

March 2, 1943.

S. KOSZEGHY

2,312,914

WORK HOLDING DEVICE

Filed July 15, 1941

3 Sheets-Sheet 1

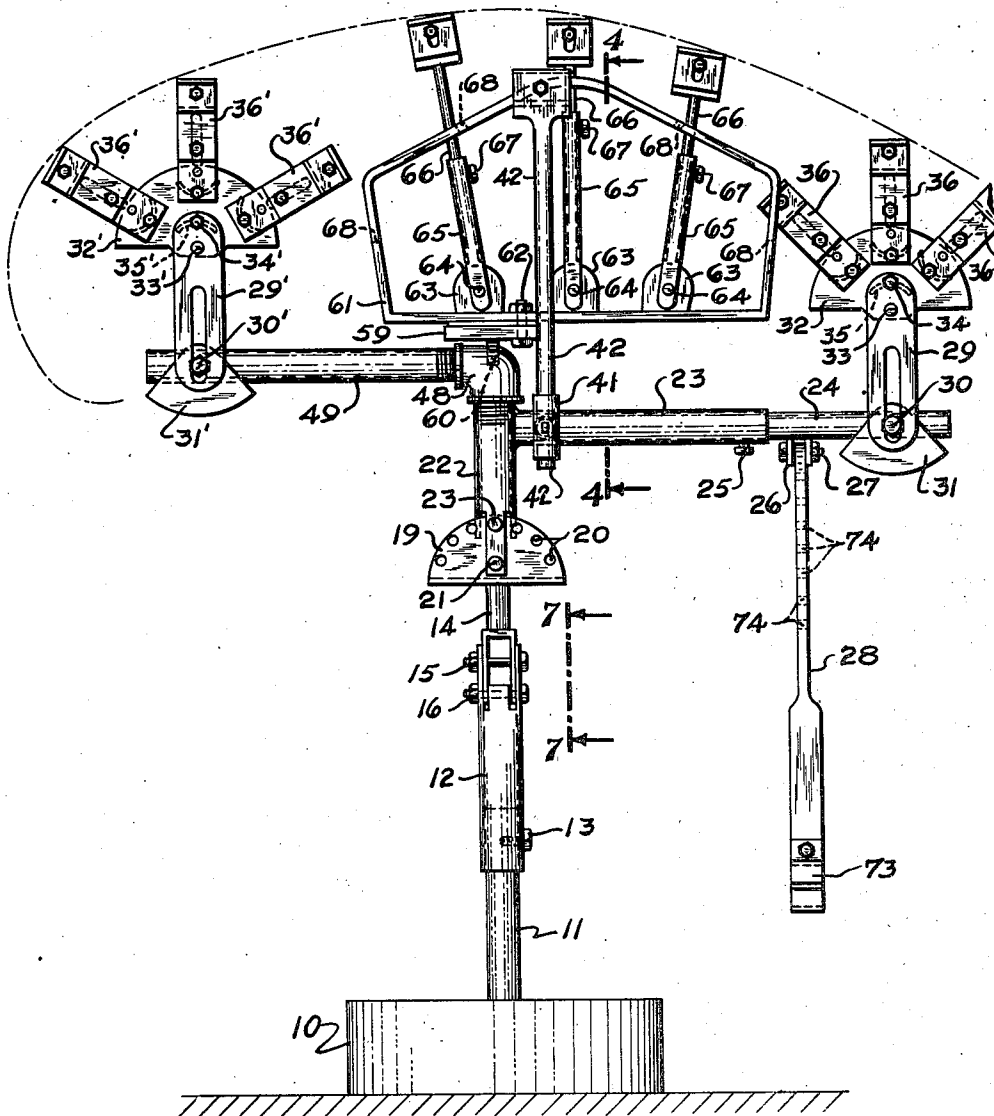


FIG. 1

INVENTOR
Stephen Koszeghy.
BY
