

(No Model.)

F. S. DUELL.
WRENCH.

No. 331,951.

Patented Dec. 8, 1885.

Fig. 1.

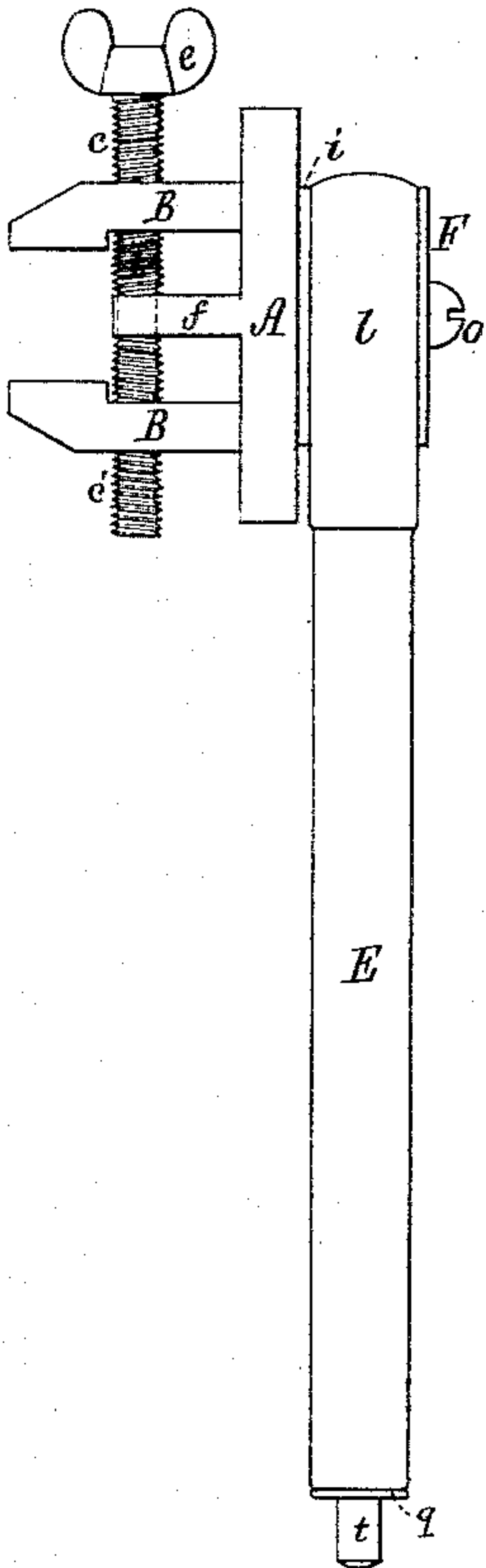


Fig. 3.

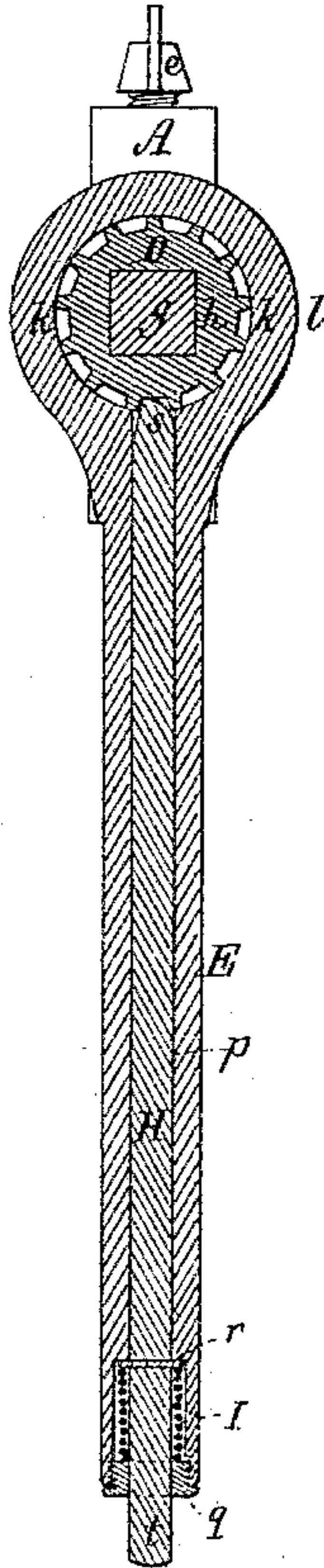


Fig. 2.

