

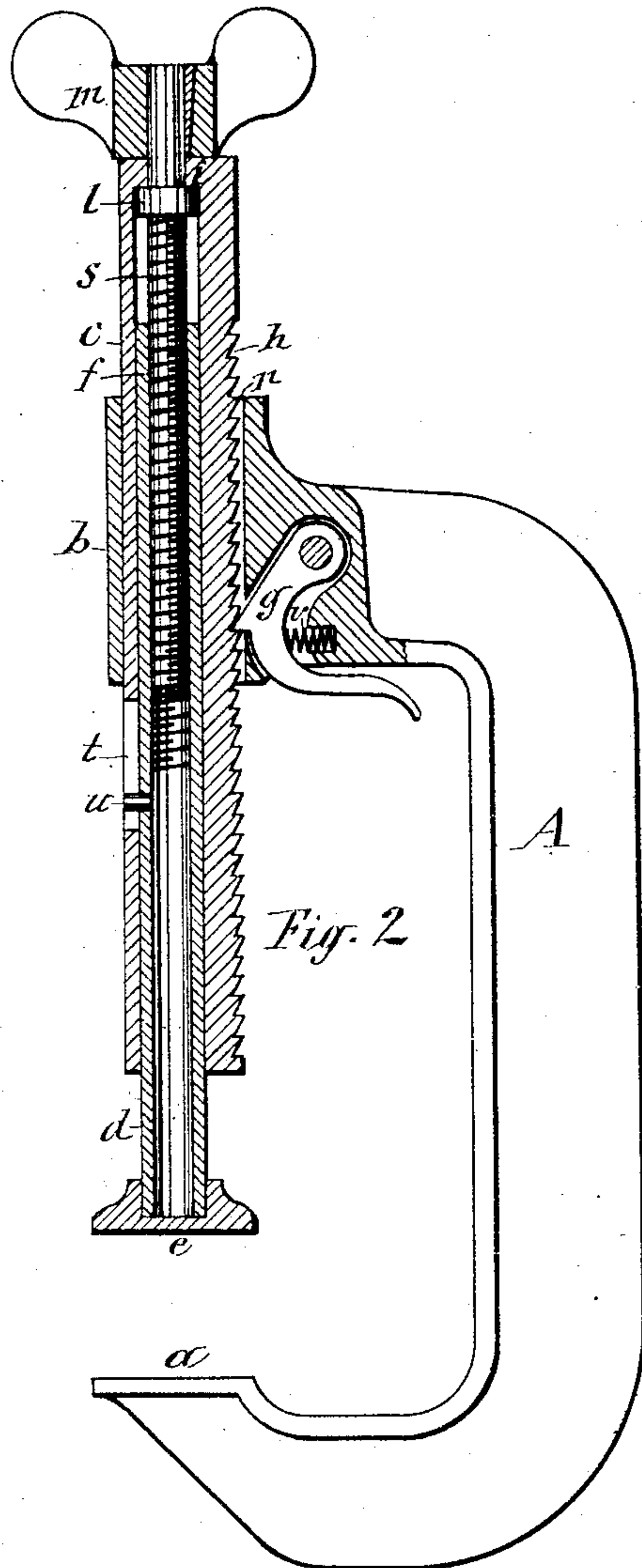
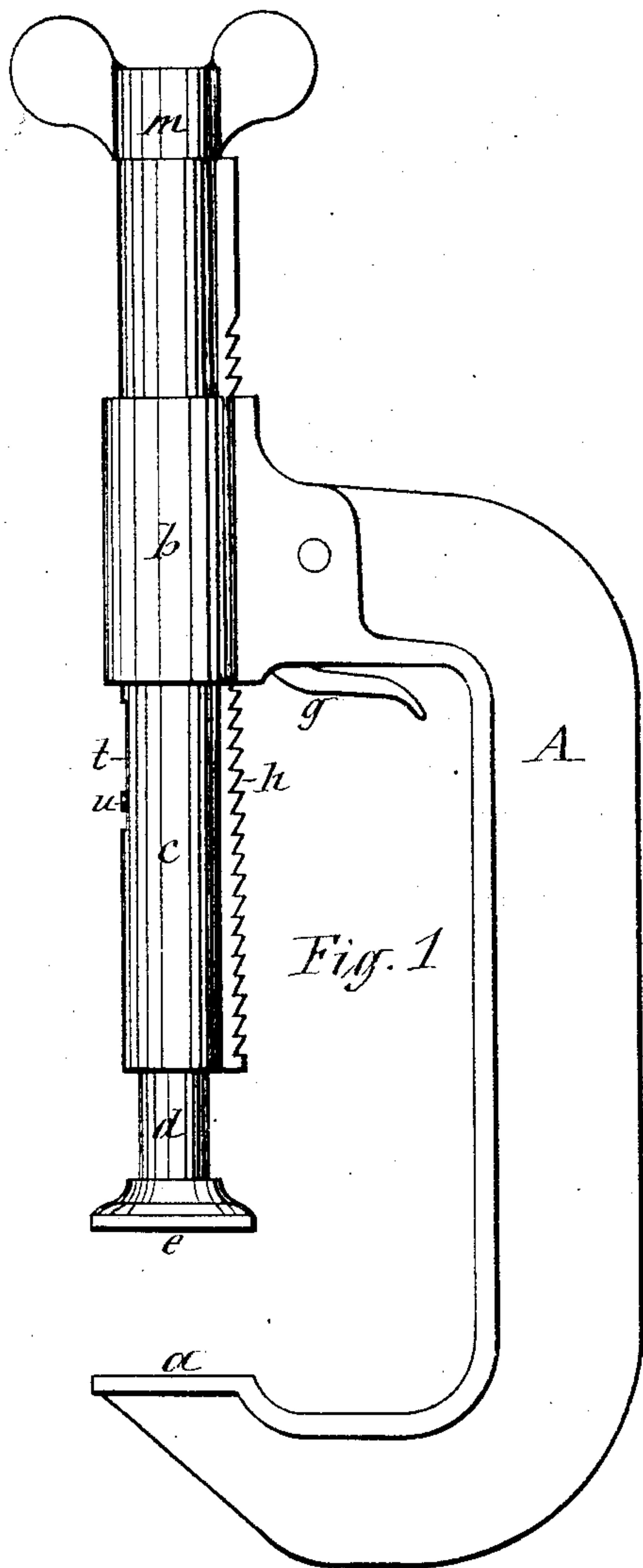
(No Model.)

