

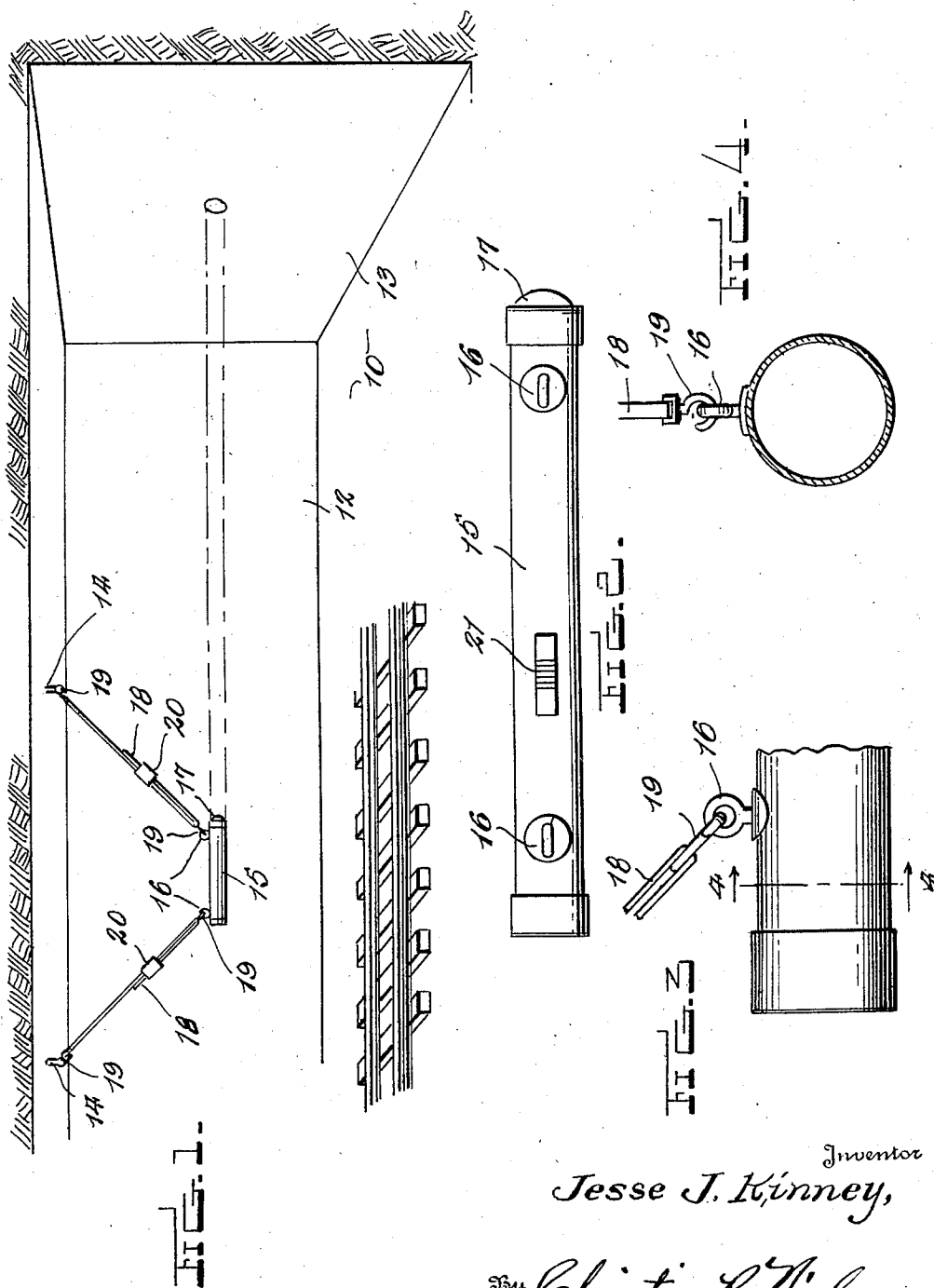
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J. J. KINNEY

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CENTER FINDER FOR TUNNEL EXCAVATIONS AND THE LIKE

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Inventor

Jesse J. Kinney,

By *Christian R. Nielsen*
Attorney

UNITED STATES PATENT OFFICE

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CENTER FINDER FOR TUNNEL EXCAVATIONS AND THE LIKE

Jesse J. Kinney, Pikeville, Ky.

