

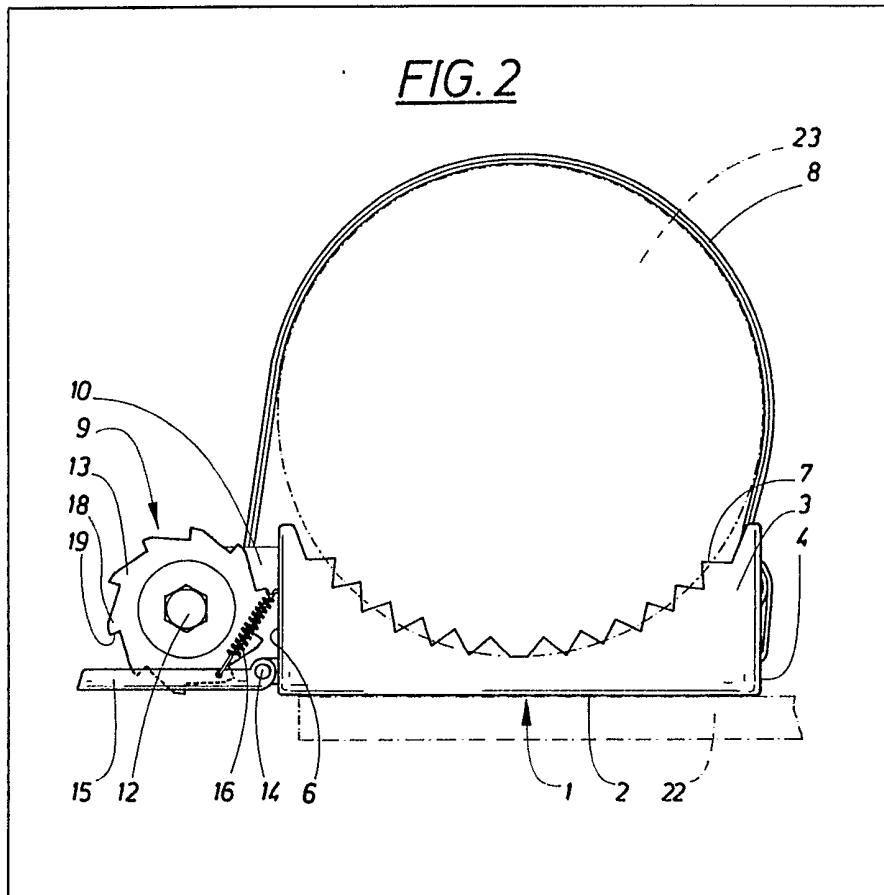
(12) UK Patent Application (19) GB (11) 2 085 066 A

(21) Application No 8128924
(22) Date of filing 24 Sep 1981
(30) Priority data
(31) 8006727
(32) 26 Sep 1980
(33) Sweden (SE)
(43) Application published
21 Apr 1982
(51) INT CL³
F16B 2/08
(52) Domestic classification
E2A 372 428 GM
(56) Documents cited
GB 1533412
GB 1235356
GB 1189112
(58) Field of search
E2A
(71) Applicants
Thulin Produkter HB,
Ravinvägen 10, S—513
00 Fristad, Sweden
(72) Inventors
Rulf Thulin,
Mats Thulin
(74) Agents
Mewburn Ellis & Co.,
70/72 Chancery Lane,
London WC2A 1AD

(54) **Fastening device**

(57) A fastening device for mounting articles on posts etc comprises a main portion (1) adapted to support the article (22) and a securing device (8, 9) to secure the main portion (1) to the post (23). The main portion has the shape of a box with a plane (2)

from which there extend four edges (3, 4, 6), two of the side edges (4, 6) being adapted to secure a flexible elongated element, preferably a band (8) belonging to the securing device (8, 9), while the two remaining side edges (3, 5) situated opposite one another are adapted to bear against the post (23). A preferred article to be so mounted is a clay-pigeon thrower.



