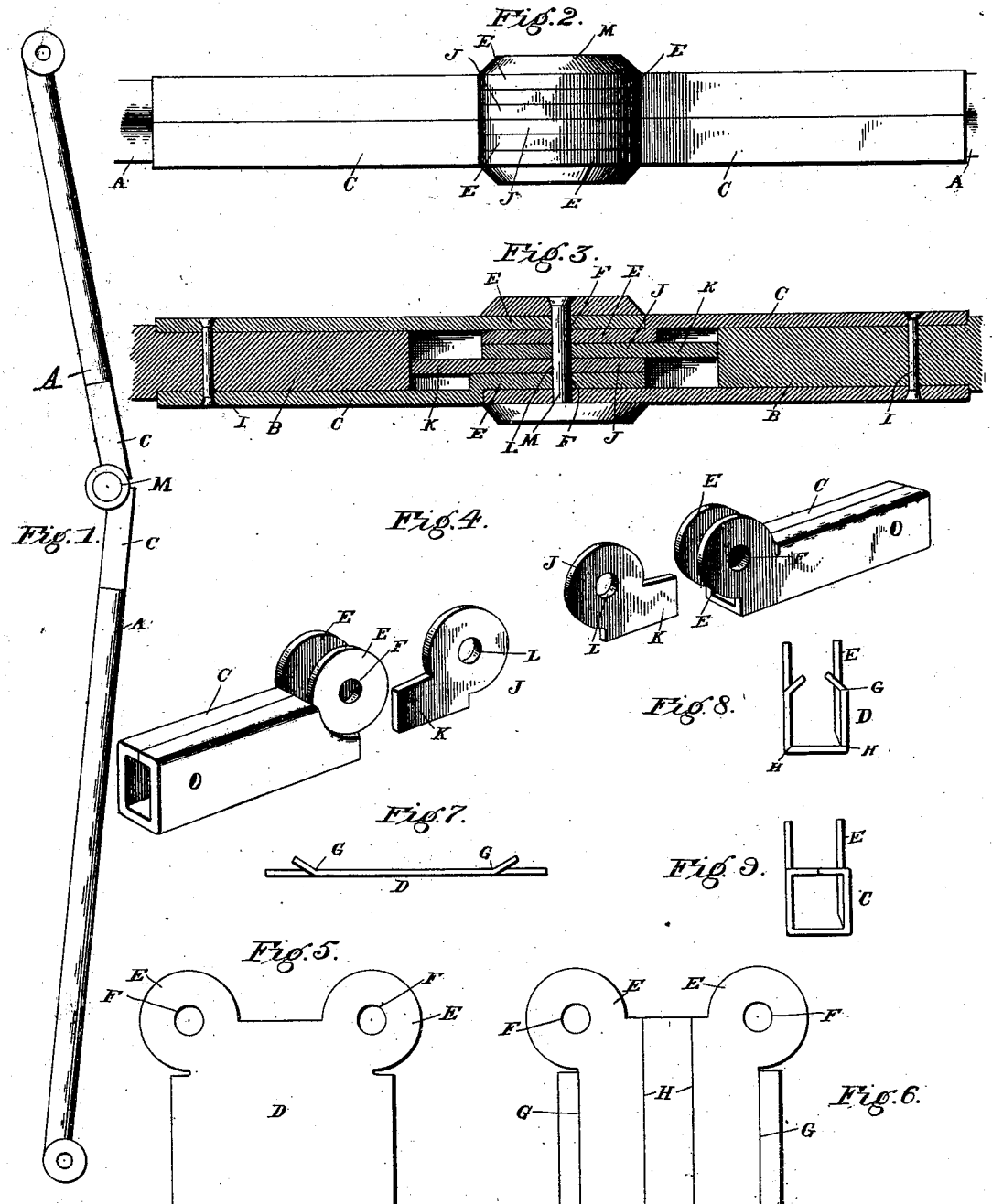
(No Model.)

J. T. GROVES.

CARRIAGE TOP JOINT.

No. 503,135. Patented Aug. 15, 1893.



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UNITED STATES PATENT OFFICE.

JOHN T. GROVES, OF CINCINNATI, OHIO.

CARRIAGE-TOP JOINT.

SPECIFICATION forming part of Letters Patent No. 503,135, dated August 15, 1893.

Application filed November 25, 1892. Serial No. 453,039. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. GROVES, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Carriage-Top Joint, of which the following is a specification.

This invention relates to carriage top joints; and it has for its object to provide certain improvements in the construction of joints of this character used in connection with the top props for carriage tops, which shall render the manufacture thereof much simpler, while at the same time securing a joint of especial efficiency and durability.

To this end the invention primarily contemplates certain improvements on Letters Patent No. 445,631, owned by me, whereby the construction therein disclosed is modified and improved upon to secure better results in the manufacture of the joint and its strength.

