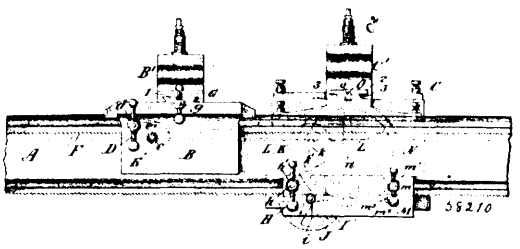
Claim.—1st. An acetylene gas generator consisting of a water tank and interior pipes as set forth, an annular gas holder, a carbide holder and cage, and a gauge operated by the gas holder to lift the carbide holder when an excess of gas is produced, substantially as set forth. 2nd. An acetylene gas generator, comprising a water tank and interior pipes, a annular gas holder, an ash pan fitting through the tube of the gas holder and resting on the bottom of the tank, a carbide holder over said pan, a carbide cage fitting within the carbide holder and a gauge to lift the holder when the limit set to the raising of the gas holder is reached, as set forth. 3rd. The combination with a tank having interior pipes as set forth, of an annular gas holder telescoping therein, as ash pan seated on the bottom of the tank, a carbide holder fitting loosely into the centre tube of the gas holder, a cage fitting within the carbide holder to contain the carbide, and a gauge to cause the gas holder to lift the carbide holder when an excess of gas is produced, as set forth. 4th. The combination with an annular gas holder telescoping within a water tank, of a carbide holder sliding loosely in the central opening or tube of the gas holder, said holder having a gauge comprising a perforated post, standing on the top of the carbide holder, a bar crosswise of the post and sliding thereon, a pin inserted in a hole in the post, said bar lifted by the gas holder, and engaging the pin to lift the gas holder and carbide holder simultaneously by over-rising of the gas holder by the excess of gas, as set forth.

No. 58,210. Lathe. (*Loquet.*)



Willard Goldthwaite Bixby, New York, State of New York, U.S.A., 24th November, 1897; 6 years. (Filed 21st September, 1897.)