Richards & Seier
ATTORNEYS

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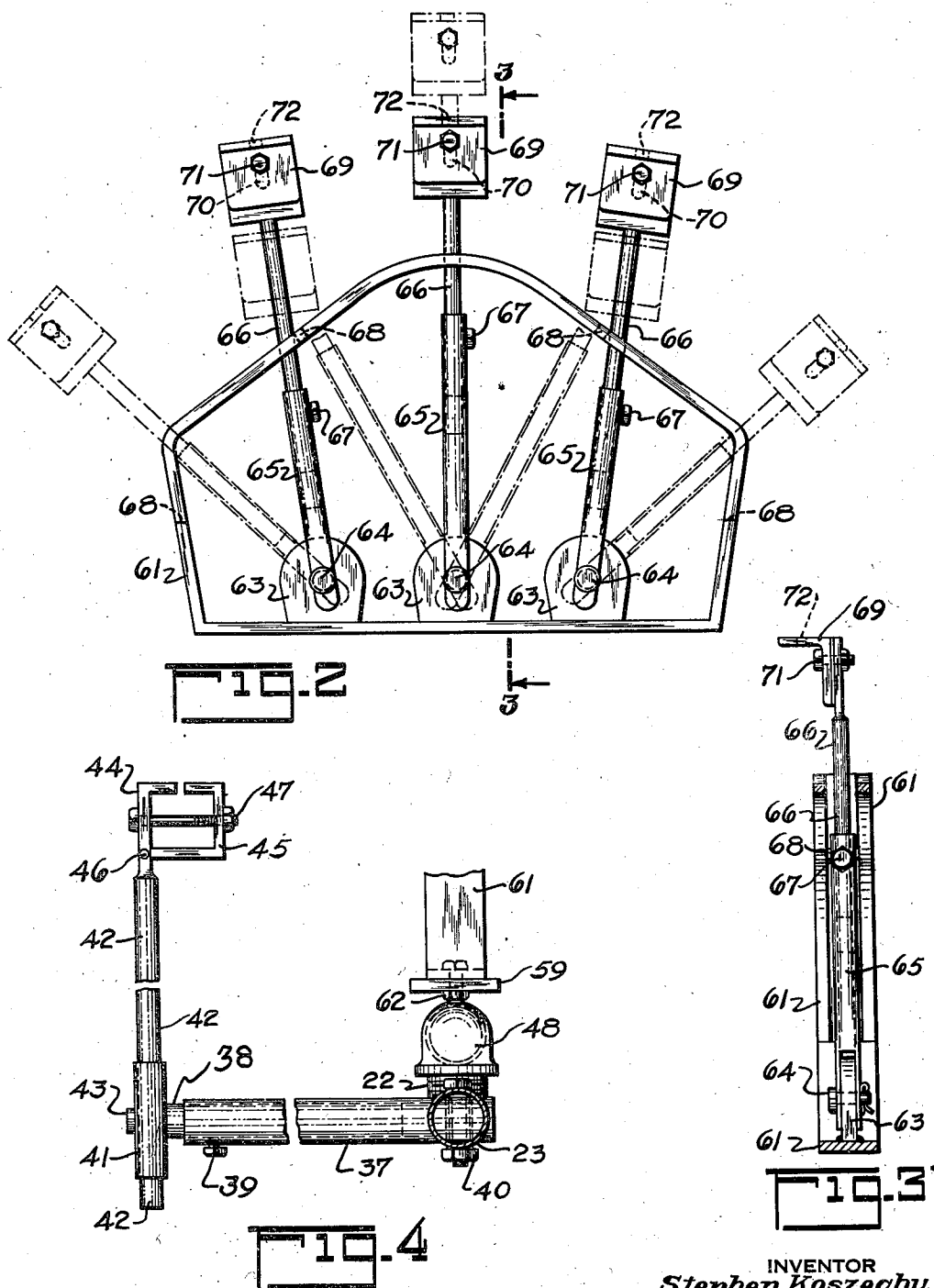
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3 Sheets-Sheet 2