With these and many other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts, hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings:—Figure 1 is a side view of a top joint contemplated by this invention. Fig. 2 is a plan view of the inner edge of the joint. Fig. 3 is a transverse longitudinal sectional view of the same. Fig. 4 is a detail in perspective of the joint members and the washers slightly separated. Fig. 5 is a plan view of one of the blanks from which one of the halves or members is stamped. Fig. 6 is a similar view illustrating the first and second stages of stamping. Figs. 7 and 8 are detail end views illustrating the stages of stamping disclosed in Fig. 7. Fig. 9 is a detail end view of one joint member complete.

Referring to the accompanying drawings, A A represent the solid top-prop ends of the usual pattern, and terminating at their adjacent or connected ends in the squared tongues or shouldered portions B, which receive the outer ends of the tubular stump joint members which embody the principles of the present invention. The stump joint members C, are duplicate constructions and complements of each other, and are each stamped from a single sheet of metal D, illustrated in Fig. 6 of the drawings. The metal blank D, is cut in a requisite size in order that the completed joint member may be made to assume the necessary tubular shape, and at one end of the blank D, are cut the opposite disk ears E, provided with the perforations F, for the reception of the usual rivet, when the members are assembled.

In forming each of the stump joint members C, from the metal blank D, the opposite edges thereof are stamped as at G, illustrated in Figs. 6 and 7, to form the meeting edges of the blank, after which the closed base or outer edge of the member is stamped as at H, illustrated in Figs. 6 and 8, which forms the two opposite sides of the member, so that all that is now necessary to complete the tubular shape of the member, is to stamp or press the angles out evenly as illustrated in Fig. 9, so that the opposite edges of the blank at G, meet at the center of one edge or side of the member, to complete the hollow or tubular shape of the joint member, said meeting edges being joined by brazing or soldering. It will of course be apparent that the rectangular or squared shape just described can be equally as well substituted for by an oval, circular, or other shape which permits the opposite edges of the metal blank being drawn together, while leaving the disk ears E, in parallel planes. The outer ends of the tubular joint members C, receive the solid joint ends B, which are held therein by means of rivets I, as shown, or by brazing, if so desired.

As clearly illustrated in the drawings, one of the disk ears at one end of each joint member C, is in the same plane as the side of the member which it forms a continuation of, while the opposite disk ear of the same member is stamped so as to stand inside of the plane of the opposite side of the same joint member. This provides for a duplicate construction in each joint member, and at the same time provides two inside tongues instead of one as shown in Patent No. 445,631. This is secured by reason of having the stamped disk ear of one member oppositely disposed with relation to the stamped disk ear of the other member, so that the stamped ear of each member works inside of the flush disk ear of the other member, the flush disk ears of both

members being the outside disks of the stump joint.

Each of the joint members C, accommodates a removable disk washer J, which is of the same width of metal as the disk ears. Each of the disk washers J, is provided with a square tongue or stem K, which is adapted to register with the inner bore of each joint member, so that the washer itself registers with and rests flat against the inner face of the inwardly stamped disk ear, so that when the duplicate joint members are interlocked, the said washers fill the entire space between the opposite inwardly stamped disk ears. The washers J, are provided with perforations L, which align with the perforations in the disk ears, the several aligned perforations receiving the usual joint rivet M, to complete the joint.

From the foregoing it is thought that the many advantages arising from the construction, of a stump joint, as herein described will be apparent to those skilled in the art, and I will have it understood that changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a carriage top joint, the combination with the solid joint ends having reduced extremities; of the hollow stump joint secured upon said ends, each member of which joint is stamped from a single blank of sheet metal having its two opposite edges brought together at one side to form a tubular body, and parallel disk ears at one end, one of which is stamped in from the plane of its side, substantially as set forth.

2. In a carriage top joint, the stump joint composed of two members stamped from a single sheet of metal and having at one end parallel perforated disk ears, one of which is stamped in from the plane of its side, and being disposed oppositely to the corresponding disk ear of the other member, both of said disk ears working between the other flush disk ears of the joint, substantially as set forth.

3. In a carriage top joint, the tubular stump joint members having an inwardly stamped disk ear working inside of the flush disk ear of the opposite member, and separate disk washers mounted within each of the joint members and arranged in the space between the two inwardly stamped ears, substantially as set forth.

4. In a carriage top joint, the tubular stump joint members each having an inwardly stamped disk ear working inside of the flush disk ear of the opposite member, and separate disk washers arranged in the space between the inclosed inwardly stamped disk ears and having extended tongues or stems registering with the inner bore of one of the members, substantially as set forth.

5. The combination with the carriage top props having adjacent tongue ends; of a connecting hollow stump joint consisting of a single blank of sheet metal stamped into a tubular body to embrace at one end the tongues of said top props, and having its two opposing edges brought together into a brazed or similar joint, said blank having int perforated disk ears formed therewith and disposed at one end of the tubular body in parallel planes with respect to each other, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in in the presence of two witnesses.

JNO. T. GROVES.

Witnesses:

JOHN C. ANTHONY,

EDWARD SCHWAT.