A. G. STRATHERN.

SCREW CLAMP OR GRIPPING DEVICE.

APPLICATION FILED DEC. 20, 1918.

1,322,370.

Patented Nov. 18, 1919.

Fig. 1.

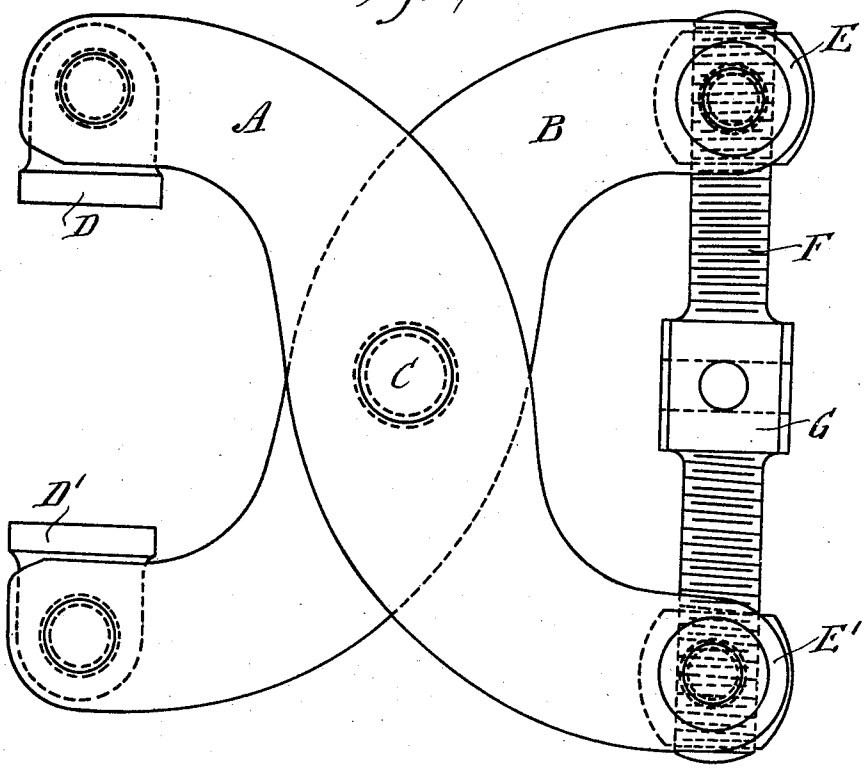
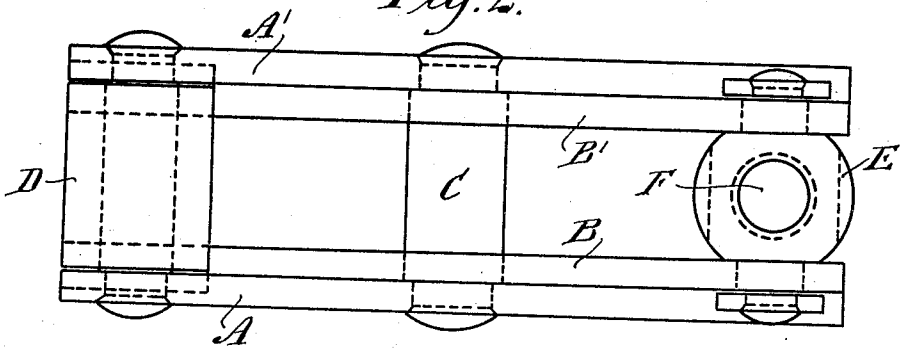


Fig. 2.



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UNITED STATES PATENT OFFICE.

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SCREW CLAMP OR GRIPPING DEVICE.

1,322,370. Specification of Letters Patent. Patented Nov. 18, 1919.

Application filed December 20, 1918. Serial No. 267,655.

To all whom it may concern:

Be it known that I, ALEXANDER GEORGE STRATHERN, a subject of the King of Great Britain and Ireland, residing at 50 Wellington street, in the city and county of Glasgow, Scotland, have invented certain new and useful Improvements in Screw Clamps or Gripping Devices, of which the following is a specification.

This invention relates to screw clamps or gripping devices—sometimes called grabs—of the type comprising two arms hinged or pivoted together—like the two parts of tongs or pincers or scissors—a gripping member being provided on the one end of each arm, and a rod, oppositely threaded at its two ends, being arranged to engage with the two arms so that, by rotating this rod in the one direction, the two gripping members will be forced toward each other—and can thus grip an object or hold two or more objects together—and, by rotating the rod in the other direction, the two gripping members will be forced apart—and will thus release an object or objects held.

The object of the present invention is to provide an improved clamp of this type which will be specially suitable for engaging with a body having two faces nearly but not quite parallel, *e. g.* the flanges of a rolled steel joint of I-shaped or similar cross section.

The present invention consists in a clamp of this type characterized—with the above object in view—by a special construction (which will be hereinafter more fully described) involving the formation of the arms each of two flat parallel bars.

The invention is illustrated by the accompanying drawing in which:—

Figure 1 is an elevation of the clamp, and Fig. 2 is a plan thereof.

Referring to the drawing, the arms of the clamp are built up of flat parallel bars A, A^1 and B, B^1 respectively. At one end of the one arm and the corresponding end of the other arm are arranged gripping members or jaws D, D^1 which lie between the two bars of the arms and are transversely pivoted thereto. At the other end of each arm is arranged a nut, E or E^1, which lies between the two bars of the arm and is also pivoted transversely thereto. The nuts are tapped right and left hand respectively and receive the two ends of the operating rod or double ended screw F which is threaded right and left hand at its two ends to engage with the nuts in the manner of a turn buckle. The two arms are hinged together by the pivot C which is arranged intermediate between the gripping members D, D^1 and the nuts E, E^1. The axes of the hinge pivot C and of the pivots of the members D, D^1 are perpendicular to the planes of the bars A, A^1, B, B^1.

The rod F is provided with means for rotating it by a spanner or the like. It may for example be formed with an enlarged socketed or apertured portion of squared section as shown at G.

The construction as above described allows of the production of a clamp which combines effectiveness in action with moderate cost, handiness, strength, durability, and relative lightness.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A screw clamp of the type hereinbefore mentioned, characterized by the arms being formed each of two flat parallel bars, gripping members placed between and pivoted transversely to the two bars of their respective arms at one end thereof a nut being placed between, and pivoted transversely to the two bars of each arm at the other end thereof, and threaded operating rod engaging said nuts, the two arms being hinged together at an intermediate point, and the axes of the hinge and pivots being perpendicular to the planes of the arm bars, substantially as described and illustrated.

2. A screw clamp comprising arms pivotally connected with each other intermediate their ends and disposed in crossed relation in X-shaped formation and providing substantially parallel forward ends, relatively long intermediate crossed portions angularly disposed with relation to the forward

ends to space said forward ends a substantial distance apart, and relatively short rear ends substantially parallel and spaced at a substantial distance apart, oppositely disposed gripping members pivoted on the forward ends, oppositely disposed nuts pivoted on the rear ends, and a screw rod having right and left hand threads screwing in the said nuts and provided with a gripping portion for turning said screw rod.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDER GEORGE STRATHERN.

Witnesses:
E. L. CREW,
A. E. VIDAL.