GB 2 085 066 A

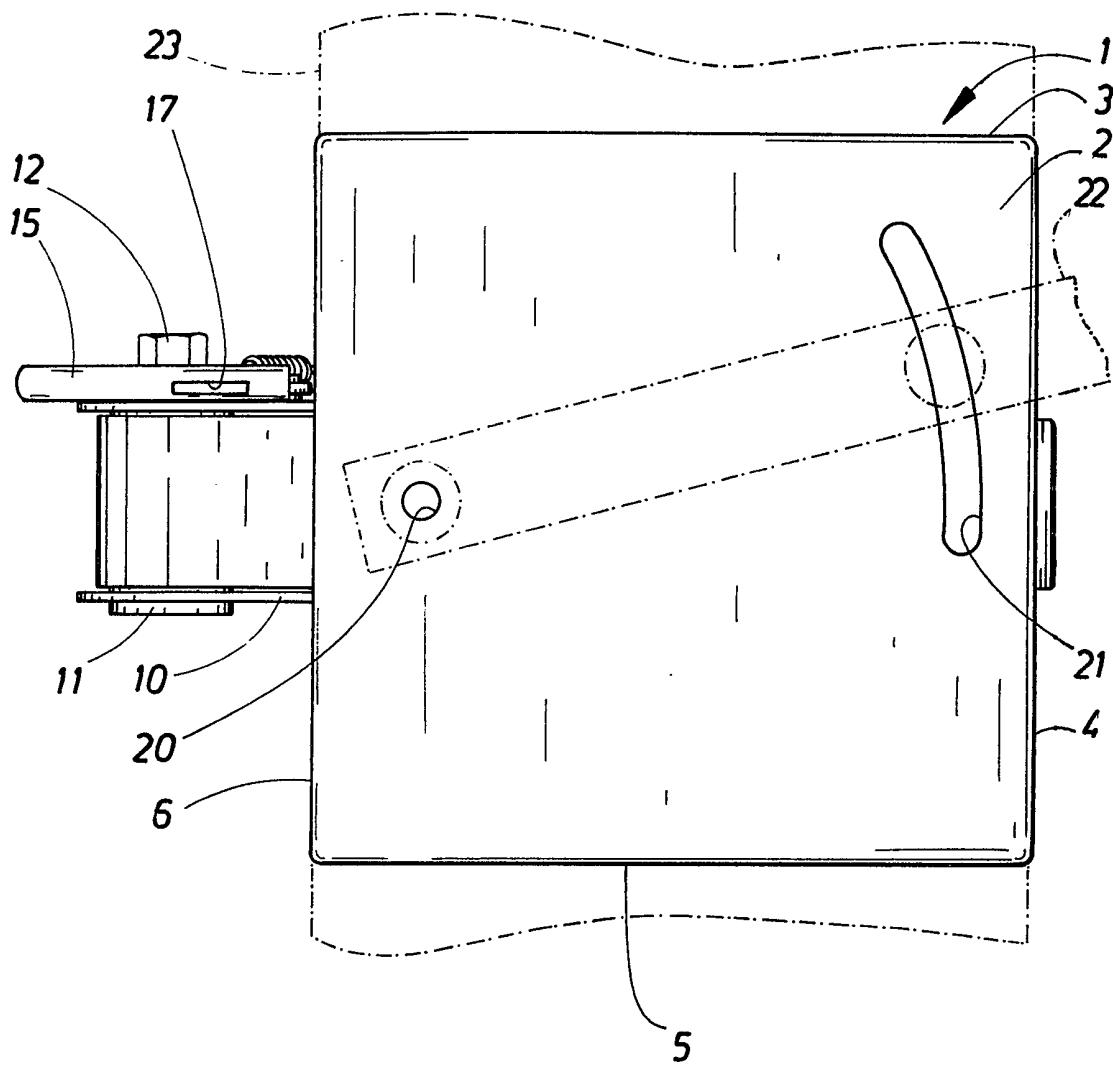


FIG. 1

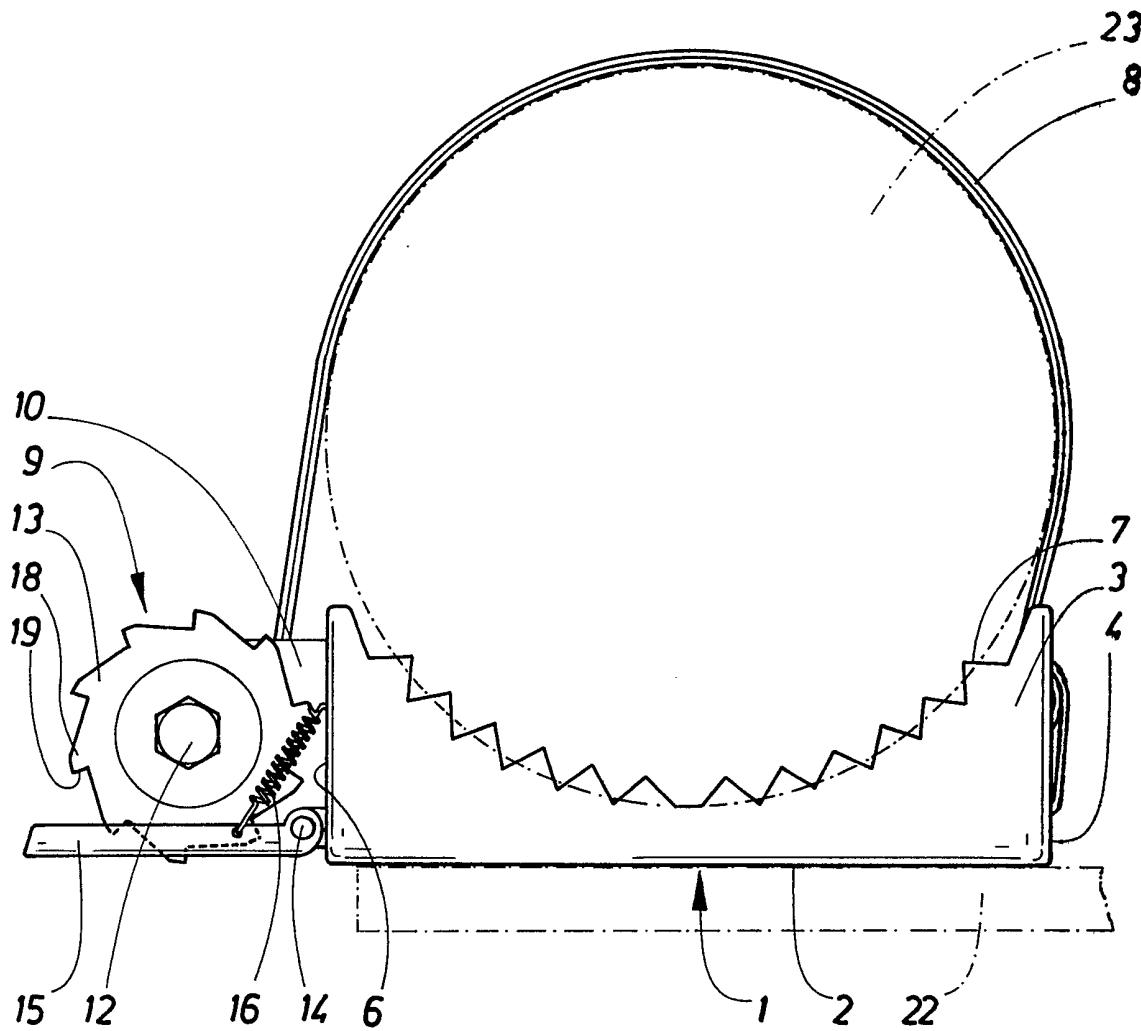


FIG. 2

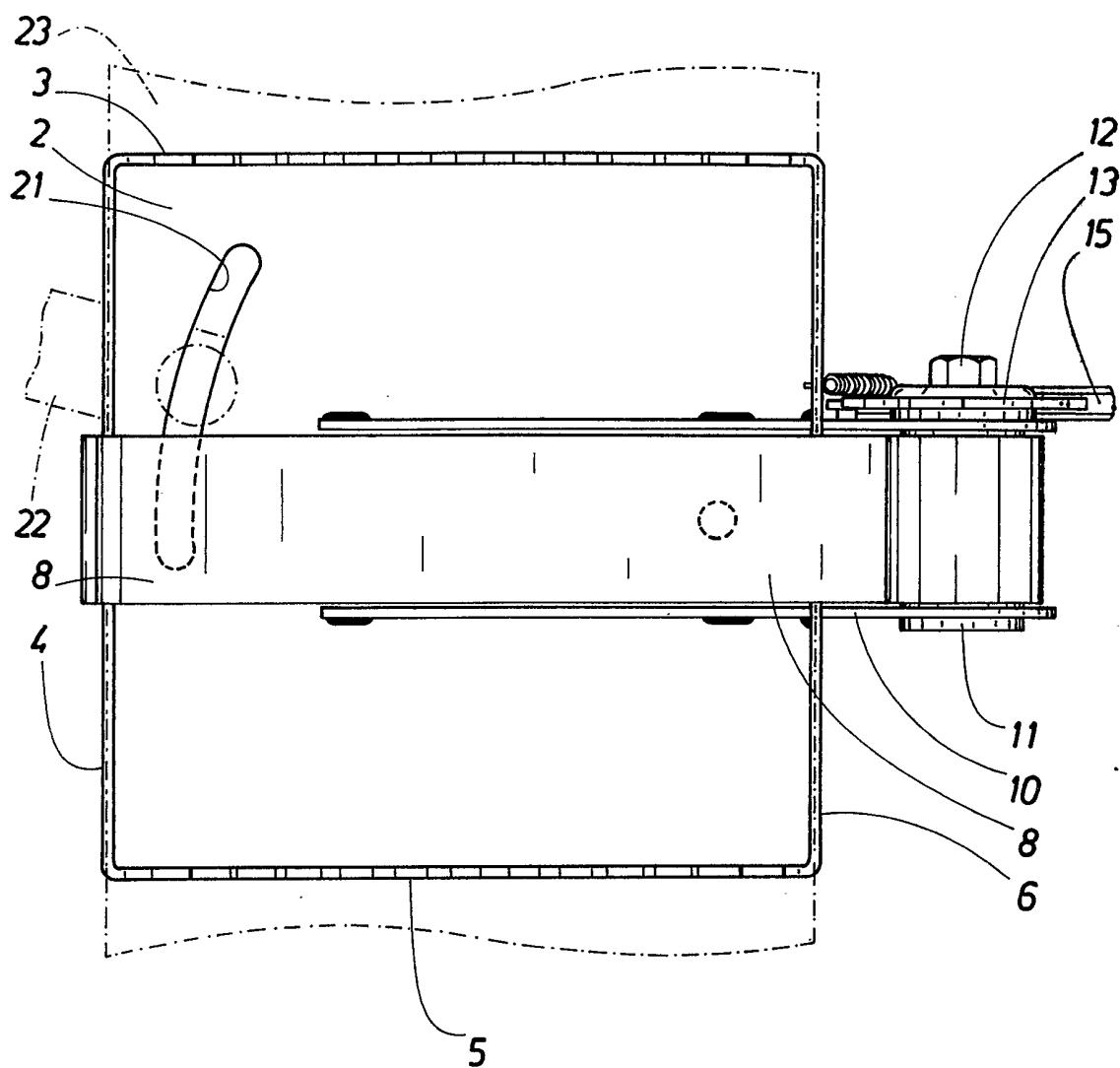


FIG. 3

SPECIFICATION

Fastening device and clay pigeon thrower incorporating it

The present invention relates to a fastening device and particularly to a clay-pigeon thrower including such a device.

For many different purposes some object is required to be supported at a certain height. In order to reach the intended height, some kind of stand is required. In many cases the stand is more bulky to transport and has a greater weight than the supported object itself. In addition, the stand represents a cost which can be regarded as unnecessary, because it only relates to an auxiliary device.

