

No. 685,011.

Patented Oct. 22, 1901.

J. F. TELL.
COLLAR BRACE.

(Application filed May 3, 1901.)

(No Model.)

Fig. 1

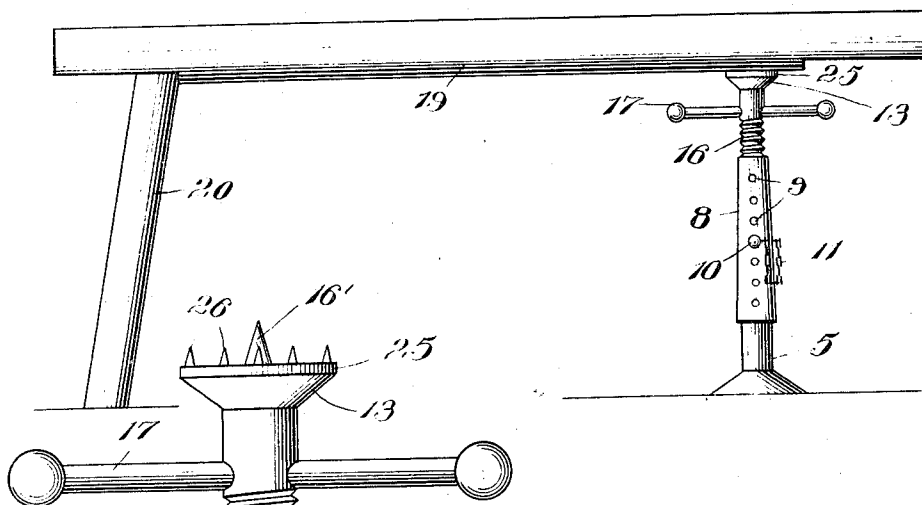


Fig. 2.

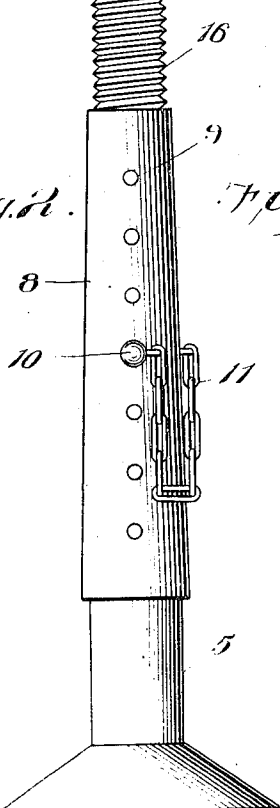
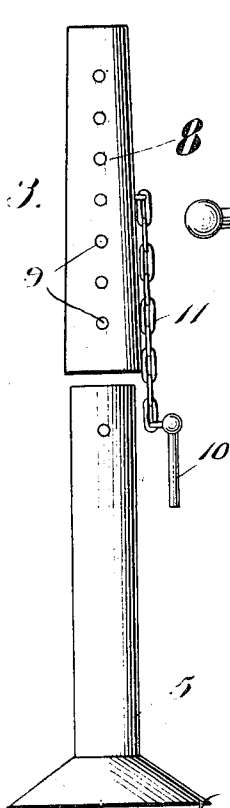
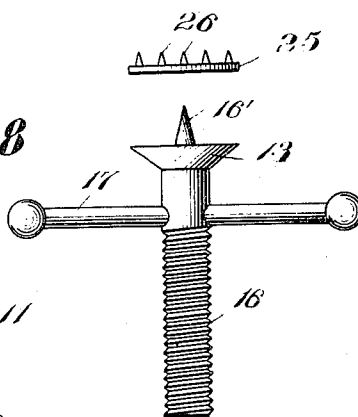


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH F. TELL, OF SCRANTON, PENNSYLVANIA.

COLLAR-BRACE.

SPECIFICATION forming part of Letters Patent No. 685,011, dated October 22, 1901.

Application filed May 3, 1901. Serial No. 58,926. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH F. TELL, a citizen of the United States, residing at Scranton, in the county of Lackawanna, State of Pennsylvania, have invented certain new and useful Improvements in Collar-Braces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to braces for supporting collars for bracing up the roof of a mine or other excavation, the object of the invention being to provide a brace which may be quickly adjusted to different heights and which may be then operated to raise the collar and press it firmly against the roof to prevent caving in.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation showing the jack mechanism engaged with a collar, which latter is supported at one end upon a timber. Fig. 2 is an enlarged detailed elevation of the jack. Fig. 3 is a plan view showing the different parts of the jack disassembled.

Referring now to the drawings, the collar brace or jack consists of a base portion 5, having an enlarged lower end, and the stem of which is transversely perforated, and slidably disposed over the stem of the base is a sleeve 8, having a number of perforations 9 formed transversely therethrough. As the sleeve is slid up and down on the stem of the base the perforation in the stem is brought to a line with the perforations in the sleeve interchangeably. When the sleeve is adjusted upon the stem and the perforation of the stem is alined with opposite perforations of the sleeve, a pin 10 is engaged with the alining perforations to hold the base and the sleeve in fixed relation. This pin in the present instance is connected with the sleeve by means of a chain 11. The upper end of the sleeve is slightly reduced in diameter, and this reduced portion is interiorly threaded for engagement of a screw 16 therewith, and with this screw is connected the pressure-plate 13,

which is adapted to directly engage the collar of the mine-timbers. This pressure-plate has a central spike 16', which engages in the wood of the collar to hold the latter steady, and with the screw is engaged a rod 17 to facilitate rotation of the screw, so that it may be screwed into or out of the sleeve.

In practice the collar 19 of the mine-timbers is disposed with one end upon the leg 20, while the brace is disposed under the opposite end of the collar, the sleeve being adjusted with respect to the stem of the base so as to raise the screw to that point where it will just slip under the free end of the collar. The screw being then rotated, the pressed plate at the upper end thereof is moved upwardly, so as to lift the otherwise free end of the collar.

To prevent rotation of the pressure-plate directly against the under face of the collar, a washer 25 is disposed upon the pressure-plate and over the central spike thereof, and from this washer are projected short spikes 26, which by engagement with the collar hold the washer against rotation.

It will be seen from the foregoing description that the brace may be easily and quickly put into place and operated, and by slidably connecting the stem and body of the brace the initial height of the brace may be varied, so that only a slight degree of movement of the screw of the brace is required. When the normal height of the brace is changed, it is adapted for use upon low collars.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. A collar-brace comprising a base having a stem provided with a transverse perforation, a sleeve slidably engaged over the stem and having transverse perforations therethrough and with which the perforation of the stem is adapted for alinement interchangeably, a pin for engagement with the alining perforations, a screw adjustably engaged with the sleeve and having a pressure-plate, means connected with the screw for rotating it, said

screw having a central spike at its upper end, and a washer disposed against the upper end of the screw and loosely encircling the spike, said washer having spikes to hold it against rotation.

5 2. A lifting-jack including a base and a screw engaged therewith, said screw having an enlarged head provided with a central spike, and a washer disposed loosely upon the

spike and resting upon the head, said washer to having spikes upon its upper surface.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, on the 1st day of April, 1901.

JOSEPH F. TELL.

Witnesses:

JOHN T. HOWE,
WM. VOKOLLK.