

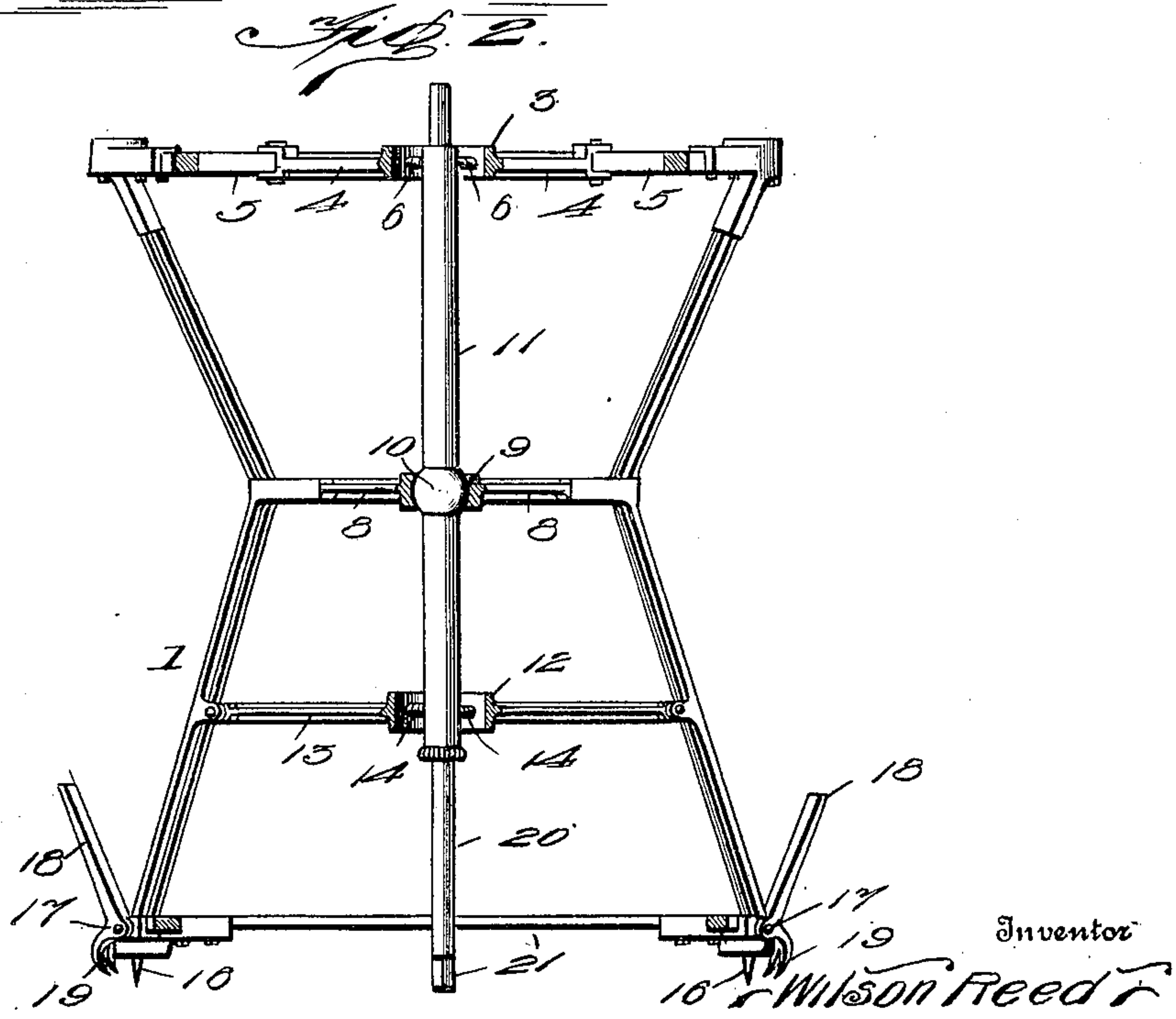
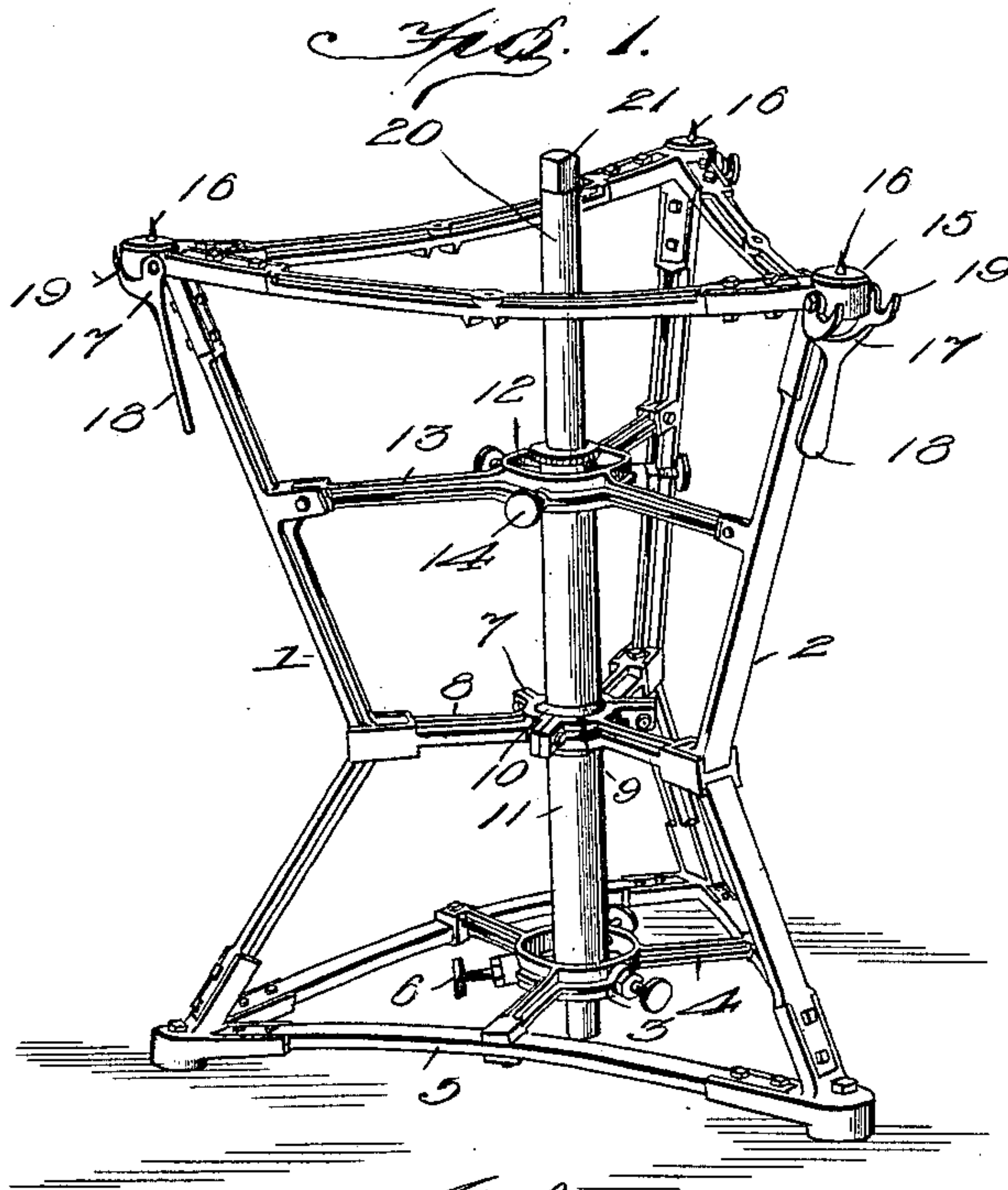
No. 681,375.

