Apr. 17, 1923. 1,451,881

J. B. McMULLEN

ADJUSTABLE SUPPORTING BRACKET

Filed May 14, 1921 2 Sheets-Sheet 1

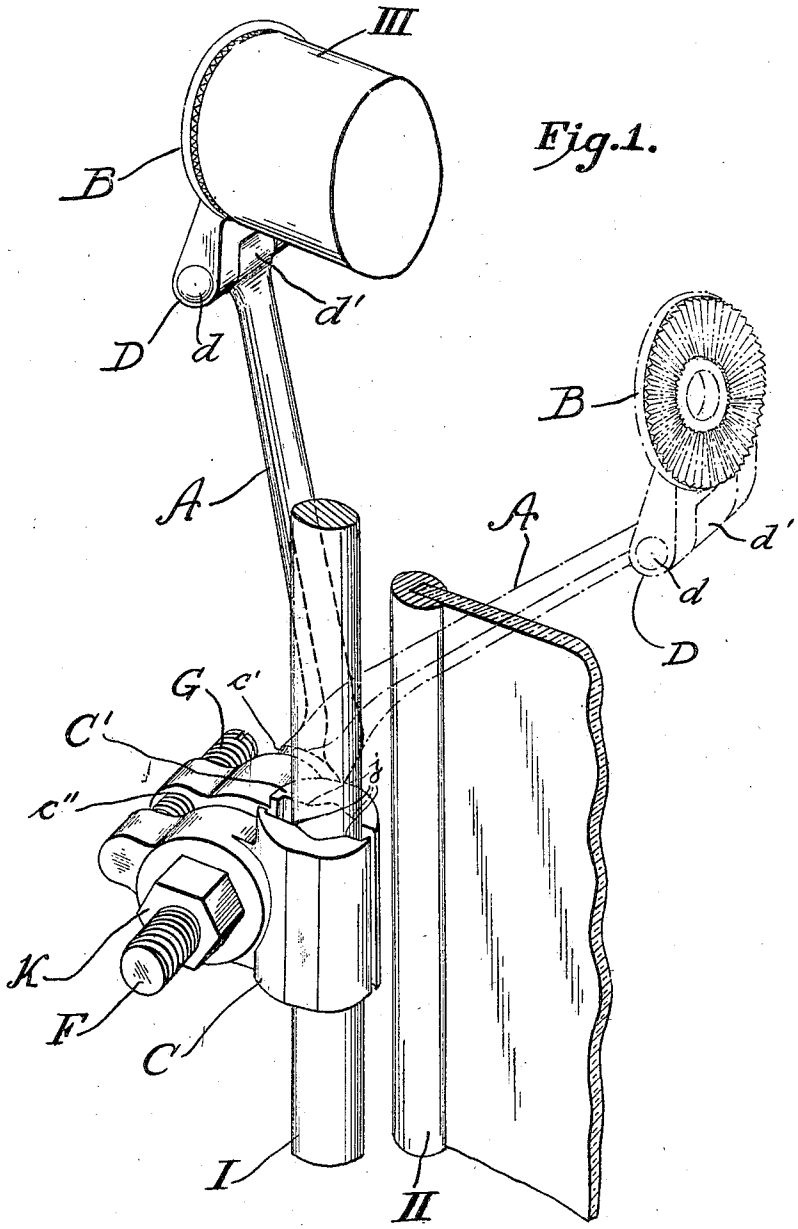


Fig. 1.

