the inner side edge of the flat surface **18** and is engageable with and slidable over inner flat side surfaces **16**, **16** bounding or defining the inner sides of elongated channels in the corresponding frame members. As disclosed, the first elongated gripping bar **12** of each frame unit is bounded or defined at its outer side by a flat side surface **20** in perpendicular relation to the frame members of the frame unit. The flat side surfaces **19** and **20** are in parallel planes.

The second elongated gripping bar **13** of each frame unit is bounded or defined at its forward side by a flat surface **21** engageable with and slidable over flat surfaces **15**, **15** bounding or defining the bases of elongated channels **14**, **14** in the corresponding frame members **10**, **10**, and at its outer side by a flat side surface **22** which slants rearwardly and inwardly from the outer side edge of the flat surface **21** and is engageable with and slidable over outer flat side surfaces **17**, **17** bounding or defining the outer sides of elongated channels in the corresponding frame members. The second elongated gripping bar **13** of each frame unit is bounded or defined at its inner side by a flat side surface **23** in perpendicular relation to the frame members of the frame unit. The flat side surfaces **22** and **23** are in parallel planes.

The overall width of the first and second elongated gripping bars **12** and **13** of each frame unit is less than a measurement representing the distance between flat side surfaces **16** and **17** bounding or defining the opposite sides of each elongated channel **14**.

The first and second elongated gripping bars **12** and **13** of each frame unit are held in spaced relation to each other, and the inner and outer side surfaces **19** and **22** of said first and second elongated gripping bars are held in resilient engagement with the flat side surfaces **16** and **17**, respectively, bounding or defining the opposite sides of the elongated channels in the frame members of the corresponding frame unit, through the instrumentality of compression coil springs, each designated **24**, uniformly spaced along intermediate portions of the lengths of the first and second elongated gripping bars. As will be apparent from Fig. 4 of the drawing, the compression coil springs **24**, in perpendicular relation to the gripping bars, have inner end portions thereof seated in depressions **25** in the outer side surfaces **20** of the first gripping bar **12** and outer end portions thereof seated in depressions **26** in the inner side surface **23** of the second gripping bar **13**.

There is a first device **27** in each end portion of the second elongated gripping bar **13** of each frame unit for releasably clamping the first and second elongated gripping bars between the opposite side surfaces **16** and **17** bounding or defining the opposite sides, respectively, of the elongated channels **14**, **14** in the frame members **10**, **10** of the corresponding frame unit. Each of the first devices **27** is constituted as a stub shaft **28** mounted in the corresponding second elongated gripping bar **13** in perpendicular relation thereto, a camming element **29** fixed upon a forward end of said stub shaft and disposed in a pocket **30** in the forward surface **21** of said corresponding second elongated gripping bar, and a manipulating finger piece **31** fixed upon a rearward end of the stub shaft. Each pocket **30** is open at its inner side, and the construction and arrangement are such that each

finger piece 31 can be turned in one direction to cause the corresponding camming element 29 to engage the outer side surface 20 of the corresponding first elongated gripping bar 12 and force the first and second gripping bars apart, or in opposite direction to exert no spreading apart force upon said first and second elongated gripping bars. In Fig. 3 and in full lines in Fig. 6 a first device 27 is disclosed as when situated to cause the first and second gripping bars of a frame unit to be clamped between oppositely disposed surfaces 16 and 17 of a frame member of said frame unit. In dotted lines in said Fig. 6 the first device is disclosed as when the camming element 29 thereof is exerting no force upon the first and second elongated gripping bars tending to spread them apart. The compression coil springs 24 alone exert spreading apart influence upon the first and second elongated gripping bars when first devices 27 are situated as in dotted lines in Fig. 6.

There is a second device 32 in each end portion of the first and second elongated gripping bars 12 and 13 of each frame unit for permitting said first and second elongated gripping bars to be moved toward and away from each other and at the same time precluding their separation. Each of the second devices 32 is constituted as a screw bolt having an intermediate portion 33 thereof slidably disposed in an opening 34 in the corresponding first elongated gripping bar 12 in parallel relation to the forward surface 18 thereof, an outer end portion 35 thereof fixed in the corresponding second elongated gripping bar 13 and extending inwardly from its inner side surface, and a head 36 thereof freely disposed in a concavity 37 in the inner side surface 19 of said corresponding first elongated gripping bar. The construction and arrangement will be such that the second devices 32 will permit movement of the first and second elongated gripping bars 12 and 13 apart to extent necessary in order that they can be clamped in the frame members but will prevent separation of said first and second elongated gripping bars.

The manner in which the picture frame can be made larger and smaller will be evident. The frame members 10, 10 of different frame units will be moved or pulled apart longitudinally, thus to be slid relative to the corresponding first and second elongated gripping bars, when it is desired that the picture frame be made larger. And said frame members will be shoved toward each other when said picture frame is to be made smaller. At the left in Fig. 1 of the drawing is shown a detachable frame member 38 which in cross-section transversely of the frame unit is of the same configuration and size as are all of the frame members 10. At the right in Fig. 1, and in Fig. 2, there is a space for receiving a detachable frame such as 38. Detachable frame members such as 38 of different dimensions in direction longitudinally of the frame units will be employed, and spaces between adjacent alined frame members 10, 10 created by moving or pulling said frame members apart will be filled by detachable frame members, such as 38, of appropriate length. Detachable frame members can be applied by compressing the first and second elongated gripping bars 12 and 13 toward each other, against the force of the compression coil springs 24, while the first devices 27 are inoperative. Relative adjustments of adjacent frame members also will be made while said first devices are inoperative. After adjustments are made said devices will be actuated to clamp said first and second elongated gripping bars to and against the frame members, in the manner as hereinbefore set forth.

