

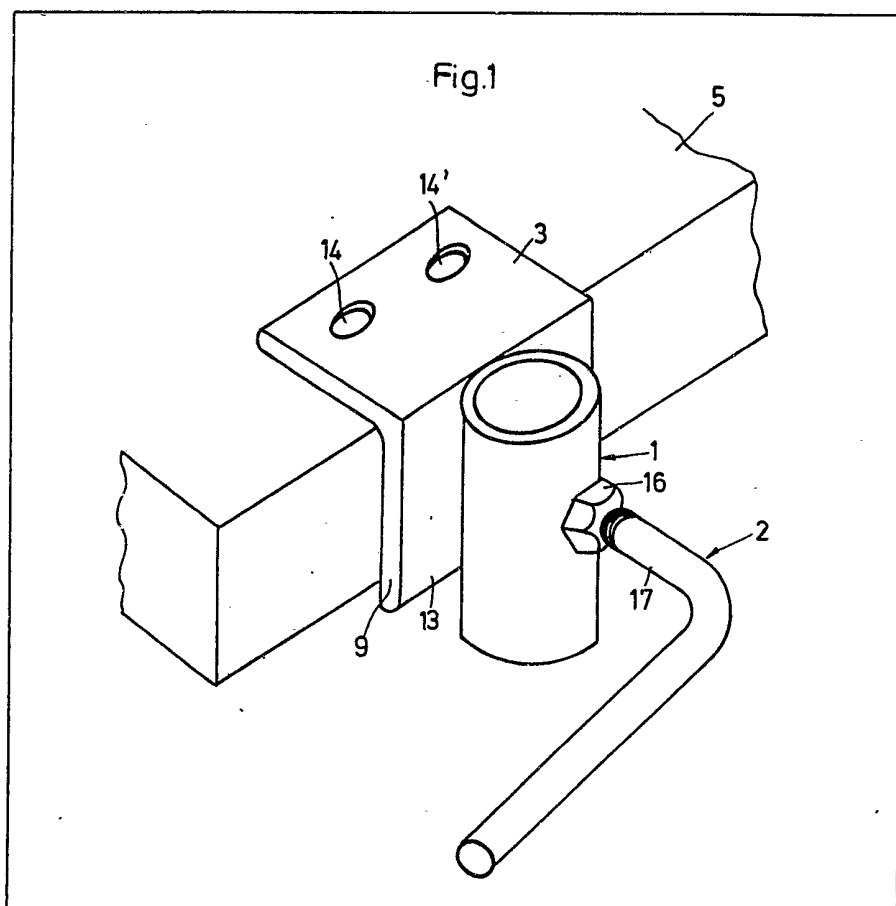
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(54) **Clamp for a support for tubes, bars and the like**

(57) A clamp for a support for tubes, rods and the like during machining thereof comprises an angle (8) which may be clamped to the edge of a workbench (5). One side (3) of the angle (8) has an inner bearing surface (4) which rests on the top of the bench (5). The other side (9) of the angle (8) has a tubular holder (1) welded to

the outer face (13) thereof, holder (1) being open at both ends (6, 7) and having the tube support therein. A nut (16) is welded to the holder (1) in alignment with a hole therein and a cranked, screwed clamping rod (2) passes through the nut (16) and holder (1) to effect clamping of the tube support. Apertures (14, 14') are provided in the side (3) of angle (8) whereby the clamp can be screwed to the bench (5).



