

(No Model.)

2 Sheets—Sheet 1.

G. W. ELLIOTT.

MACHINE FOR BORING AND MINING ROCK, COAL, OR OTHER MINERALS.

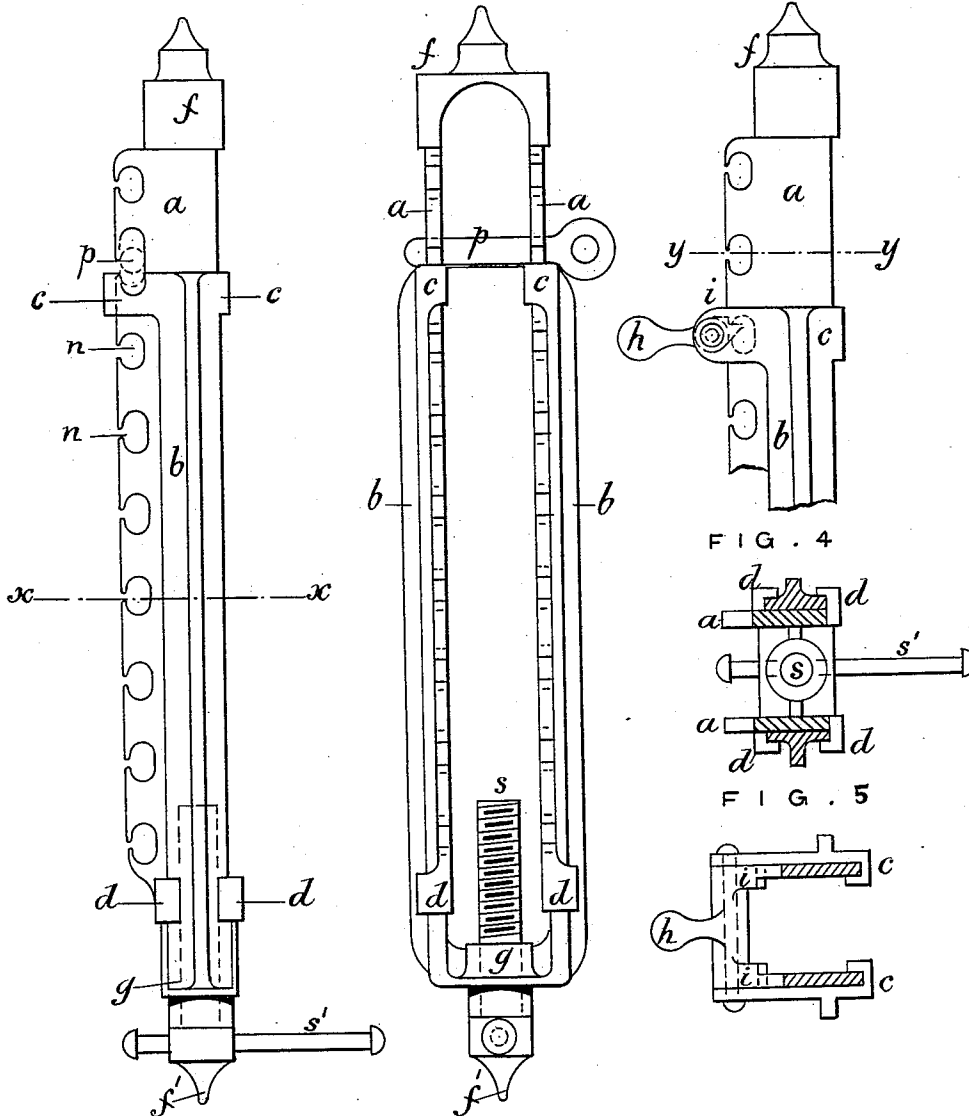
No. 463,498.

Patented Nov. 17, 1891.

FIG. 1

FIG. 2

FIG. 3



Witnesses.

Peray. B. Hills

Albert Smith

Inventor.

George W. Elliott.

By

James H. Norris.

Att'y.

(No Model.)

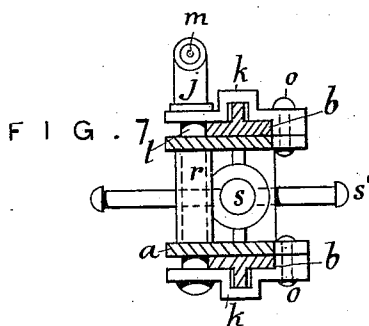
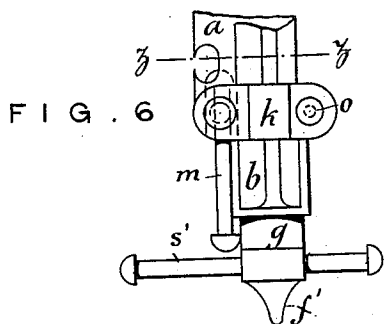
2 Sheets—Sheet 2.

