

C. Chinnock,

Mirror,

N<sup>o</sup> 7,080.

Patented Feb. 12, 1850.  
Fig. 1.

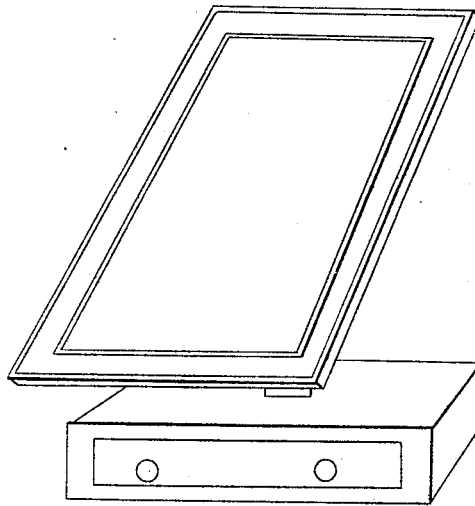


Fig. 18.

Fig. 19.

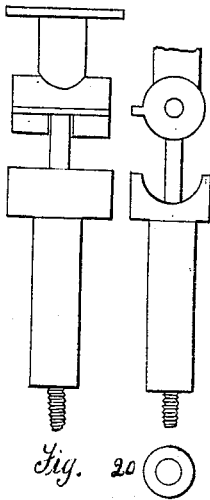


Fig. 2.

Fig. 3.

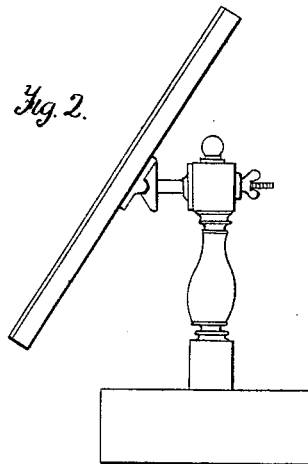


Fig. 4.



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Fig. 5

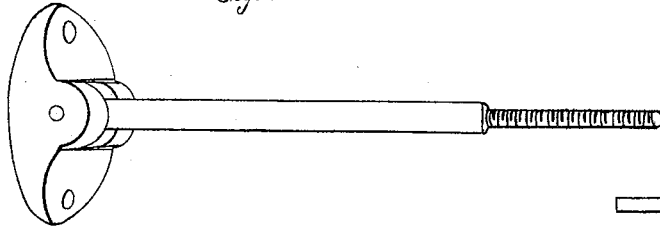


Fig. 11.

Fig. 6.

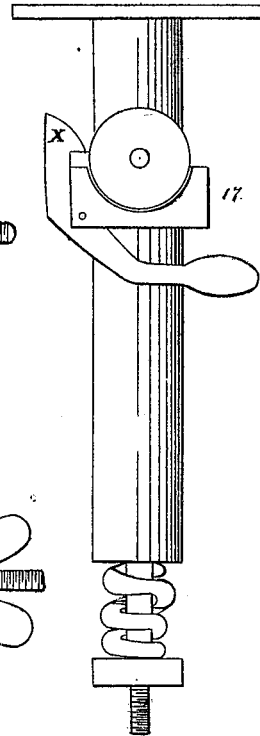
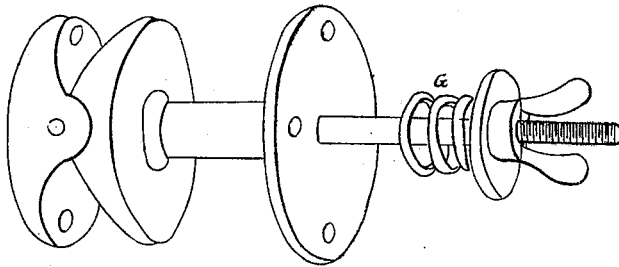


Fig. 7.

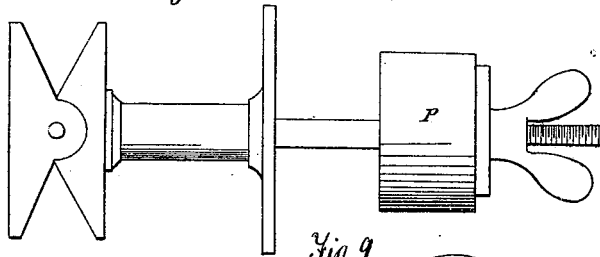


Fig. 9.

Fig. 8.

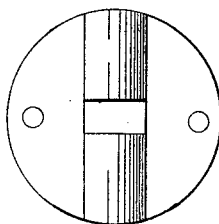


Fig. 16.

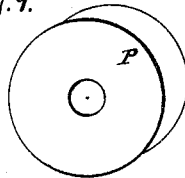
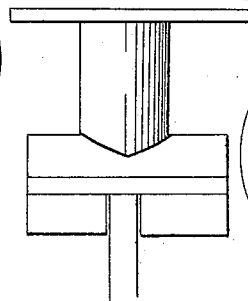
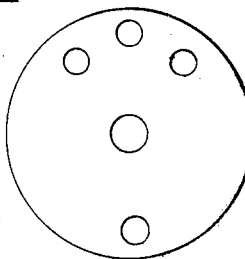


Fig. 10.