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3 Claims. (Cl. 33—46)

This invention relates to a center finder for use in accurately and readily locating a center point in a wall face of material being mined by the tunneling process, and it consists in the constructions, arrangements and combinations herein described and claimed.

It is the cardinal object of the invention to provide a center finder of such construction as to eliminate the need of one man in locating a center point, as is required under present day practices.

It is also an object of the invention to provide a center finder which can be constructed from parts available on the market and which is readily adaptable to use with "spads" as installed in the roof or ceiling of a tunnel by the mine engineers.

It is a further object of the invention to provide a center finder which is quickly detachable and of light weight enabling the device to be readily carried in the pocket of a miner.

Additional objects, advantages and features of invention will be apparent from the following description considered in conjunction with the accompanying drawing, wherein,

Figure 1 is a fragmentary perspective view of the interior of a tunnel having my center finder installed,

Figure 2 is a top plan view of the light unit employed in the device, enlarged,

Figure 3 is an enlarged fragmentary elevation of the light unit, illustrating the mounting of one of the suspension devices employed.

Figure 4 is a cross sectional view on the line 4—4 of Figure 3.

There is illustrated a tunnel 10, one side wall 12 of which is shown, a roof and work face-wall 13 being inherent, as will be readily understood.

As is now customary, "spads" 14 are placed in the roof 12, in line with the longitudinal axis of the mine or tunnel, by the mine engineers, and are employed for suspending a plumb bob or transit for the purpose of locating the center point in the wall 13. At present, one miner must remain at the transit for the purpose of sighting a line, while another must remain at the wall 13 to hold a light thereat for sighting purposes.

In my device, I employ a strong powered flashlight 15, suspended between a pair of "spads" as shown in Figure 1.

As shown in detail in Figures 2, 3, and 4, a pair of eyelets 16 are welded or otherwise secured upon the casing of the flashlight, the eyelets being positioned in accurate longitudinal alignment along the casing and consequently in alignment with light rays projected through the lens 17 of the flashlight. One eyelet 16 is mounted rearwardly of the lens 17 while the other is positioned inwardly of the rear end of the flashlight casing.

A pair of adjustable suspension means 18 are employed of identical construction, each being provided with detachable connectors 19 at respective ends, which in the present instance, are shown as hooks, although other means may be employed. The suspension means each include an adjustable clamp 20 for the purpose of centering the flashlight unit in the medial longitudinal axis of the tunnel. This is accomplished by releasing the clamp, adjusting the suspension means to the proper lengths and then securing the means with the clamp. With the unit centered in the tunnel it is only necessary to actuate the switch 21 to cause a light beam to be projected upon the wall face 13, thus indicating the center thereof. The miner now merely marks the center point upon the wall. The centering device is now removed from the spads, the adjustment of the suspension means being maintained so that the device can be again mounted upon spads as work progresses.

While I have shown and described a preferred form of the invention, this is by way of illustration only, and I consider as my own all such modifications in structure as fairly fall within the scope of the appended claims.

I claim:

1. Means for locating a center point in a tunnel structure having a ceiling and a work face wall, consisting of an anchor means in the ceiling positioned in the medial longitudinal axis of the tunnel roof, and illuminating projector suspended from said anchor means at a horizontal center level to project a beam of light at the center point of said face wall.

2. The structure of claim 1, in which the means for suspending the illuminating means consists of longitudinally adjustable strand members secured between the anchor means and said illuminating means.

3. Means for locating a center point in a tunnel structure having a ceiling and a work face wall, consisting of a pair of anchor means in the ceiling positioned in the medial longitudinal axis of the tunnel roof, a strand member detachably connected to each anchor means, a flashlight, said flashlight having a pair of eyelets mounted upon the casing of the flashlight adjacent respective ends of the casing and being positioned in the medial longitudinal axis of the casing, each of said strand means having a detachable attaching means for connection with respective eyelets, and said strand members having longitudinally adjustable means for supporting the flashlight at a horizontal center level so as to project a beam of light at the center point of said face wall.

JESSE J. KINNEY.