G. W. ELLIOTT.

MACHINE FOR BORING AND MINING ROCK, COAL, OR OTHER MINERALS.

No. 463,498.

Patented Nov. 17, 1891.



Witnesses.

Percy B. Hills.

Robert Elliott.

Inventor.

George W. Elliott.

By

James L. Norris.

Atty.

UNITED STATES PATENT OFFICE.

GEORGE WILLIAM ELLIOTT, OF SHEFFIELD, ENGLAND.

MACHINE FOR BORING AND MINING ROCK, COAL, OR OTHER MINERALS.

SPECIFICATION forming part of Letters Patent No. 463,498, dated November 17, 1891.

Application filed April 3, 1888. Serial No. 269,492. (No model.) Patented in England February 15, 1888, No. 2,279.

To all whom it may concern:

Be it known that I, GEORGE WILLIAM ELLIOTT, mining and mechanical engineer, and a subject of the Queen of Great Britain, residing at 12 Clarkehouse Road, Sheffield, Yorkshire, England, have invented certain new and useful Improvements in Machines and Appliances for Boring and Mining Rock, Coal, or other Minerals, for which I have obtained a patent in Great Britain, No. 2,279, dated February 15, 1888, of which the following is a specification.

My invention relates to that class of boring-machines used for boring holes in rock, coal, or other materials, and has for its object the construction of a standard with the greatest possible amount of variation in its length to suit the varying heights of the places where it is required, and also to make it easy to adjust and fix.

I form the movable standards in two parts, each part consisting of two side pieces, so formed that the two parts may slide upon each other telescopically. One part has notches formed on the adjacent edge of each side piece to receive projections or trunnions on the nut of the machine, the other sliding part being made without notches, and narrower, so as to clear the notches and not to interfere therewith in any position. The standard is fixed at the required length by a suitable clamp at the lower end of the notched portion, or by a pin placed in one of the notches at each side of the standard, or by a pawl catching into one of the notches on each side. The standard is secured in position for use by means of a screw at one end.

In order that my said invention may be particularly described, reference is hereby made to the accompanying drawings, in which similar letters of reference indicate corresponding parts.

Figure 1 is a side view of my telescopic standard. Fig. 2 is a front view of the same. Fig. 3 is a side view of the upper part of a standard, showing a variation in the method of adjustment. Fig. 4 is a section on the line $x x$ of Fig. 1. Fig. 5 is a section on the line $y y$ of Fig. 3. Fig. 6 is a side view of the lower part of a standard, showing another method

of adjustment. Fig. 7 is a section on the line $z z$ of Fig. 6.

Referring to Figs. 1 to 7, a is the upper portion of the standard, and b is the lower portion. $c c$ are overlapping slides or clips forming part of b , and $d d$ are corresponding slides or clips forming part of the upper part a . These overlapping portions $c c$ and $d d$ retain the parts together and allow of telescopic action. f is the upper end of a , and f' the lower end of b , both being formed to take bearings in the cutting when the standard is duly expanded. Notches $n n$ are formed in a , into a pair of which notches the pin p is placed, and whereby a is lifted to nearly the required height. s is a screw fitted to the lower end of b , having a bar s' to turn the same. g is a boss in which the internal screw-thread is formed, fitting the screw s .

Fig. 3 represents another method of securing the standard at the approximate length by means of the pawl i fitted with the handle k .

Figs. 6 and 7 represent another method of securing the standard, which is effected by means of a double clamp $k k$, fitted to a by the rivets $o o$, the double clamps $k k$ being made to grip the portion b of the standard by means of the bolt l , the nut j of which is turned by the handle m . r is a distance piece or sleeve between the two sides of a , and the screw-bolt l is used to grip both sides simultaneously.

I claim—

In an adjustable standard for boring-tools, the combination of the slidably connected parts $a b$, respectively provided with overlapping slides or clips $d d$ and $c c$, and with end projections $f f$, the part a being provided with a series of notches $n n$, the pin p adapted to be engaged in a pair of said notches, and means for securing the said parts a and b in the position to which they may be adjusted, substantially as described.

GEORGE WILLIAM ELLIOTT.

Witnesses:

F. NELSON,

22 Salmon Street, Sheffield,

A. E. SIDDALL,

110 Cemetery Road, Sheffield.