

Lucius B. Clogston.
Gate for Gangs of Marble Saws.

No. 119,968.

Patented Oct. 17, 1871.

Fig. 1.



Fig. 2.

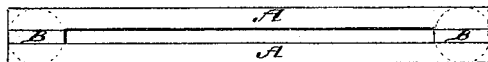


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

LUCIUS B. CLOGSTON, OF WEST RUTLAND, VERMONT.

IMPROVEMENT IN GATES FOR GANGS FOR MARBLE-SAWS.

Specification forming part of Letters Patent No. 119,968, dated October 17, 1871; antedated September 30, 1871.

To all whom it may concern:

Be it known that I, LUCIUS B. CLOGSTON, of West Rutland, in the county of Rutland and State of Vermont, have invented a new and useful Improvement in Gates for Gang-Saws; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification.

My invention relates to a new way of coupling together the sides and cross-pieces of a gang-saw gate by means of an intermediate coupling piece, fast to the cross-bars but sliding loosely in the tubular sides.

I am aware that tubular and channeled iron have been heretofore used to combine lightness and strength, and are as well known to the public as any other old material; but I combine with them a third instrumentality which enables the two to embody a new principle or mode of operation.

Figure 1 is a plan view of a gate coupled in my new way. Fig. 2 is a longitudinal edge view of the cross-bars. Fig. 3 is a longitudinal sectional view of the side tubes.

A represents the cross-bars, preferably formed of channel iron; C, the side pieces, preferably made tubular throughout their whole length; and B my coupling-plugs, riveted to the cross-bars, but playing loosely in the tubes. A series of saws is placed between and parallel to the

side pieces C at a suitable distance apart and strained to any desired tension while cold. As they are used the heat of friction causes them to expand and become elongated. If the cross-bars are rigidly fastened at a fixed distance apart one of two things must occur; they must be either strained very loosely at first, so as not to work well, and remain so until they reach some indefinite temperature and expansion; or they must be strained tight enough to work well in the first instance and successively keyed up as they work loose by expansion, according to the judgment of the operator, until the requisite tension is obtained. Neither of these give the desired accuracy or desired economy of labor. By making the coupling-plugs B self-adjustable in the side tubes C they can be strained to the proper degree of tension in the beginning and thus made automatically to adjust themselves to the elongation of the saws by expansion.

Having thus described all that is necessary to a full understanding of my invention, what I esteem to be new, and desire to secure by Letters Patent, is—

In combination with ordinary cross-bars and side tubes A C the plugs B fast to the former and working loosely in the latter, as and for the purposes specified.

LUCIUS B. CLOGSTON.

Witnesses:

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