Patented Aug. 27, 1901.

W. REED.
MEANS FOR ALINING DRILLS.

(Application filed Oct. 24, 1900.)

(No Model.)



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MEANS FOR ALINING DRILLS.

SPECIFICATION forming part of Letters Patent No. 681,375, dated August 27, 1901.

Application filed October 24, 1900. Serial No. 34,211. (No model.)

To all whom it may concern:

Be it known that I, WILSON REED, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented new and useful Improvements in Means for Alining Drills, of which the following is a specification.

This invention relates to new and useful improvements in means for alining drills; and its primary object is to provide a device whereby drills may be placed at the proper inclination to the wooden backing of armor-clad ships, so as to drill bolt-holes, &c., therein which will be in alinement with the corresponding holes in the armor-plate.

A further object is to provide means whereby the device may be firmly secured to the backing when in use thereon.

Another object is to provide means whereby by the drill may be readily adjusted to the desired inclination.

With these and other objects in view the invention consists in providing a skeleton frame of double-tripod form having a brace arranged therein at the center, within which is formed a socket-like flange arranged about a rounded flange on the center of a tube. The ends of this tube lie within rings having means whereby said ends may be held at any desired position in relation to the rings.

The invention also consists in providing spikes or sharpened studs upon the bottom of the frame and hinged claws arranged adjacent thereto and adapted to engage the wooden backing or other material to be drilled.

The invention also consists in certain novel features of construction and combination of parts, which will be hereinafter fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a perspective view of the device in inverted position. Fig. 2 is a section therethrough, showing the same in position for drilling.