A. W. DAVIS.

CLAMP.

No. 286,688.

Patented Oct. 16, 1883.



WITNESSES:

C. Bendixon

Wm. C. Raymond

INVENTOR:

Arthur W. Davis

per Duell, Laessle & Hay
his attys —

UNITED STATES PATENT OFFICE.

ARTHUR W. DAVIS, OF ELMIRA, NEW YORK.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 286,688, dated October 16, 1883.

Application filed March 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR W. DAVIS, of Elmira, in the county of Chemung, in the State of New York, have invented new and useful Improvements in Clamps, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to a clamp designed to afford the utmost facility of adjustment to its work, and to grip its work without danger of marring the same.

The invention consists in a novel construction and combination of the component parts of the clamp, as hereinafter fully described, and specifically set forth in the claims.

Referring to the annexed drawings, Figure 1 is a side view of my improved clamp, and Fig. 2 a longitudinal section of the same.

Like letters of reference denote like parts in both figures.

A represents the clamp-yoke, usually formed of cast-iron, and of proper shape and dimensions to reach with its extremities over opposite sides of the article to be gripped or clamped, one of the extremities being provided with the usual bearing, *a*, by which the clamp takes hold of one side of the article to be clamped. The opposite extremity of the yoke I form with a sleeve, *b*, which is in range with the bearing *a*. In said sleeve slides a tubular stem, *c*, which is provided with a ratchet, *h*, on the side facing the yoke, the interior of the sleeve *b* being formed with a longitudinal groove, *n*, for the passage of the ratchet *h*, the latter constituting a spline or rib, which serves to prevent the stem *c* from turning.