With the object of eliminating the stand, it is usual to make use of available objects for fastening up the actual article. Thus tree trunks and house walls, for example, are used for mounting signs so that these do not require any separate poles and the same applies, for example, to lighting fittings. As an actual article in connection with the invention, a clay-pigeon thrower may be mentioned. This must be supported at a certain height above the ground and conventional throwers are therefore provided with a stand. It has been proposed that a tree should be used for mounting the clay-pigeon thrower since it is often used in a wood. In practice, however, this has not proved feasible because the securing members which have to be used in such a case and be screwed into the trunk of the tree, damage this, and the damage increases in extent with time through decay. On the other hand, a tree stump generally does not have the necessary height.

The object of the present invention is to provide a fastening device for the temporary or permanent mounting of articles on objects which can be encircled, for example tree trunks, poles or portions of fences.

It is also an object of the invention to provide a device of the said kind which does little or no damage to the object which is used for the mounting.

A further object of the invention is to provide a device which can be mounted very quickly and be taken down equally quickly and which can immediately be adapted to the object which is to be used for the mounting.

Yet another object of the invention is to provide a device of the said kind which is adapted for mounting a number of different types of article.

One form of embodiment of the invention is described below being illustrated in the accompanying drawings in which Figure 1 shows the device in a front view; Figure 2 shows the device in a side view; and Figure 3 shows the device in a view from the back in relation to the view in Figure 1.

The fastening device comprises a box-like main portion 1. The main portion 1 comprises a plane 2 and four side members 3, 4, 5, 6. According to Figure 2, the side members 3 and 5 are cut out in

65 an arcuate shape and comprise teeth 7 along the edge. The side member 4 is provided with slits for securing a band 8. Disposed on the opposite side member 6 is a winding device 9.

The winding device 9 is fixed to two flanges 10 which continue into the box-like main portion and brace the plane 2. The winding device consists of a core 11 which is rotatable in the flanges 10 and which is adapted to secure the band 8, that is to say the end thereof which is not fixed to the side member 4. A spanner grip 12 is provided for turning. In addition there is a ratchet wheel 13 which cooperates with a pawl 15 which is pivotable about a spindle 14 and which tends to be swung in towards the sprocket through the action of a spring 16. Formed in the pawl is a slit 17 through which a tooth of the ratchet wheel 13 can project.

As a result of the shape of the ratchet teeth comprised by the wheel 13, this can be turned in the one direction (clockwise in Figure 2) and the teeth then lift the pawl 15 against the action of the spring 16. On the other hand, the ratchet wheel 13 cannot be turned in the opposite direction (counterclockwise in Figure 2) unless the pawl 15 is lifted by hand by pressure against its outer portion. In the locked position, one of the teeth 18 rests with its steeper portion 19 against the inner end of the slit 17. The plane 2 may appropriately be formed with some kind of 95 fastening arrangement for securing the article which is to be supported. In the present example of embodiment such a fastening arrangement is shown in the form of a hole 20 and an elongated slot 21 which is shaped like an arc with the centre 100 in the hole 20. As indicated in chain lines, a bar-shaped article or a bar-shaped part 22 of an article can be supported for example by means of screws extending through said hole 20 and the slot 21, in which case the article 22 can be swung into 105 various angular positions. Other fastening arrangements may, of course, be provided on the box-like main portion 1.

In the Figures, the device is shown mounted on a round object, for example a tree trunk or a power pole, designated in the Figures by 23. One begins by laying the box-like main portion 1 with the edges of the side members 3 and 5 provided with the teeth 7 against the trunk or the like 23. During this, the band 8 should be released from the

115 winding device 9. Then the band 8 is pulled round the tree trunk 23 or the like and fixed to the core 11, after which it is turned round in the winding direction (clockwise in Figure 2) by means of a spanner engaging round the spanner grip 12.