Witnesses:
Elbert Bronney
Marcus J. Brock

Inventor
JOSEPH B. McMULLEN
By his Attorney

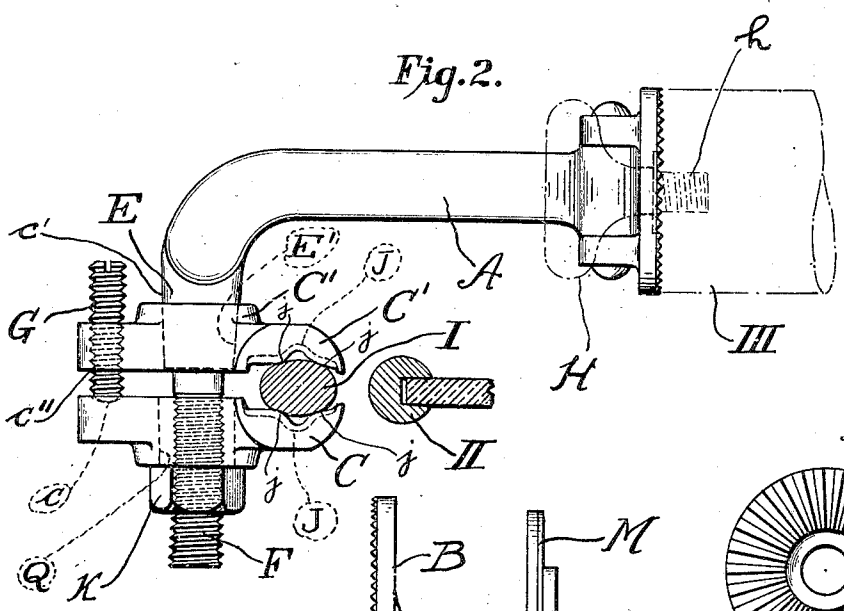
Apr. 17, 1923. 1,451,881

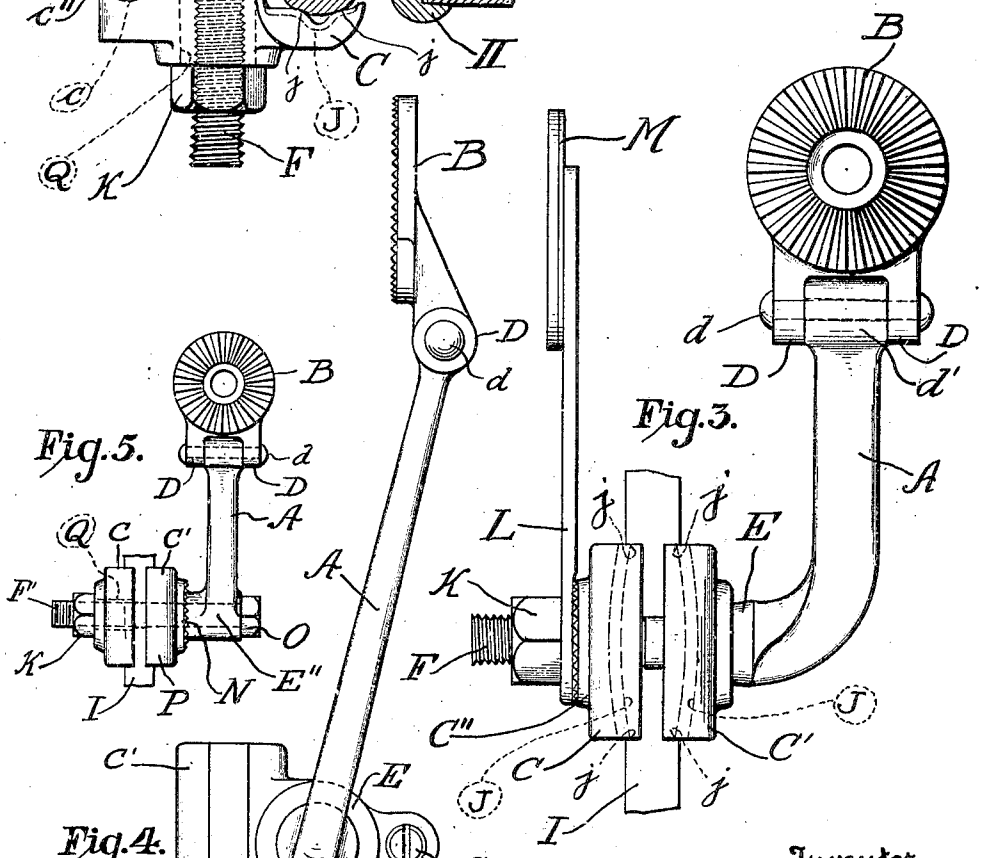
J. B. McMULLEN

ADJUSTABLE SUPPORTING BRACKET

Filed May 14, 1921 2 Sheets-Sheet 2

Fig.2.