In a cavity in the yoke A, adjacent to the groove *n*, is pivoted a dog, *g*, adapted to engage the ratchet *h*, and held yieldingly in said engagement by a spring, *v*, pressing on the back of the dog, as illustrated in Fig. 2 of the drawings. The free end of said dog protrudes through the yoke, and is formed into a suitable handle, to allow the operator to throw the dog out of engagement with the ratchet *h*. Inside of the stem *c* slides, longitudinally, the gripping-bar *d*, having the step or bearing *e* permanently fixed to the end which faces the bearing *a* of the yoke. The bar *d* is prevented from turning by means of a lug, *u*, projecting from the

side thereof and into a longitudinal slot, *t*, in the stem *c*, thus holding the bearing *e* stationary when applying the clamp to the article to be gripped, and therefore obviating the danger of wearing or defacing the said article. The gripping-bar *d* may be formed either of a metal tube screw-threaded internally or of a solid rod provided with a female threaded socket, *f*, at the end opposite that which carries the bearing *e*. In said socket works a screw, *s*, which is confined longitudinally to the stem *c* by a collar, *l*, and a thumb-piece or handle, *m*, on the outer end of the screw, bearing, respectively, against opposite sides of a shoulder, *i*, on the end of the stem *c*.

The operation of my improved clamp is as follows: In applying the clamp to the article to be gripped, the foot or bearing *a* of the yoke A is placed against one side of the article. Then the bearing *e* of the gripping-bar *d* is set against the opposite side of said article by throwing the dog out of engagement with the ratchet *h* and pushing the thus released stem *c*, with the gripping-bar *d*, toward the article to be gripped. When this is effected, the dog *g* is allowed to engage the ratchet *h*, and thus lock the stem *c* in its position. Then, by turning the thumb-piece or handle *m*, the screw *s* is caused to crowd the gripping-bar toward the article interposed between the bearings *e* and *a*, and thereby tighten the clamp upon the said article. The clamp is removed with equal facility by turning the handle *m* in the opposite direction, and, so soon as the bearing *e* is liberated from the article, throwing the dog *g* off the ratchet *h*, and then withdrawing the stem *c*.

Having described my invention, what I claim as new is—

1. The improved clamp, consisting of the yoke A, provided with the bearing *a* and sleeve *b*, the tubular stem *c*, sliding in said sleeve, and adapted to be locked in its position, the gripping-bar *d*, sliding in the stem *c*, and provided with the screw-threaded socket *f*, and the screw *s*, confined longitudinally on the stem *c* and entering the socket *f*, all combined and operating substantially as set forth and shown.

2. The combination of the yoke A, provided with the bearing *a* and sleeve *b*, the dog *g*, the

tubular stem *c*, provided with the ratchet *h* and shoulder *i*, the gripping-bar *d*, sliding in the stem *c*, and provided with the screw-threaded socket *f*, and the screw *s*, provided
5 with the collar *l* and thumb-piece or handle *m*, respectively, at opposite sides of the shoulder *i*, substantially in the manner described and shown.

3. In combination with the yoke *A*, provided
10 with the sleeve *b* and groove *n* in said sleeve, the tubular stem *c*, adapted to be locked in the sleeve *b*, and provided with the spline or rib *o*, slot *t*, and shoulder *i*, the gripping-bar *d*, provided with the bearing *e*, lug *u*, and screw-

threaded socket *f*, and the screw *s*, provided 15 with the collar *l* and thumb-piece *m*, all constructed and combined substantially as and for the purpose set forth and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence 20 of two attesting witnesses, at Elmira, in the county of Chemung, in the State of New York, this 17th day of March, 1883.

ARTHUR W. DAVIS. [L. s.]

Witnesses:

R. W. DAVIS,
F. G. HALL.