(No Model.)

G. F. TONG.

ADJUSTABLE PORTABLE PIPE VISE BENCH.

No. 600,100. Patented Mar. 1, 1898.

Fig. 1.

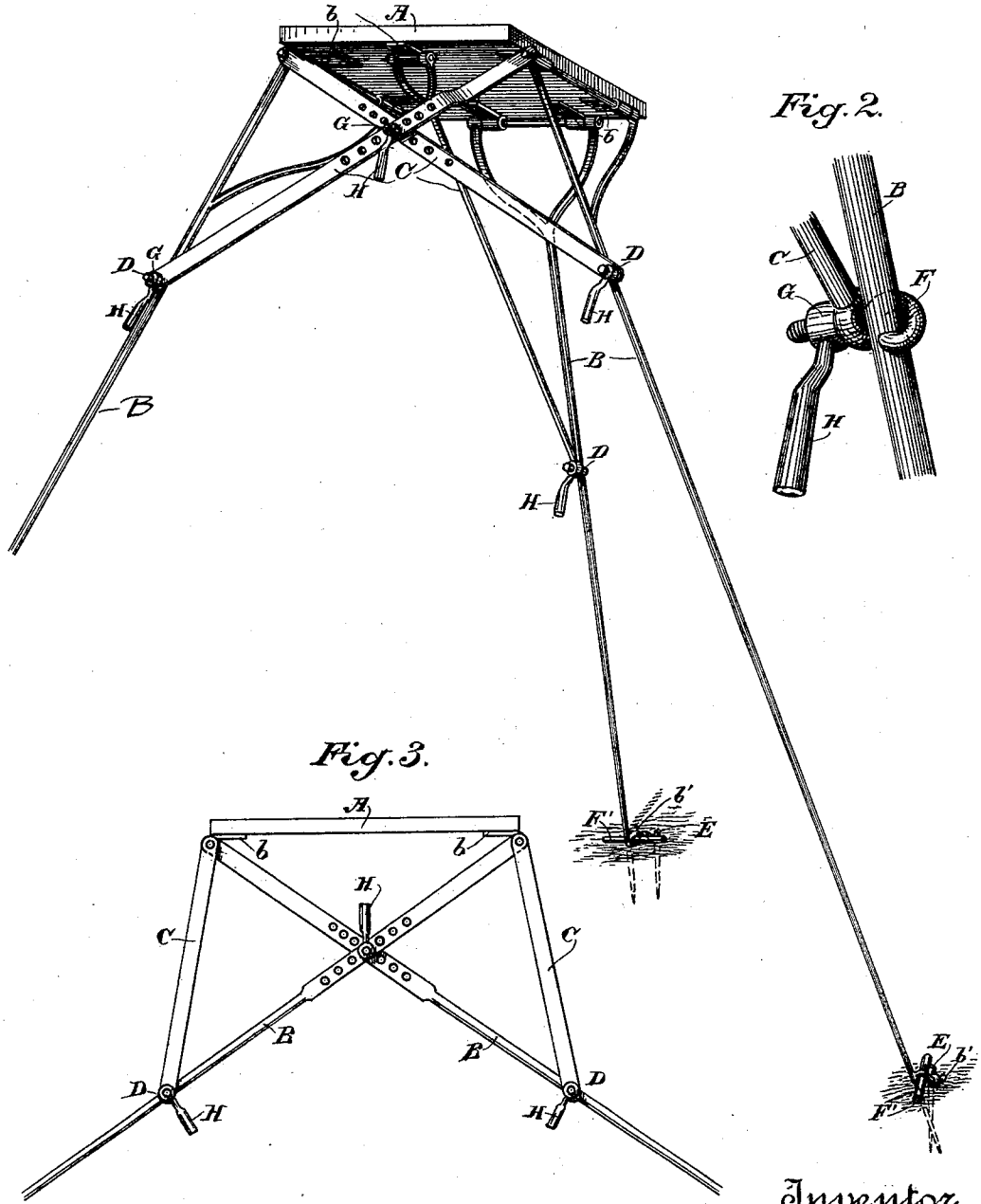


Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE F. TONG, OF SACRAMENTO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO M. K. BARRETT, OF SAME PLACE.

ADJUSTABLE PORTABLE PIPE-VISE BENCH.

SPECIFICATION forming part of Letters Patent No. 600,100, dated March 1, 1898.

Application filed October 7, 1897. Serial No. 654,425. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. TONG, a citizen of the United States, residing at Sacramento, county of Sacramento, State of California, have invented an Improvement in Adjustable Portable Pipe-Vise Benches; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a portable bench which is especially designed as a support for vise for pipe and screw-thread cutting devices.

It consists, essentially, of a heavy table having hinged to its lower surface at the edges legs which diverge widely from their point of hinging to the bench, so as to form a wide-based tripod. In conjunction with these legs are brace-bars, also pivoted or fulcrumed upon the lower part of the bench, extending diagonally downward and having clamps by which they are adjustably locked upon the main legs, whereby the latter are held firmly in place. The lower part of the legs are provided with means to prevent their sinking deeply into the ground when the work is being done and means for holding them in place.

Referring to the accompanying drawings, Figure 1 is a perspective view of the apparatus. Fig. 2 is an enlarged view of one of the brace-clamps. Fig. 3 is a modification of my device.

In work which is done by plumbers, either in the construction of new buildings or repairs upon old, it is usually necessary to find some strong fixed bench to which the necessary pipe and screw-thread cutting tools and holding vises can be attached, said devices having sufficient resistance to prevent their becoming detached or moved by reason of the strain put upon them when cutting pipe or forming screw-threads upon the pipe. Such fixtures are not easy to find; and it is the object of my invention to provide a simple portable apparatus that can be set upon the ground or upon any convenient floor or surface, so that the work can be completed without difficulty.