Witnesses:
Robert R. Barnes
Warren J. Brock

Inventor
JOSEPH B. McMULLEN
By his Attorney
Herman H. Kretz

Patented Apr. 17, 1923. 1,451,881

UNITED STATES PATENT OFFICE.

JOSEPH B. McMULLEN, OF CATONSVILLE, MARYLAND.

ADJUSTABLE SUPPORTING BRACKET.

Application filed May 14, 1921. Serial No. 469,737.

To all whom it may concern:

Be it known that I, JOSEPH B. McMULLEN, a citizen of the United States, residing in the town of Catonsville, county of Baltimore, State of Maryland, have invented certain new and useful Improvements in Adjustable Supporting Brackets, of which the following is a specification, reference being had to the accompanying drawings, illustrative of one particular embodiment of my invention.

This invention relates particularly to brackets adapted to firmly support one article from another and permit adjustment of the relative positions of the two members intermediate which the bracket forms the connecting member. In particular the bracket serves the purpose of clamping an arm rigidly to a rod, bar or like member, and simultaneously with the clamping permits the realtive position of the arm to take a different angularity or position which, when set, is firmly locked in such optional position. It also provides for the relative adjustment at the other end of an arm in order to maintain parallelism between the end or articulated extension, and the base of the clamp. While brackets containing my invention serve for use in pairs, they may be individually used and provide the combination of characteristics of adjustability, strength and rigidity, coupled with the many advantages of economy and practicability of manufacture and assurance against wear and deterioration while maintaining required strength for every particular use.

In particular, the adjustable bracket, as shown in the accompanying drawings, comprises an arm with an angular extension to which is added a clamp in rotary relation for adjustment, and having means whereby the locking of the arm locks the clamp, or vice versa, and provides a substantially uniform adjustment by the relation of parts permitting extension of the clamp to encompass a variety of sizes and shapes of a supporting stanchion, bar or staff, or like member. The other member of the bracket has hinged thereto a plate adapted to support the end of a rod, and being adjustable at the hinge or pivot about one axis assures the desired parallelism of the face of the hinged plate with respect to the member supported by it with due regard to the relative position of the rod, stanchion or other member to which the opposite end of the bracket arm is rigidly clamped.

Particular embodiments of my invention are shown in the accompanying drawings, in which:

Figure 1 is a perspective of the adjustable bracket with a shifted position of arm shown dotted to illustrate the articulation and adjustability.

Figure 2 is a plan view.

Figure 3 is a front elevation.

Figure 4 is a side elevation.

Figure 5 is a front elevation on a smaller scale with modifications in detail of construction.

The adjustable supporting bracket as illustrated comprises the bracket arm A to which is hinged at one end the supporting plate B and at the other end the clamping jaws C, C′. As in the preferred form of my invention, the object is to maintain the supporting plate with its face parallel to a plane including the axis of adjustment of the other end of the arm A and parallel with the axis of the jaws, the supporting plate B is therefore carried by hinge D with the pintle *d* carried in a hole on a boss *d′* so that the hinge axis is permanently in fixed relation, and in the form shown is parallel with the axis of the stud E forming the opposite end of the arm. The stud or the supporting end E has the taper portion E′, merging into the shank F, which is threaded to receive clamp C, while a complementary hole *c′* in jaw member C′ is tapered to provide a locking fit on the tapered portion E′ of the stud end of the arm.

A set screw G screws into a threaded hole *c″* on the end of the jaw C′ on the opposite side of the shank from the clamp jaw, and engages a recess *c* in order to permit setting of the jaw members a suitable distance apart to accommodate the size and shape of the rod, bar or stanchion I to which it is desired to clamp the adjustable bracket, the clamping jaws being so arranged that they will not project beyond the bar *l*, to interfere with adjacent members such as the

frame section, fragmentary section of which is shown at II. By the clamping of the jaws to the supporting bar or other rigid member *l*, the stud E may be swung on its axis, varying the position of adjustment of the arm A to any degree and with any nicety of adjustment desired, which is accommodated by the taper E′ and when adjusted the hinge D assures the supporting plate B to be swung so that it is in a plane parallel both with the axis of the jaws and the axis of the stud E, in order that this plate B will abut and accurately register with the end of an object such as III, the end of which has a predetermined position to which this supporting plate B must conform and which it must accurately engage.

