

No. 809,882.

PATENTED JAN. 9, 1906.

J. WRIGLEY.  
CLAMP.

APPLICATION FILED AUG. 31, 1905.

Fig. 2.

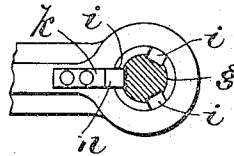
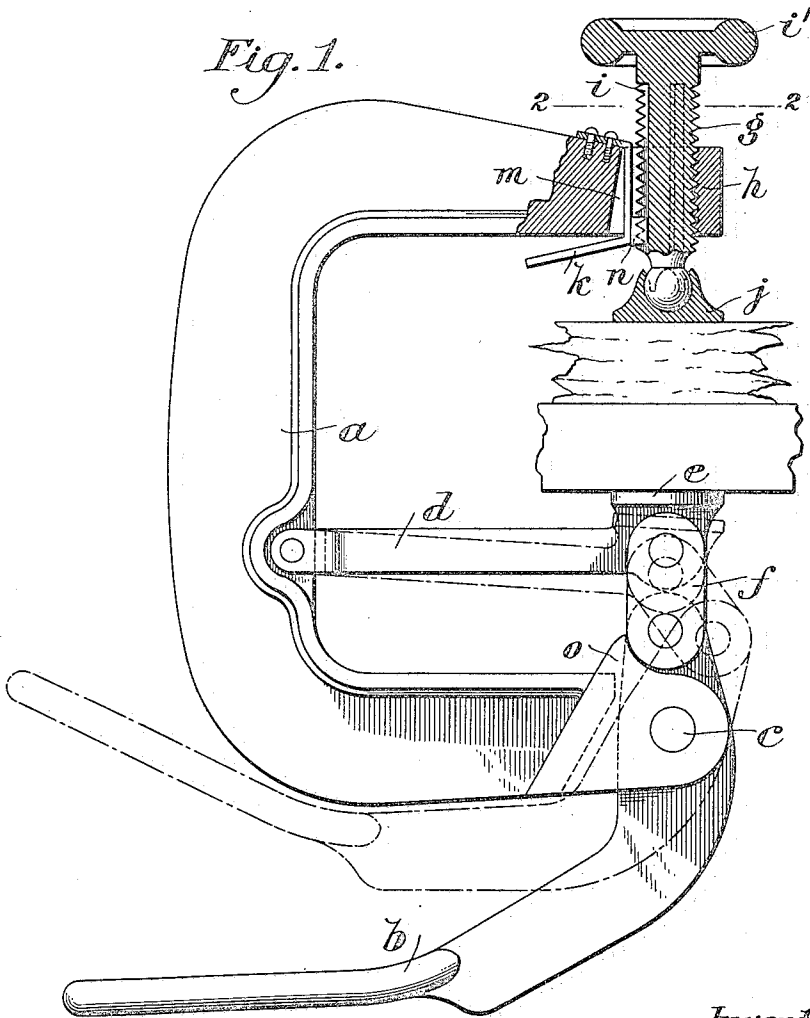


Fig. 1.



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# UNITED STATES PATENT OFFICE.

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## CLAMP.

No. 809,882.

Specification of Letters Patent.

Patented Jan. 9, 1906.

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To all whom it may concern:

Be it known that I, JOHN WRIGLEY, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Clamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to clamps, and has for its object to provide a construction by which work of the same thickness may be clamped with a definite pressure a number of times or at a number of positions with the greatest possible speed.

In the drawings, Figure 1 is a side elevation of the clamp. Fig. 2 is a section on the line 2 2 of Fig. 1.

*a* is a yoke carrying at the end of its lower arm a handle *b*, pivoted to the yoke at *c*. To the connecting member of the yoke *a* is pivoted a lever *d*, having the clamping-jaw *e*.

*f* is a link connecting the end of lever *d*, carrying the jaw *e*, with the end of handle *b* adjoining its pivot *c*.

A screw *g* extends through a threaded nut *h* on the upper end of the yoke. The lower end of the screw is connected by a ball-and-socket joint with the other jaw *j* of the clamp. The upper end of the screw has a wheel *i*, by which the screw may be turned. The screw *g* is provided with a plurality of grooves *i*, extending longitudinally of the screw.

*k* is a spring-latch secured to the top face of the upper arm of the yoke and extending downwardly within a slot *m* in the nut and thence outwardly below the upper arm of the yoke.

*n* is a projection secured to the downwardly-extending arm of the latch. The slot *m* is located adjacent to screw *g*, and when the screw is turned to bring one of its grooves *i* into alinement with the slot *m* the projection *n* on the latch *k* springs into the groove and holds the screw in its adjusted position. To permit the screw to be adjusted, the free end of the latch is pressed against the lower face of the upper arm of the yoke, thereby withdrawing the projection *n* from the screw-groove, and the latch is held in its retracted position until the screw *g* adjusts

the clamping-jaw *j* to the desired position, whereupon the latch is released and springs into the groove *i* in alinement therewith.