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Fig.1

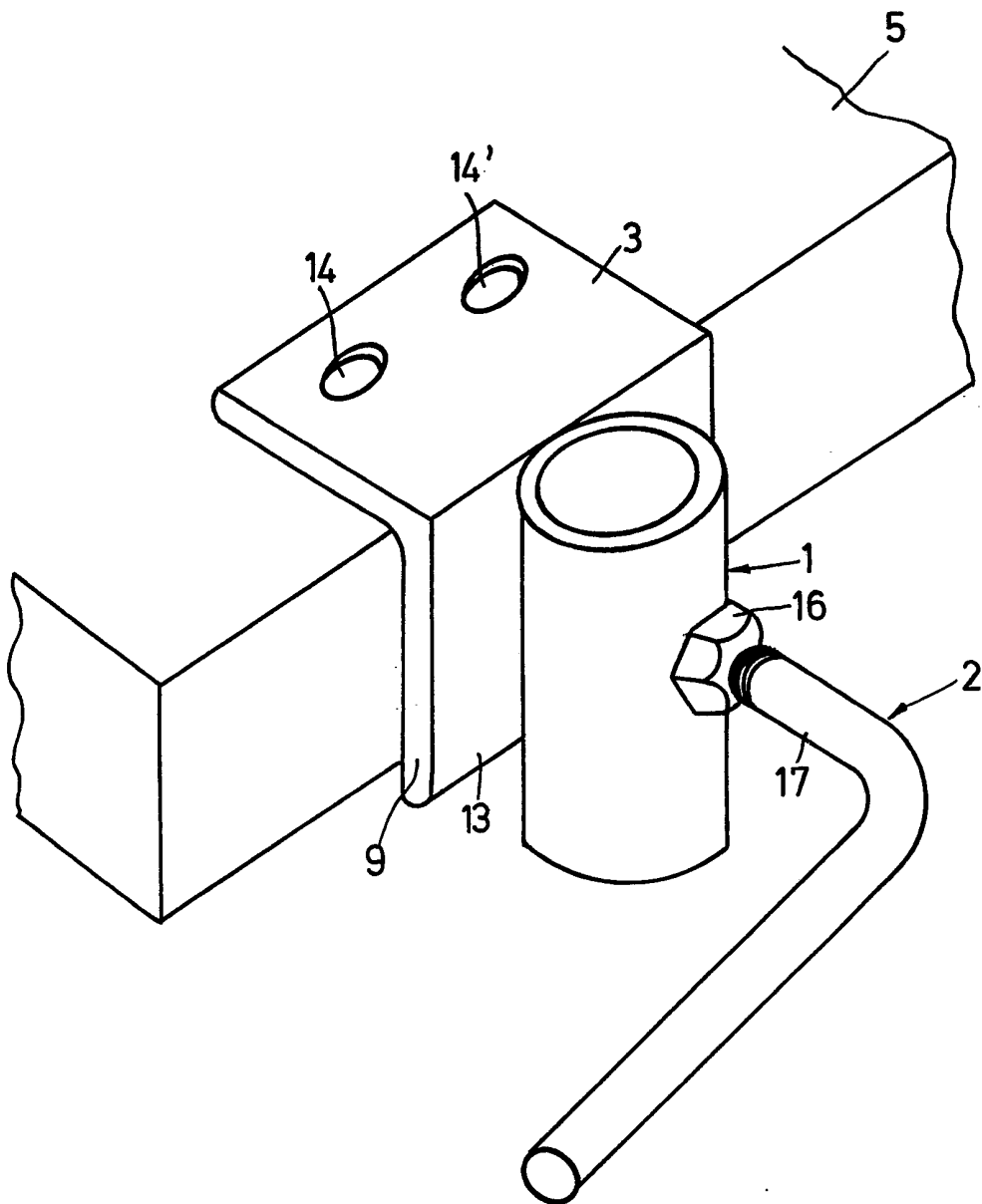


Fig.2

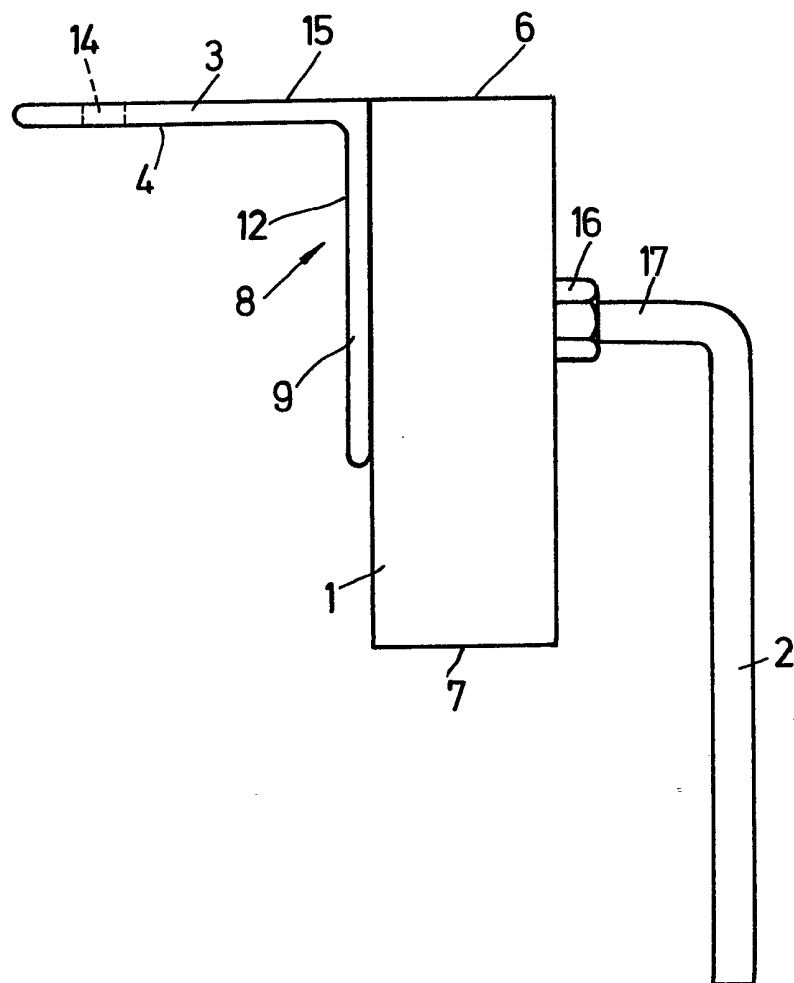
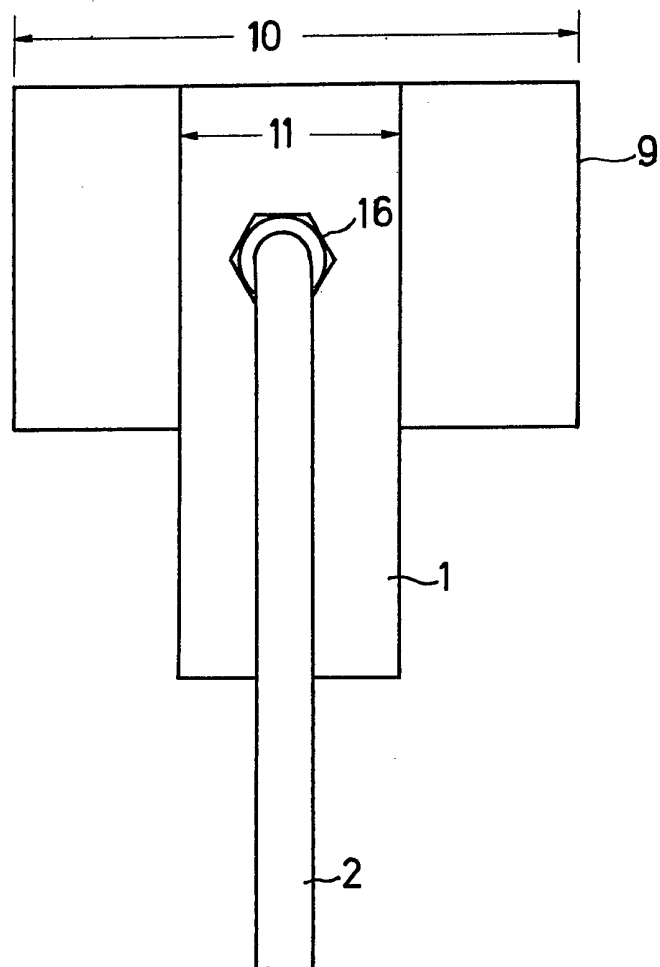


Fig.3



## SPECIFICATION

## Clamp for a support for tubes, bars and the like

The invention relates to a clamp for a support for tubes, rods and the like for supporting them during machining, such as thread cutting operations. In particular the invention relates to a clamp having at least one tubular holder for the tube support and at least one clamping member for clamping such support in the holder.