A is a table or bench of heavy material of any suitable or convenient size.

B B are legs of considerable length, the upper ends being forked into two diverging parts, which are pivoted or hinged to stout brackets *b* on the lower outer edges of the table. These legs are here shown as three in number, hinged to three adjacent sides, leaving one side free and convenient for the attachment of the pipe or screw cutting devices or vise These legs are of such length that they may be widely diverged and set upon any convenient supporting-surface, or if nothing else is convenient they can be set upon the surface of the ground. If they are thus set, some arrangement must be devised to prevent their being forced deeply into the ground if the latter is soft. I therefore have shown each of the legs provided with an outwardly-projecting arm or lug *b'*, which is curved into an **S** shape, as shown. The part adjacent to the leg has an upward curvature or concavity which allows of a stick, a section of pipe, or any convenient object being laid beneath it, and whatever the article may be it is clamped and held in place by the arch of the curved piece, so that it lies closely against the leg, and as it extends over a considerable surface it will prevent the leg from being pressed into the ground more than enough to retain it steadily in place. The outer reverse curve of the lug serves to receive the hook-shaped lug of a stake E, which may be driven into the ground, and the lugs are thus firmly fixed.

In order to prevent the legs from spreading beyond the desired point and also to hold the bench rigidly, I have shown brace rods or arms C, which are hinged approximately upon or near the sides of the bench opposite to the hinge-points *b* of the legs. These brace-rods extend across beneath the table at a more acute angle than that of the legs, so that they intersect the latter at points D, where they are provided with clamps to unite them rigidly to the legs.

Various forms of clamps may be employed. In the present case I have shown eyebolts F, which clasp the legs B, and with shanks which extend through holes or eyes formed in the lower ends of the braces C. Upon the outer ends of these shanks, which are screw-threaded, are fitted nuts G with convenient handles H, by which they are turnable, so as to clamp the lower ends of the brace-rods C

between the nuts and the legs B, thus holding them firmly where desired.

When the apparatus is to be folded for transportation, it is only necessary to loosen the clamps by turning the nuts backwardly, when the legs can be folded closely together, the braces sliding upon the legs to allow of them so doing, or they may be entirely disengaged, if preferred. Two of the legs diverge from opposite sides of the table, and their braces C cross each other beneath the table. These cross-braces are perforated, and a bolt is fitted to pass through coincident holes at the intersection of the braces, so that they are locked firmly together and the rigidity of the structure increased. The bench being thus supported and braced it will be possible to bring any amount of pressure to bear upon the work without dislodging it or unduly settling it into the ground when it is set upon a soft surface. If it is desired, however, to make it more secure, it is done by the employment of stakes E, which are formed of metal and have a curved-over section or lug *e*, which can be driven down, so that the hook engaging with the projecting reversely-curved lugs *b'* of the legs will absolutely prevent any motion thereof.

In Fig. 3 I have shown the legs instead of the braces crossing each other and locked at their intersection beneath the table, while the braces diverge outwardly from the edges of the table to a lesser degree and have their lower ends adjustably clamped to the legs, as previously described.

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

1. A portable pipe, screw-cutting, and vise bench, consisting of a table, legs having the upper ends forked and hinged to the edge of the table at a plurality of points in line with each other about which hinges the legs are independently turnable, supplemental brace-rods hinged to the table at points essentially opposite to the hinges of the legs extending diagonally across and intersecting the opposite legs at an acute angle and having openings in their lower ends, curved eyes loosely slidable upon the legs, shanks of said eyes passing through the openings made in the brace-rods and clamping lever-nuts whereby the parts are locked together.

2. A portable pipe, screw-cutting, and vise bench, consisting of a table, legs with forked diverging upper ends hinged to the sides of the table at a plurality of points and turnable about said hinges, brace-rods pivoted beneath the table essentially opposite to the legs which diverge upon three sides thereof, said brace-rods intersecting the legs at points below the attachment to the table, and clamps whereby they are locked thereto, one pair of said brace-rods crossing each other having holes made through them at the intersections, and a locking eyebolt and nut whereby they are additionally braced at the points of intersection.

3. A pipe and screw-cutting and vise bench consisting of a table, legs hinged and diverging upon three sides thereof, with diverging forked ends at the top, hinged at a plurality of points to the table, brace-rods similarly hinged upon opposite sides of the table from the legs extending across beneath the table, meeting the legs at an acute angle at points intermediate between the table and the ground, clamps whereby said braces and legs are rigidly united, curved outwardly-projecting lugs fixed to the legs near the lower ends and so formed as to clasp and retain transverse bars laid upon the surface of the ground beneath them, and hook-shaped locking-pins adapted to be driven into the ground and engaging said lugs.

4. An improved plumber's vise-bench consisting of an essentially horizontal table, diverging legs and braces hinged to the lower side of the table in pairs, one member of each pair crossing and diverging outwardly and downwardly from their intersection, and the other members of said pairs diverging from the edges of the table in a less degree to points where they intersect the first-named members, a hole made in the lower portion of one member of each pair and an eyebolt engaging the other member of the same pair and passing through said hole, other eyebolts and holes at the first-named intersection, and nuts for securing said bolts.

In witness whereof I have hereunto set my hand.

GEO. F. TONG.

Witnesses:
GEO. H. STRONG,
S. H. NOURSE.