I will now describe one of the uses to which the clamp is applied, although it will be understood that it is capable of application to many other uses.

It is necessary in structural work to mark on the angle-irons the position of the bolt-holes. There are often quite a number of such angle-irons, in all of which the holes have a like arrangement. For this purpose a wooden templet is provided having holes arranged in a manner corresponding to the desired arrangement of holes in each of the angle-irons. The wooden templet and an angle-iron are clamped between the two jaws of a clamp, and the proper positions of the holes may then be marked on the angle-iron. The templet and angle-iron are then released and another angle-iron substituted. This operation may be repeated a number of times, from which the importance of quickly clamping and unclamping the work may be appreciated.

In operating my clamp the handle is swung to the position shown in full lines in Fig. 1 and the templet and the first angle-iron placed in position. The screw *g* is then adjusted until the jaw *j* is brought firmly against the templet and the templet and angle-iron clamped with the requisite pressure between the jaws of the clamp. The latch *k* is then released, permitting the projection *n* to snap into one of the grooves *i* of the screw. When the first angle-iron is properly marked, the handle *b* is moved to the position illustrated in dotted lines in Fig. 1, and the templet and angle-iron are then removed. The templet and another angle-iron are then inserted and the handle returned to the full-line position shown in Fig. 1. It will be understood that the construction is such that each time that the handle is returned to its operative position the jaw *e* is brought to a definite and unvarying distance from the jaw *j* so long as the screw is held in its adjusted position. Therefore at such clamping operations the templet and angle-iron will be clamped together with precisely the requisite pressure, no readjustment being necessary. The link *f* and the section of the handle between the link *f* and pivot *c* form together a toggle-joint, its movement to-

ward the clamping position being limited by the joint *d* of the toggle engaging a lug *o* near the end of the lower arm of the yoke.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In a clamp, the combination, with an adjustable clamping-jaw, of a second clamping-jaw, a pivoted lever carrying the second jaw, a handle-lever pivoted between its ends, and a link connecting one end of the handle-lever with the second clamping-jaw.

2. In a clamp, the combination with the yoke, of an adjusting-screw at one end thereof, a clamping-jaw movable by said screw, a lever pivoted to the yoke, a clamping-jaw carried by the lever, a toggle between the second jaw and the other end of the yoke, and means to operate the toggle.

3. In a clamp, the combination with the yoke, of an adjusting-screw at one end thereof, a clamping-jaw movable by said screw, a lever pivoted to the yoke, a clamping-jaw carried by said lever, a handle pivoted near its end to the other end of the yoke, and a link connecting the end of the handle with the clamping-jaw lever.

4. In a clamp, the combination with the yoke, of a clamping-jaw carried at one end of the yoke, a lever pivoted on the yoke, a second clamping-jaw carried by said lever, a handle pivoted on the other end of the yoke, and a link connecting the handle and the clamping-jaw lever.

5. In a clamp, the combination, with the yoke, of a clamping-jaw carried at one end of the yoke, a second clamping-jaw, a handle pivoted near one end at the other end of the yoke, a link connecting the end of said handle and the second clamping-jaw, a pivoted lever connecting the second jaw and yoke, and a lug on the handle limiting the movement of the toggle.

6. In a clamp, the combination with the yoke, of an adjusting-screw at one end there-

of, a clamping-jaw carried at the end of the screw, a spring-latch on the yoke adapted to engage a groove in the screw to hold the latter to its adjusted position, a second clamping-jaw, and means, connecting the second clamping-jaw with the yoke, adapted to move the second clamping-jaw toward the first clamping-jaw into a definite position with respect to the yoke.

7. In a clamp, the combination with the yoke, of an adjusting-screw at one end thereof, a clamping-jaw carried at the end of the screw, a spring-latch on the yoke adapted to engage a groove in the screw to hold the latter to its adjusted position, a lever pivoted on the yoke, a second clamping-jaw carried by said lever, a handle pivoted at the other end of the yoke, and a link connecting said handle and clamping-jaw lever.

8. In a clamp, the combination with the yoke of a threaded nut at one end thereof, an adjusting-screw, having longitudinal grooves, working in said nut, a clamping-jaw jointed to the end of said screw, a spring-latch extending into a slot in the nut, a projection on said latch adapted to engage either of said grooves, an arm on the latch extending without said slot, whereby the latch may be operated to retract said projection, a lever pivoted to said yoke, a second clamping-jaw on the free end of said lever, a handle pivoted near one end to the other end of the yoke, a link connecting said clamping-jaw lever and handle end, and a lug on the yoke adapted to engage the joint between said link and handle when the latter is operated to move the second jaw to clamping position.

In testimony of which invention I have hereunto set my hand, at Philadelphia, on this 24th day of August, 1905.

JOHN WRIGLEY.

Witnesses:

CARRIE REDEKER,  
CARRIE REDEKER, Jr.