There is a third device 39 upon each end portion of the second elongated gripping bar 13 of each frame unit. The third devices are for fastening the gripping bars in fixed relation to the corresponding frame members after a picture frame has been adjusted to desired size. Each of the third devices 39 is constituted as an outwardly extending piece rigid with the corresponding second elongated gripping bar and secured to a frame member, as by a nail 40. The first and third devices, together, are insurance that the frame members will remain fixed in the relation to which adjusted and set.

What is claimed is:

1. In a picture frame, a frame unit comprising longitudinally alined frame members each having an elongated channel therein bounded by internal, opposed, longitudinally extending surfaces, first and second elongated gripping bars having opposite end portions thereof situated in the elongated channels of said frame members, respectively, for slidable movement relative to said internal, opposed, longitudinally extending surfaces of each of said frame members, and mechanism for spreading said first and second elongated gripping bars apart and into clamping relation to internal, opposed, longitudinally extending surfaces of each of said frame members.

2. In a picture frame, a frame unit comprising longitudinally alined frame members each having an elongated channel therein bounded by internal, opposed, longitudinally extending surfaces, first and second elongated gripping bars having opposite end portions thereof situated in the elongated channels of said frame members, respectively, resilient means urging said first and second elongated gripping bars into engaged relation with internal, opposed, longitudinally extending surfaces of each of said frame members for slidable movement relative thereto, and mechanism for spreading said first and second elongated gripping bars apart and into clamping relation to internal, opposed, longitudinally extending surfaces of each of said frame members.

3. The combination as specified in claim 1 wherein each of said mechanisms is constituted as a stub shaft mounted in one of said elongated gripping bars, a camming element fixed upon a forward end portion of said stub shaft and engageable with the other of said elongated gripping bars, and a manipulator for the stub shaft fixed upon a rearward end portion thereof.

4. The combination as specified in claim 1, first means connecting said first and second elongated gripping bars for movement toward and away from each other, and second means for precluding separation of the first and second elongated gripping bars.

5. The combination as specified in claim 1, and a replaceable frame member for detachable assembly with said first and second elongated gripping bars at a location between said frame members.

6. In a picture frame, a frame unit comprising alined frame members each having an elongated channel therein bounded by internal, longitudinally extending surfaces, first and second elongated gripping bars having opposite end portions thereof situated in the elongated channels of said frame members, respectively, to be slidable relative to said internal surfaces, and means for securing said first and second elongated gripping bars in fixed relation to said frame members, respectively, said means being constituted as a stub shaft mounted in one of said elongated gripping bars, a camming element fixed upon a forward portion of said stub shaft and engageable with the other of said elongated gripping bars, and a manipulating piece for the stub shaft fixed upon a rearward end portion thereof.

7. In a picture frame, a frame unit comprising longitudinally alined frame members each having an elongated channel therein bounded by internal, opposed, longitudinally extending surfaces, first and second elongated gripping bars having opposite end portions thereof situated in the elongated channels of said frame members, respectively, resilient means urging said first and second elongated gripping bars into engaged relation with internal, opposed, longitudinally extending surfaces of each of said frame members for sliding movement relative thereto, and means for securing said first and second elongated gripping bars in fixed relation to each of said frame members, said means being constituted as a stub

shaft mounted in one of said elongated gripping bars, a camming element fixed upon a forward portion of said stub shaft and engageable with the other of said elongated gripping bars, and a manipulating piece for the stub shaft fixed upon a rearward end portion of said stub shaft.

8. In a picture frame, a frame unit comprising alined frame members each having an elongated channel therein bounded by internal, longitudinally extending surfaces, first and second elongated gripping bars having opposite end portions thereof situated in the elongated channels of said frame members, respectively, to be slidable relative to said internal surfaces, means for securing said first and second elongated gripping bars in fixed relation to said frame members, respectively, and means connecting said first and second elongated gripping bars for movement toward and away from each other.

9. In a picture frame, a frame unit comprising longitudinally alined frame members each having an elongated channel therein bounded by internal, opposed, longitudinally extending surfaces, first and second elongated gripping bars having opposite end portions thereof situated in the elongated channels of said frame members, respectively, resilient means urging said first and second elongated gripping bars into engaged relation with internal, opposed, longitudinally extending surfaces of each of said frame members for sliding movement relative thereto,

means for securing said first and second elongated gripping bars in fixed relation to each of said frame members, and means connecting said first and second elongated gripping bars for movement toward and away from each other.

10. In a picture frame, a frame unit comprising alined frame members each having an elongated channel therein bounded by internal, longitudinally extending surfaces, first and second elongated gripping bars having opposite end portions thereof situated in the elongated channels of said frame members, respectively, to be slidable relative to said internal surface, means for securing said first and second elongated gripping bars in fixed relation to said frame members, respectively, and a replaceable frame member for detachably assembly with said first and second elongated gripping bars at a location between said frame members.

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