INVENTOR
Stephen Koszeghy.
BY *Richards & Seier*
ATTORNEYS

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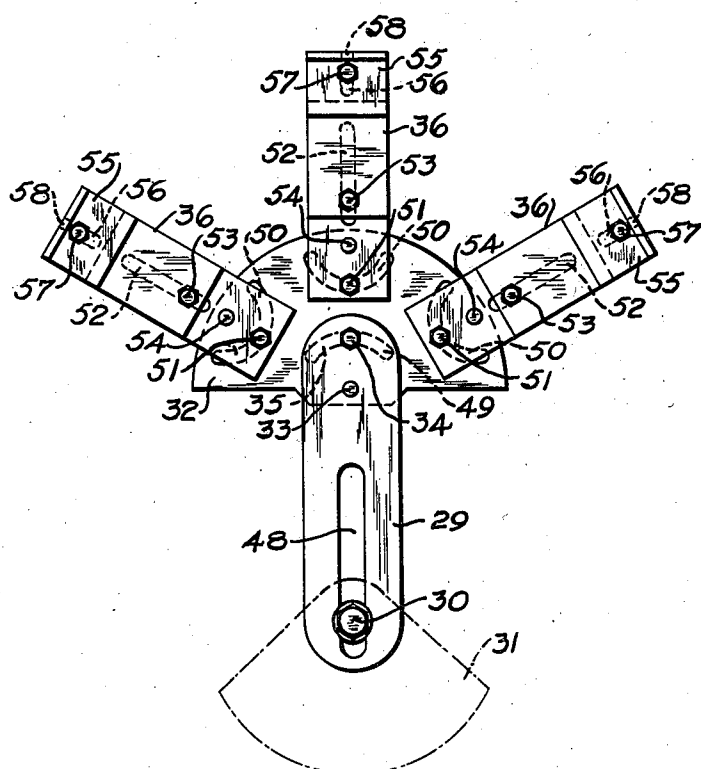
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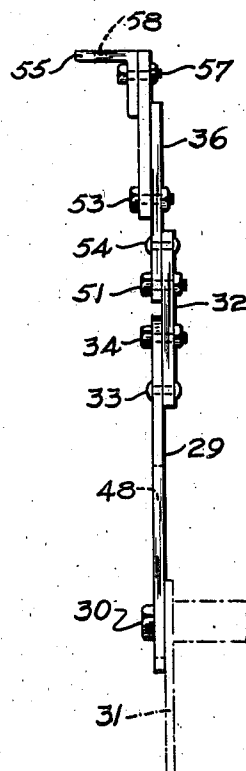
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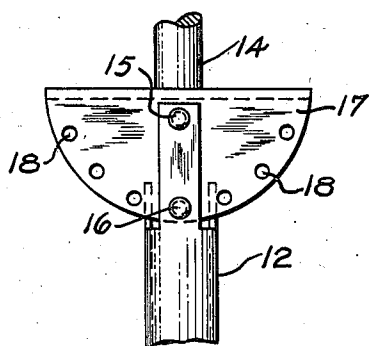
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19-5



19-6



19.7

INVENTOR
Stephen Koszeghy
BY *Richards & Geier*
ATTORNEYS

UNITED STATES PATENT OFFICE

2,312,914

WORK HOLDING DEVICE

Stephen Koszeghy, West New York, N. J.

Application July 15, 1941, Serial No. 402,495

3 Claims. (Cl. 29—89)

This invention relates to work holding device, and more particularly deals with a novel device adapted to hold automobile fenders and the like in divers positions to facilitate work thereon.

It is well known that fenders or mudguards, radiator shells, engine hoods and other parts of automobile bodies are often bent out of shape due to collision or other accidents, and hitherto it has been difficult to repair them. On the one hand, if repairs were made without removing the damaged part from the body, the work often did not prove satisfactory; and on the other hand, if the part was removed from the body in order to repair it, it was difficult to handle and maintain in proper position, with the result that it took an unreasonably long time to make repairs and a helper was generally needed to hold the work in position.

My improved device enables the mechanic to do better and faster work and makes unnecessary the use of a helper to assist in holding the work in proper position. These and other objects of my invention, as will appear hereinafter, result from the novel details of construction and arrangement of parts described and illustrated in the following specification and annexed drawings, in which—

Fig. 1 is a front elevational view of my work holding device;

Fig. 2 is a front elevational view of the central adjustable work holding means thereof;

Fig. 3 is a cross sectional view along line 3—3 of Fig. 2;

Fig. 4 is a sectional view along line 4—4 of Fig. 1;

Fig. 5 is a front elevational view of the adjustable work holding means at either end of my work holding device;

Fig. 6 is a side elevational view of one of the adjustable arms of the work holding means of Fig. 5;

Fig. 7 is a side elevational view along line 7—7 of Fig. 1.

Referring now to the drawings, and particularly to Fig. 1, 10 is a base supporting a member 11 telescopically associated with a tubular member 12, which associated members are held positioned with respect to each other by bolt 13 and are adapted to increase or decrease the height of the work holding device.

Tubular member 12 is associated at its upper end with a forked member 14 and swingably positioned with relation thereto by means of bolts 15 and 16. As more particularly shown on Fig. 7 a segmental member 17 provided with a

plurality of apertures 18 is held in fixed relationship to forked member 14 by bolt 15 and adjustably positioned with respect to tubular member 12 by bolt 16, thereby permitting my work holding device horizontally to swing over an arc of substantially 180° by removing bolt 16, swinging member 14 to the desired angle, using bolt 15 as pivot and replacing bolt 16. It will be understood that the degree of adjustability will depend on the number of apertures 18 on the segmental member 17 (the greater the number, the finer the adjustment) and that a still greater degree of adjustability may be obtained by substituting a slot for apertures 18.