In the drawings the same reference characters indicate the same parts of the invention.

1 is a skeleton frame, preferably substantially triangular in plan view and of double-tripod form in elevation and provided at one end and at points between the ends with braces connecting the side strips 2 of the

frame. The end brace comprises a ring 3, from which extend, preferably, three arms 4, which are connected at their outer ends to the centers of the end strips 5 of the frame. Set-screws 6 are arranged within this ring at regular intervals and are for a purpose hereinafter more fully described. A second brace, comprising a ring 7 and three arms 8, extending therefrom, is arranged between the side strips 2, and said ring is provided with a groove 9 therein adapted to receive a rounded flange 10, inclosing a tube 11. One end of this tube projects into the ring 3, before referred to, and is adapted to be contacted upon opposite sides by the set-screws 6. The remaining end of the tube, which lies at a point removed from the adjacent end of the frame 1, extends through a ring 12, similar to the ring 3, before described, and is provided with arms 13, connected to the side strips 2. Set-screws 14 are arranged within this ring and adapted to contact with opposite sides of the tube. Each of the corners 15 of the frame 1, which are adjacent to the ring 12, is provided with spikes or sharpened studs 16, and a yoke 17 is pivoted upon opposite sides of each corner and is provided with a handle 18. Curved prongs 19 extend forward from this yoke and are adapted to swing in the direction of the stud 16 when the handle 18 is moved outward from the frame 1. A rod 20 is fitted within the tube 11, and one end thereof is preferably squared, as shown at 21.

When it is desired to drill a hole in the wooden backing of an armor-plate, the frame 1 is placed upon said plate in the position shown in Fig. 1, and the cylindrical end of the rod 20 is inserted into the bolt-hole within the plate. The tube and the rod therein are then adjusted by means of the set-screws 6 and 14 until they are in alinement with the bolt-hole. The movement of the tube within the frame is permitted by the rounded flange 10, which acts as a ball within the socket or groove 9, before referred to. When the proper angle has been secured, the frame is inverted upon the wooden backing and the prongs 16 forced thereinto. The levers or handles 18 are then thrown downward, causing the prongs or claws 19 to swing into engagement with the wood and firmly lock the

frame thereon. A drill is then secured to the squared end of the rod 21, and when said rod is revolved in any suitable manner the hole will be drilled into the wood at the proper inclination. It will thus be seen that when the armor-plate is placed in position upon the backing the holes therein will be in alinement, and a bolt or other securing means can be readily inserted thereinto.

10 In lieu of securing the drill to the rod 20, said rod may, if desired, be removed after the frame has been properly placed on the backing and a drill inserted through the tube in place thereof.

15 In the foregoing description I have embodied the preferred form of my invention; but I do not wish to be understood as limiting myself thereto, as I am aware that modifications may be made therein without departing from the principle or sacrificing any of the advantages of this invention, and I therefore reserve to myself the right to make such changes as fairly fall within the scope thereof.

25 Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. A means for alining drills comprising a frame of double-tripod form, having triangular ends, a drill-holder, and braces whereby the drill-holder is held adjustably within the frame.

2. A means for alining drills comprising a frame of double-tripod form having triangular ends, a brace having a ring and secured to the frame, a drill-holder extending through and pivoted in the ring, and means whereby the drill-holder is held adjustably in the frame.

3. A means for alining drills comprising a frame of double-tripod form having triangular ends, a brace having a ring formed with

a socket-groove, a drill-holder extending through the ring and having a rounded flange fitting in the socket-groove, and means whereby the drill-holder is held adjustably in the frame. 45

4. A means for alining drills comprising a frame of double-tripod form having triangular ends, a central brace having a ring formed with a socket-groove, a drill-holder extending through the ring and having a rounded flange fitting in the socket-groove, end braces having rings surrounding the drill-holder and secured to the frame, and set-screws working in the rings of the end braces whereby the drill-holder is held adjustably in the frame. 50 55

5. A means for alining drills, comprising a frame of double-tripod form having triangular ends, a drill-holder, braces whereby the drill-holder is held adjustable within the frame, pointed studs located at the corners of one of the end frames, and yokes, each having a pair of curved prongs and a handle and pivoted to the said corners. 60 65

6. The combination with a skeleton frame having triangular ends; of rings therein, arms connecting the rings with the sides of the frame, set-screws within the end rings, a tube pivoted within the intermediate ring and extending into the end rings, a rod projecting from the ends of the tube, pointed studs at one end of the frame, a yoke hinged to the frame adjacent to each stud, a handle to the yoke, and outwardly-curved prongs extending therefrom. 70 75

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

WILSON REED.

Witnesses:

CHARLES L. WILLIAMS,
JOHN L. MOORE.