10 A known clamp of this type has three support parts constructed as tubular feet and arranged at an angle with respect to each other, by which parts the clamp stands on the floor. One of these support parts passes in an angular manner upwards into an extension part, which form the tubular holder for the support, which is clamped inside the holder by the clamping part. The clamp is relatively large and bulky as a result of its three-legged construction, so that it can only be transported in an inconvenient and difficult manner and furthermore requires a relatively large space. In order that the support can be retained sufficiently securely in the holder, the holder has a relatively long construction, which further increases the dimensions of the clamp. Furthermore, the clamp is expensive to manufacture.

If it is intended to machine relatively long tubes, bars and the like, for example if external screw threads are to be cut, then the clamp is located at such a distance from the machining unit that the rods are supported in a reliable manner during machining. Above all, if relatively short tubes are machined, then the clamp must be placed close to the machining unit on the floor, where it is a hindrance owing to its size. In addition, the clamps are generally oversized for short tubes and therefore too expensive in relationship to their purpose of use.

40 The object of the invention is to construct the clamp of the aforementioned type so that it is small and easy to handle, but is able to retain the support for the tubes reliably.

The invention provides a clamp for a support for tubes, rods and the like, for supporting them during machining, such as thread-cutting operations, with at least one tubular holder for the support and with at least one clamping member for clamping the support in the holder, characterised in that the clamp comprises a retaining flange having a bearing surface, which flange is provided on the holder.

The clamp is attached by the retaining flange to a workbench or the like in the vicinity of the respective machining unit. As a result of the flange-like construction, the clamp is supported in a troublefree manner on the workbench, so that the support for the tubes can be held reliably during machining of the tubes. The holder may have a short construction without any fear of this impairing the retention of the support in the holder. The support can be clamped reliably in the holder by the clamping part. Thus, as a result of

the construction according to the invention, the clamp has only small dimensions and can be attached directly to the workbench. This has the advantage that particularly with transportable machining units, which are supported on the workbench, the associated clamp is always available and does not have to be transported separately and set up separately at the desired distance from the processing unit. Preferably, the holder of the clamp according to the invention is constructed so that the supports for the tubes can be inserted selectively in the holders of known three-legged clamps and of the clamp according to the invention and clamped in the latter. In addition, the clamp according to the invention can be produced simply and economically and requires a small amount of space, so that there are no transportation and storage problems.

Further features of the invention will become apparent from the description, claims and drawings.

85 The invention is described in detail with reference to one embodiment illustrated in the drawings:

Fig. 1 shows a clamp according to the invention attached to a workbench, in perspective illustration;

Fig. 2 is a side view of the clamp according to Fig. 1;

Fig. 3 is a front view of the clamp according to Fig. 1.

95 The clamp has a tubular holder 1, in which a tubular or rod-like securing part of a support (not shown) for tubes, rods and the like is clamped by means of a clamping part 2. The tubes are supported by the support during machining by means of a machining unit, such as a thread-cutting machine. In addition, the clamp has a plate-like retaining flange 3, which comprises a bearing surface 4 for resting on a workbench 5 or the like.

105 The holder 1 is formed by a through-sleeve open at both ends 6, 7, which sleeve is constructed as a short, straight section of tube. Since the holder is open at both ends 6, 7, the securing part of the tube support can be clamped at any height in the holder, the lower end of the securing part projecting downwards from the holder, according to the adjustment. Despite the relatively short length, the holder supports the securing part of the tube support reliably.

115 The retaining flange 3 is formed by one side of an angle bracket 8, on the other side 9 of which the holder 1 is provided. Despite its small dimensions, the angular construction gives the clamp high rigidity and the holder 1 can be supported reliably on the side 9. Appropriately, the two sides 3, 9 of the clamp are of the same width, whereby the manufacture of the clamp is substantially simplified. The width 10 of the sides 3, 9 is greater than the greatest width 11 of the holder 1 measured parallel thereto (Fig. 3), so that on the one hand the clamp can be supported over a large surface area by the sides 3, 9 on the workbench 5 and on the other hand, a reliable

support of the holder 1 on the side 9 is ensured.