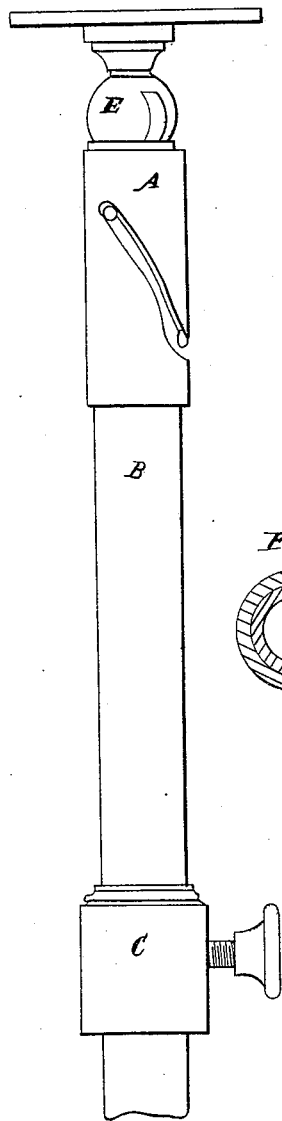


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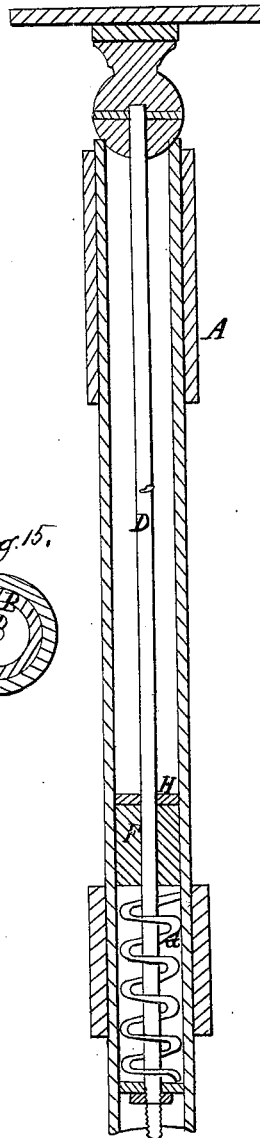
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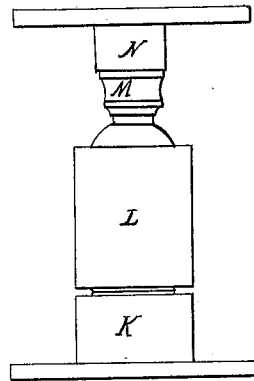
*Fig. 11.*



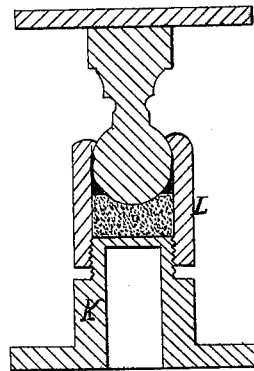
*Fig. 12.*



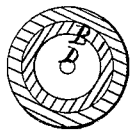
*Fig. 13.*



*Fig. 14.*



*Fig. 15.*



# UNITED STATES PATENT OFFICE.

CHARLES CHINNOCK, OF NEW YORK, N. Y.

## RULE AND SOCKET JOINT.

Specification of Letters Patent No. 7,080, dated February 12, 1850.

*To all whom it may concern:*

Be it known that I, CHARLES CHINNOCK, of the city, county and State of New York, have invented a new and useful Improvement in the Rule and Socket Joints; and I hereby declare that the following is a full and exact description.

To enable others to make and use my invention I proceed to describe its construction and operation reference being had to the drawings hereunto annexed and making part of this specification.

Figure 1 represents a cheval glass to which the rule joint is applied. Fig. 2 the same, side elevation. Figs. 3 and 4 the parts of the stand "3" being made to fit in a socket in the upper part of "4." Fig. 5 shows part of the rule joint. The stem has upon it as seen in 6 and 7 the springs which hold it firm against the other part of the joint. Fig. 6 view of the rule joint, spiral spring and thumb screw complete. Fig. 7 side elevation of the same with a spring of india rubber applied instead of a spiral spring. Fig. 8 plan of that part of the rule joint seen in Fig. 5. Fig. 9 the india rubber spring which is only a piece the kind of india rubber tubes used for conveying water. Fig. 10 plan of the plate which is attached to the stand as seen in Fig. 2. The stem, seen in 6 and 7 runs through the stand. The spring is imbedded into it and the thumb screw is flush with the outside. Fig. 11 shows the ball and socket joint, adapted for an easel or changeable stand. Fig. 12 the longitudinal section. The ball E, Fig. 11 has a slot in it into which is hinged a rod, D. The ball is held firm upon the top of the tube B, by the rod, D, which passes through a diaphragm, H, which is permanent and has upon it a spiral spring, as, G, or an

india rubber spring as, F, and is governed by a nut at the bottom. Fig. 13 the universal ball and socket joint, Fig. 14, section, Fig. 15, section of Fig. 12. Fig. 16 the rule joint for tables—17—the same entire with catch—18—19—the same 20 section.

The universal ball and socket joint is thus made:—The top part is in two pieces. N is unscrewed and taken from M. The ball is then passed up through the cylindrical piece, L, and the top piece N is screwed on. A spring of india rubber, I, is put in beneath and touching the ball and the lower part is then screwed on and this forces the spring up firm against the ball and holds it as firm as required.

The principle of all these joints is that a spring is used to hold the ball firm upon the socket or hold the rule joint together and both of these can be governed by a thumb screw, so that any degree of firmness or looseness can be given.

To fix the ball joint firm when required a collar, A Fig. 11 is used. This is made to fit on the upright, B, and has a slot cut spirally in one side, into which fits a pin set in B. The turning the collar presses the slot on the pin and holds the ball firm.

What I claim as my invention and desire to secure by Letters Patent is—

The application to the rule joint and to the ball and socket joint of the rod D which is hinged into the ball or rule joint, to hold the joint as firm as desired by means of the spiral spring, G, or the india rubber spring, P, as described.

CHARLES CHINNOCK.

Witnesses:

OWEN G. WARREN,  
NIEL GRAY.