The upper end of member 14 is also forked and has attached thereto at right angle to segmental member 17 a second segmental member 19 provided with a plurality of apertures 20, which segmental member is held in fixed relationship to the upper fork of forked member 14 by bolt 21 and adjustably positioned with respect to tubular member 22 by bolt 23, thereby permitting my work holding device horizontally to swing over an arc of substantially 180° by removing bolt 23, swinging member 22 to the desired angle using bolt 21 as pivot, and replacing bolt 23. It will be understood, of course, that the degree of adjustability permitted by segmental member 19 depends on the same factors hereinbefore stated with respect to segmental member 17.

Tubular member 22 has attached at right angle thereto (as by welding) a horizontally disposed tubular member 23 having telescopically associated therewith a member 24, which associated members are held positioned with respect to each other by bolt 25, said member 24 being provided with hanger 26 and bolt 27, said bolt 27 serving as pivot for member 28.

Member 24 is also provided near its free end with a slotted member 29 adjustably mounted on said member 24 by bolt 30 and segmental member 31. Member 29 is provided at its upper end with a segmental member 32 held positioned with respect to member 29 by pivot 33 and bolt 34, said member 32 being horizontally swingable with respect to the axis of member 29 over an arc of substantially 180° described by slot 35. Segmental member 32 carries a plurality of members 36 adjustably mounted thereon as will be more fully described hereinafter when referring to Fig. 5.

Tubular member 23 has attached at right angle thereto a horizontally disposed member 37 (see Fig. 4) having telescopically associated therewith

a member 38, which associated members are held positioned with respect to each other by bolt 39. Member 37 is held positioned with respect to member 23 by bolt 40.

Still referring to Fig. 4, member 38 has attached thereto (as by welding) a member 41 having telescopically associated therewith member 42, said members 41 and 42 being held adjustably positioned with respect to each other by bolt 43. Member 42 is provided at its upper end with an angle 44 having pivotally associated therewith a member 45, said member 45 pivoting on pivot 46 and being held adjustably positioned with respect to member 44 by bolt 47. Members 44 and 45 are adapted to co-act in association with pivot 46 and bolt 47 for the purpose of gripping and holding the edge of a mudguard or the like being held positioned for the purpose of working on it.

Referring again to Fig. 1, member 22 has attached thereto (as by welding or screwing) an elbow 48 provided with a horizontally disposed member 49. Said member 49 is provided near its free end with a slotted member 29' adjustably mounted thereon by a bolt 30' and segmental member 31'. Member 29' is provided at its upper end with a segmental member 32' held positioned with respect to member 29' by pivot 33' and bolt 34', said member 32' being horizontally swingable with respect to the axis of member 29' over an arc of substantially 180° described by slot 35'. Segmental member 32' carries a plurality of members 36' adjustably mounted thereon as will be more fully described hereinafter when referring to Fig. 5.

It will be readily understood, of course, that elements 29', 30', 31', 32', 33', 34', 35' and 36' are substantial duplicates of elements 29, 30, 31, 32, 33, 34, 35 and 36 hereinbefore described.

Referring now to Fig. 5, slot 48 is adapted for longitudinal adjustment of member 29 by means of bolt 32. Slot 49 is adapted to permit member 32 horizontally to swing with respect to the axis of member 29. Slot 50 is adapted to permit member 36 horizontally to swing with respect to the axis thereof. Bolt 34 is adapted to hold member 32 in adjustable relationship with member 29. Bolt 51 is adapted to hold member 36 in adjustable relationship with member 32. Slot 52 is adapted for longitudinal adjustment of member 36, and bolt 53 is adapted to hold the desired position. Pivot 54 is for the purpose of holding member 36 in swingable relationship with member 32. Angle 55 is provided with a slot 56 and bolt 57 adapted to regulate its position longitudinally, and is also provided with an aperture 58 through which is passed a bolt (not shown) adapted to engage the tapped edge of a mudguard or the like for the purpose of securely bolting it in place, so that it may be positioned while being repaired.

Referring again to Fig. 1, 59 is a platform attached to member 48 by bolt 60. Adjustably mounted on said platform is a frame 61 held thereon by bolt 62.