Claim.—1st. In a lathe, the combination with a back tool carriage independent of the front tool carriage and adapted to carry a cutting tool, of a handle carrier in the front of the lathe adapted to move laterally with the back tool carriage, a handle mounted in the said handle carrier, and means connecting the said handle with the back tool carriage, whereby the movement of the handle will cause the back tool carriage and the handle carrier to move laterally between the head and tail stocks, substantially as set forth. 2nd. In a lathe, the combination with a back tool carriage independent of the front tool carriage and adapted to carry a cutting tool, of a handle carrier in the front of the lathe adapted to move laterally with the back tool carriage, a handle mounted in said handle carrier, a shaft for transmitting the motion of the handle to the back of the lathe, and connecting mechanism between the shaft and the handle and the shaft and the back tool carriage, whereby the movement of the handle will cause the back tool carriage and the handle carrier to move laterally between the head and tail stocks, substantially as set forth. 3rd. In a lathe, the combination with a back tool carriage, independent of the front tool carriage adapted to carry a cross slide and a cutting tool, of a handle carrier in the front of the lathe adapted to move laterally with the back tool carriage, a handle mounted in said handle carrier and means connecting the said handle and the back cross slide, whereby the movement of the handle will cause the back cross slide to move toward or away from the vertical plane passing through the centre of the lathe parallel to the front and back of the lathe, substantially as set forth. 4th. In a lathe, the combination with a back tool carriage independent of the front tool carriage and adapted to carry a cross slide and a cutting tool, of a handle carrier in the front of the lathe adapted to move laterally with the back tool carriage, a handle mounted in said handle carrier, a shaft for transmitting the motion of the handle to the back part of the lathe, and connecting mechanism between the shaft and the handle and between the shaft and the back cross slide, whereby the movement of the handle will cause the back cross slide to move toward or away from the vertical plane passing through the centre of the lathe parallel to the front and back of the lathe, substantially as set forth. 5th. In a lathe, the combination with a back tool carriage independent of the front tool carriage and adapted to carry a cross slide and cutting tool, of a handle carrier in the front of the lathe adapted to move laterally with the back tool carriage, handles mounted in said handle carrier, and means connecting the handles with the back tool carriage and the cross slide, whereby the movement of one handle will cause the back tool carriage and the handle carrier to move laterally between the head and tail stocks, and the movement of the other handle will cause the back cross slide to move toward or away from the vertical plane passing through the centre of the lathe parallel to the front and back of the lathe, substantially as set forth. 6th. In a lathe, the combination with the back tool carriage independent of the front tool carriage and adapted to carry a cross slide and cutting tool, of a handle carrier in front of the lathe adapted to move laterally with the back tool carriage, handles mounted in said handle carrier, shafts for transmitting the motion of the handles to the back part of the lathe, mechanism connecting the handles to the shafts and mechanism connecting the shafts with the back tool carriage and cross slide, whereby the movement of one of the handles will cause the back tool carriage and the handle carrier to move laterally between the head and tail stocks, and the movement of the other handle will cause the back cross slide to move toward or away from the vertical plane passing through the centre of the lathe parallel to the front and back of the lathe, substantially as set forth. 7th. In a lathe, the combination with a back tool carriage adapted to carry a cutting tool, inverted V-shaped grooves on the underside of the bed of the lathe, and inverted V-shaped projections forming part of the back tool-carriage adapted to slide within said grooves, whereby upward pressure upon the back cutting tool is resisted, substantially as set forth. 8th. In a lathe, the combination of two tool carriages independent of each other, each extending substantially to the vertical plane passing through the centre of the lathe parallel to the front and back of the lathe, cross-slides upon said tool-carriages, a handle carrier on the front of the lathe, handles mounted in the front of the lathe for moving the tool carriages laterally between the head and tail stocks, and handles mounted in the front of the lathe for moving the cross-slides toward or away from the said central vertical plane of the lathe, and mechanism connecting said handles with the said tool-carriages and with the cross slides respectively, all so arranged that said tool carriages may be moved laterally between the head and tail stocks independently of each other, and the cross slides may be moved independently of each other and up to the said central vertical plane of the lathe or away from it to the extreme front or back of the lathe, substantially as set forth. 9th. The combination, in a lathe, of two tool-carriages independent of each other, each adapted to carry a cutting tool and extending substantially to the vertical plane passing through the centre of the lathe and parallel to the front and back of the lathe, and cross slides upon which the tools are mounted, whereby the tools mounted upon said cross-slides may be moved up to the said central vertical plane of the lathe, inverted V-shaped grooves on the underside of the bed of the lathe and inverted V-shaped projections forming part of the back tool carriage adapted to slide within said grooves, whereby upward pressure upon the back cutting tool is resisted, substantially as set forth. 10th. In a lathe, the combination with a back tool carriage independent of the front tool-carriage and adapted to carry a cutting tool, of a handle-carrier in the front part of the lathe, a handle mounted upon said handle-carrier for moving the back tool-carriage laterally between the head and tail stocks, and means connecting the back tool-carriage and the handle, whereby the movement of the handle will cause the back tool-carriage to move laterally between the head and tail stocks, a portion of the back tool-carriage sliding under a part of the bed of the lathe, whereby upward pressure upon the back cutting tool is resisted, substantially as set forth. 11th. In a lathe, the combination with a back tool-carriage independent of the front tool-carriage and adapted to carry a cutting tool, of a handle in the front part of the lathe for moving the back tool-carriage laterally between the head and tail stocks, and means connecting the back tool-carriage and the handle, whereby the movement of the handle will cause the back tool-carriage to move laterally between the head and tail stocks, inverted V-shaped grooves on the underside of the bed of the lathe, and inverted V-shaped projections forming part of the back tool-carriage adapted to slide within said grooves, whereby upward pressure upon the back cutting tool is resisted, substantially as set forth. 12th. In a lathe, the combination of two tool-carriages independent of each other, each extending substantially to the vertical plane passing through the centre of the lathe and parallel to the front and back of the lathe, cross-slides upon the said tool-carriages, handles in the front part of the lathe for moving the tool-carriages laterally between the head and tail stocks, and handles in the front part of the lathe for moving the cross-slides toward or away from the said central vertical plane of the lathe, and mechanism connecting said handles with the said tool-carriages and with the cross-slides respectively, all so arranged that said tool-carriages and cross-slides may be moved independently of one another between the head and tail stocks and up to and away from the central vertical plane, inverted V-shaped grooves on the underside of the bed of the lathe, and inverted V-shaped projections forming part of the back tool-carriages adapted to slide within said grooves, whereby upward pressure upon the back cutting tool is resisted, substantially as set forth. 13th. In a lathe, the combination of two tool-carriages independent of each other, each extending substantially to the vertical plane passing through the centre of the lathe and parallel to the front and back of the lathe, cross-slides upon the said tool-carriages, handles in the front part of the lathe moving at the same time and speed as the respective tool-carriages and adapted to move the tool-carriages laterally between the head and tail stocks and adapted to move the cross-slides toward or away from said central vertical plane of the lathe, and mechanism connecting said handles with the said tool-carriages and with the cross-slides respectively, all so arranged that said tool-carriages and cross-slides may be moved independently of one another between the head and tail