The two sides 3, 9 of the angle bracket 8 are advantageously at right angles to each other, so that the clamp can be attached by the bearing surfaces 4, 12 of the angle bracket to the edge of the workbench 5 (Fig. 1). The holder 1 is located on the outer side 13 of the side 9.

In the preferred embodiment, the retaining flange 3 is provided with at least one but preferably with two openings 14, 14' for fixing screws or the like, by which the clamp is fixed to the workbench 5. This construction has the advantage that complicated clamping and other fixing devices may be dispensed with, so that this results in a very compact and small construction of the clamp. The construction of the clamp is thus simple and poses no problems.

The upper end 6 of the holder 1 is flush with the outer side 15 of the retaining flange 3 (Fig. 2).

Thus, the clamp has no parts which project upwards, which parts could be troublesome and lead to injuries if no securing part were inserted in the holder. It is also achieved that the holder 1 is supported in its upper region by the side 9 of the angle bracket 8, so that the bending moments produced in this region by the securing part of the tube support can be absorbed reliably by the angle bracket.

In order that the overall dimension of the clamp remains small and nevertheless the holder 1 has a sufficiently great length, the holder 1 extends from the plane containing the outer side 15 of the retaining flange 3 downwards beyond the other side of the angle bracket 8 (Figs. 2 and 3).

In the embodiment, the holder 1 is welded to the side 9. However, it may be constructed in one piece with the angle bracket. The cross-sectional shape of the holder 1 depends on the cross-sectional shape of the securing part of the tube support to be received. Normally the holder has a circular cross-section.

The clamping part 2 consists of an angle lever, which is screwed into a tapped hole in the holder 1 and by which the securing part inserted in the holder is clamped. The tapped hole may be provided directly in the holder 1, but also, as in the embodiment, may be formed by the hole in a nut 16, which is welded to the holder and the tapped hole of which aligns with a hole in the holder. For clamping the securing part, the angle lever is rotated until its bent end part 17 comes to bear against the securing part inside the holder and clamps the latter.

## CLAIMS

1. A clamp for a support for tubes, rods and the like, for supporting them during machining, such as thread-cutting operations, with at least one tubular holder for the support and with at least one clamping member for clamping the support in the holder, characterised in that the clamp comprises a retaining flange having a bearing surface, which flange is provided on the holder.
2. A clamp according to claim 1, characterised in that the holder is a through-sleeve open at both ends.
3. A clamp according to claim 1 or claim 2, characterised in that the retaining flange is one side of an angle bracket and that the holder is provided on the other side of the angle bracket.
4. A clamp according to claim 3, characterised in that the two sides of the angle bracket are at right angles to each other and that the holder is provided on an outer face of said other side.
5. A clamp according to claim 3 or claim 4, wherein said holder is welded to said other side.
6. A clamp according to any one of claims 3 to 5, characterised in that provided in the retaining flange is at least one opening for a fixing screw of the like.
7. A clamp according to any one of claims 3 to 6, characterised in that an upper end of the holder is flush with an outer side of the retaining flange.
8. A clamp according to any one of claims 3 to 7, characterised in that the bearing surface is an inner side of the retaining flange.
9. A clamp according to any one of claims 3 to 8, characterised in that the holder projects downwardly beyond said other side of the angle bracket.
10. A clamp according to any one of claims 3 to 9, characterised in that the width of said other side is greater than the greatest width of the holder measured parallel thereto.
11. A clamp according to any one of claims 1 to 10, characterised in that the clamping member is an angled lever, one end of which fits by a screw-threaded section into a tapped hole of the holder.
12. A clamp according to claim 11 characterised in that the tapped hole is provided by a nut which is attached to the holder and the tapped hole of which nut is in alignment with a through hole in the holder.
13. A clamp for a support for tubes, rods and the like, substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.