Referring now to Fig. 2, 63 are a plurality of pivot supports on which are mounted pivots 64. Pivoted thereon are a plurality of tubular members 65 telescopically associated with members 66, said associated members being adjustably positioned with respect to each other by bolt 67. Frame 61 is provided with stops 68 adapted to limit the horizontal movement of members 65 within the limits shown in broken lines. Members 66 are provided with angle heads 69, said angle heads having slots 70 and bolts 71 adapted to regulate its position longitudinally, said heads

also being provided with apertures 72 adapted to engage the tapped edge of a mudguard or the like for the purpose of securely bolting it in place, so that it may be positioned while being repaired. The construction and arrangement of parts of these pivoted adjustable elements is more particularly shown in Fig. 3.

Referring again to Fig. 1, member 28 is provided with an adjustable gripping head 73 substantially as shown on member 42 in Fig. 4, and its shank is provided with a plurality of apertures 74 for the purpose of adjusting its length. This member serves the purpose of gripping an untapped edge of a mudguard or the like for the purpose of bracing it and thereby permits proper positioning thereof while undergoing repairs.

As will be readily understood from the foregoing description and annexed drawings, the work holding device of my invention is characterized by extreme flexibility of adjustment, and is thereby a valuable tool easily arranged for work and nevertheless of simple construction. In operation, the supporting members having tapped heads are bolted to the tapped (body) edge of the mudguard, for instance, and those having claw-like heads are used to grip the untrapped (outer) edge. Members 17 and 19, because of the universal adjustment they permit, make it possible for the mechanic or operator to position the work in the most favorable manner to carry out the repairs.

It will be understood that my invention lends itself to various modifications within the scope thereof. I have described and illustrated preferred embodiments of my invention, but it should be understood that I do not intend to restrict myself to the particular details of construction and arrangement of parts herein described and illustrated except as limited by the scope of the appended claims.

What I claim is:

1. A work holding device comprising, in combination: a frame including a plurality of telescopically adjustable, pivotally mounted work holding members, said frame being provided with stops adapted to restrict the pivotal movement of said work holding members, and said work holding members being provided with longitudinally and horizontally adjustable work engaging heads; a plurality of horizontally disposed members, at least one of said horizontally disposed members being telescopically adjustable; work supporting members adjustably mounted on said horizontally disposed members, said work supporting members comprising a longitudinally adjustable member, a semi-circular member pivotally mounted thereon, and a plurality of longitudinally and horizontally adjustable work engaging members pivotally mounted along the peripheral edge of said semi-circular member; and a plurality of longitudinally and horizontally adjustable work gripping members on at least one of said horizontally disposed members.

2. A work holding device comprising, in combination: a frame including a plurality of telescopically adjustable, pivotally mounted work holding members, said frame being provided with stops adapted to restrict the pivotal movement of said work holding members, and said work holding members being provided with longitudinally and horizontally adjustable work engaging heads; a plurality of horizontally disposed members, at least one of said horizontally disposed members being telescopically adjustable; work supporting members adjustably mounted on said

horizontally disposed members, said work supporting members comprising a longitudinally adjustable member, a semi-circular member pivotally mounted thereon, and a plurality of longitudinally and horizontally adjustable work engaging members pivotally mounted along the peripheral edge of said semi-circular member, said work engaging members comprising a plurality of slotted members slidably positioned with respect to each other, and a work engaging head adapted to receive a work holding member; and a plurality of longitudinally and horizontally adjustable work gripping members on at least one of said horizontally disposed members.

3. A work holding device comprising, in combination: a frame including a plurality of telescopically adjustable, pivotally mounted work holding members, said frame being provided with stops adapted to restrict the pivotal movement of said work holding members, and said work holding members being provided with longitudinally

5 and horizontally adjustable work engaging heads; a plurality of horizontally disposed members, at least one of said horizontally disposed members being telescopically adjustable; work supporting members adjustably mounted on said horizontally disposed members, said work supporting members comprising a longitudinally adjustable member, a semi-circular member pivotally mounted thereon, and a plurality of longitudinally and horizontally adjustable work engaging members pivotally mounted along the peripheral edge of said semi-circular member, said work engaging members comprising a plurality of slotted members slidably positioned with respect to each other, and a work engaging head adapted to receive a work holding member; and a plurality of longitudinally extendible work gripping members, said work gripping members being provided with claw-like work gripping heads.

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STEPHEN KOSZEGHY.