The supporting plate B is preferably toothed or knurled with star radial grooves so that it will firmly clamp and hold the abutting plate as by a wing nut H engaging a suitable threaded portion *h* in the supported member. The clamps have their jaws preferably recessed as shown at J so that the ends *j* assure the clamping by spanning to the maximum extent of the jaws a section of the supporting rod thereby assuring firmness in spite of wear or irregularities.

It will be noted that the nut K when screwed onto the threaded shank F presses the clamp member C toward the clamp member C′, and with the arm A adjusted to the desired angularity the further pressure of the nut K will draw the taper section E′ into a friction locking fit and simultaneously will draw the jaws of the clamps C, C′ together, so that the single tightening operation of the nut K clamps the entire adjustable bracket to its firm and fixed support and clamps the arm in its desired angular position. The desired latitude of sizes and shapes of the supporting stanchion *l* is accommodated by the set screw G, which engaging the recess *c* assists in keeping the two parts of the clamp in the proper relative position.

As shown in Figure 3, an additional arm L may be positioned with a frictional or serrated boss or hub engaging the complementary face on the side of the clamp member C, so that an additional clamping operation is simultaneously performed by turning the nut K home or to its seat, viz, effecting a rigid support in the desired angular position of the arm L at the end of which member L may be a mirror M or such other device as may be desired.

As shown in Figure 5, the tapered stud section E′ is supplanted by the engaging serrated disc portions N, one side being on the boss or hub E″ of the arm A and the other on the back of the clamping plate C′. The threaded shank in this modification takes the form of a bolt with the head O, and with the serrated disc N performs the same function as when drawing home the tapered shank E′ in the preferred form. In either case, while a full bearing is provided for the nut K on the back of the clamp C, the hole Q, in the clamp C, is larger than the threaded or other portion of the shank which it surrounds, in order to provide for canting and irregularities in adjustment, and insure a firm bearing of the clamps with the main stanchion of the section in co-operation with the heel set screw G on their opposite end.

It will thus be seen that, for example, when my improved supporting bracket is used on a motor car it serves in a most efficient, durable and effective manner to rigidly support the ends of a visor or similar article, the end portion of which is shown at III. In such case the visor roll or frame may be of uniform length, while the distance between the wind shield stanchions such as indicated at I on either side of the car may vary in distance of separation and the adjustability of the bracket hinge D will always insure a perfectly registering engagement of the plate B with the end of the visor plate or roller, while the clamping end of the bracket may be raised or lowered, and while attaching to any size of wind shield, may with one operation of the tightening of the nut K affect a simultaneous locking of adjustment and clamping with rigidity and permanence for all conditions of service. By the formation of the jaw sides of the clamps, as shown, they are universally applicable to a round, square or other sectional rod or stanchion. In particular the great advantage of my adjustable bracket when used in this connection is its strength and simplicity and economy of manufacture.

It is evident that many modifications can be made in the details of construction, in dimensions, and in the material of which my bracket or its various parts are constructed, without departing from my invention, but what I claim and desire to secure by Letters Patent is:

1. A bracket comprising an arm, a member pivotally attached thereto at one end, a bolt cooperating with its other end, and clamps coacting with said bolt to clamp said arm to a fixed support and simultaneously lock said arms to said clamps in any desired position.

2. A bracket comprising, in combination, clamping means having an opening therethrough, an arm having an opening adjacent an end thereof, said arm adapted to frictionally engage said device, means passing through said openings to secure said arm in an adjusted position, and a supporting element adjustably mounted on said arm adapted to occupy a plurality of parallel positions as said arm is adjusted.

3. A bracket comprising, in combination, clamping means having an opening therethrough, an arm having an opening adjacent

an end thereof, said arm adapted to frictionally engage said device, means passing through said openings to secure said arm in an adjusted position, and a supporting element mounted on said arm on a pivot parallel with said securing device.

In testimony whereof, I have signed my name to this application, in the presence of two subscribing witnesses, this 26th day of April, 1921.

JOSEPH B. McMULLEN.

Witnesses:

HERMAN F. CUNTZ,

H. Y. MONTAGUE.