120 When the band is taut, it is held in this position by cooperation between the ratchet wheel 13 and the pawl 15. The article 22 is now securely supported at the desired height by the fastening device. When it is desired to remove the device, it is only necessary to swing the pawl 15 outwards and to pull out the band 8 and finally to detach it from the core 11. After that the device can be lifted off.

125 It is an advantage of the device that the main

portion thereof is shaped like a box. This provides possibilities for a very satisfactory and stable bearing against the object which is to be used from the mounting even if this should be uneven and 5 comprise projecting portions. In addition, the "bottom" of the box provides an excellent plane for various types of fastening arrangement, for example the hole shown. The side edges provide the possibility for securing one end of the band 10 and for the winding device. The box-shaped main portion is simple to manufacture, for example by pressing operations, and then acquires the said advantageous characteristics which are built into the selected shape.

15 The device is also advantageous in that the band used as a bracing member affords an exceptional adaptation to the supporting object largely independently of its shape and size. In addition, the band is easy to handle and takes up 20 very little space during transport. In addition, the device is very simple in comparison with all other conceivable arrangements.

In a very advantageous form the fastening device makes a part of clay-pigeon thrower. Such 25 an apparatus is generally used in the woods and a common type of the apparatus is intended for temporary use. The thrower has, consequently, to be brought to a place in the woods and put in position for use. As the thrower mechanism has to 30 be carried a distance over the ground the thrower must include a stand which means an increased transportation volume and weight.

If the clay-pigeon thrower is provided with a fastening device of the kind described a stand can 35 be omitted as the thrower mechanism can be carried by a tree trunk, a post or another upstanding object of limited dimensions.

A clay-pigeon thrower embodying the invention will comprise a bracket a portion of which is 40 represented in the drawings by the reference numeral 22. This bracket is secured to the main portion 1 by means of a bolt in the hole 20 forming a pivoting axis for a bracket and a bolt in the slot 21. By moving the last mentioned bolt in 45 the slot 21 the bracket can be brought to different elevation angles for adjusting of the ballistic path of the clay-pigeon.

The bracket 22 is at its outer end opposite to the end secured by means of the bolt in the hole 50 20 carrying a swingable arm provided with a resting surface for the clay-pigeon. Between the arm and the bracket is a spring tensioned. The spring can be stretched by pivoting the arm in one

direction and if the arm then is released the same 55 will swing back in the opposite direction. This swinging movement results in that the clay-pigeon will be thrown away from its resting surface in a ballistic path.

The entire clay-pigeon thrower consists of said 60 mechanism and the fastening device described. It means that a relatively small apparatus has to be transported and the same can be attached to for example a tree trunk in a suitable height. The stand is consequently not necessary.

65 CLAIMS

1. A fastening device for mounting articles on available objects such as tree trunks and posts and comprising a main portion adapted to support the article and a securing device to secure the main 70 portion to the object, wherein the main portion has the shape of a box with a plane from which there extend four side edges, two of the side edges being adapted to secure a flexible elongated element while the two remaining side edges 75 situated opposite one another are adapted to bear against the object.

2. A fastening device as claimed in claim 1 wherein the elongate element is adapted to be secured by its one end to the one side edge and to 80 be connected to a winding device fixed to the other side edge so that the element can be secured to the winding device and then be wound up and tightened round the object.

3. A fastening device as claimed in claim 2, 85 wherein the winding device comprises a rotatable core which is connected to a ratchet wheel which cooperates with a releasable pawl so that the element can be wound up by turning the core and held in the taut position by the action of the 90 ratchet wheel and pawl and can be released by inactivating the pawl.

4. A fastening device according to claim 1 or claim 2 wherein the flexible elongate element is a band.

5. A fastening device substantially as herein described and with reference to the accompanying drawings.

6. A clay-pigeon thrower comprising a bracket, a swingable arm with a resting surface for a clay-pigeon and a spring tensioned between the bracket and the arm to be stretched by the swinging of the arm in one direction and to swing the arm when released; in which the bracket is 100 connected to a fastening device according to any one of the preceding claims.