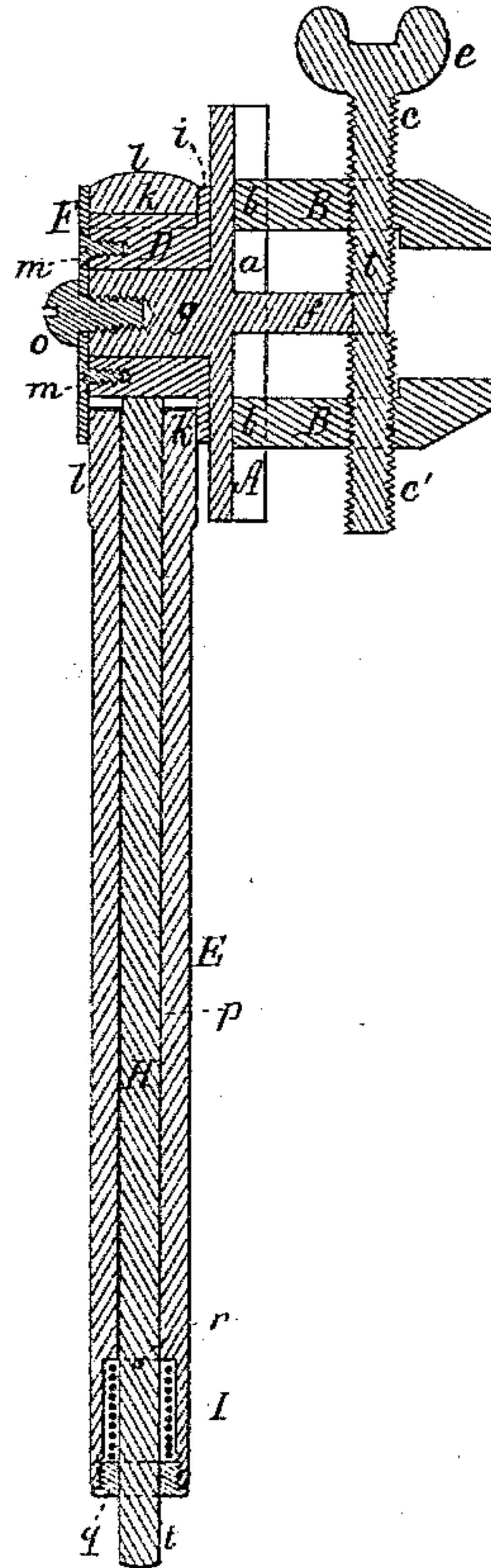


Fig. 4.

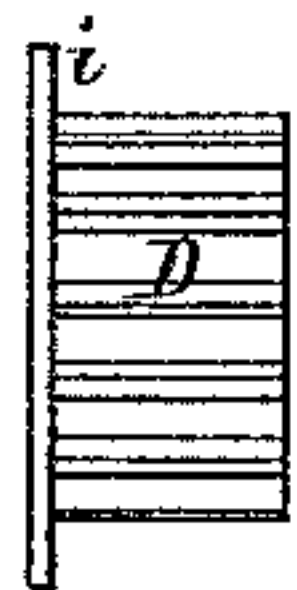


Fig. 5.

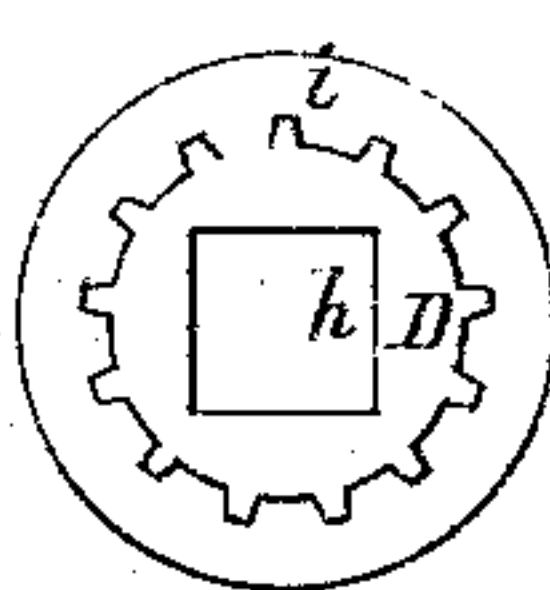
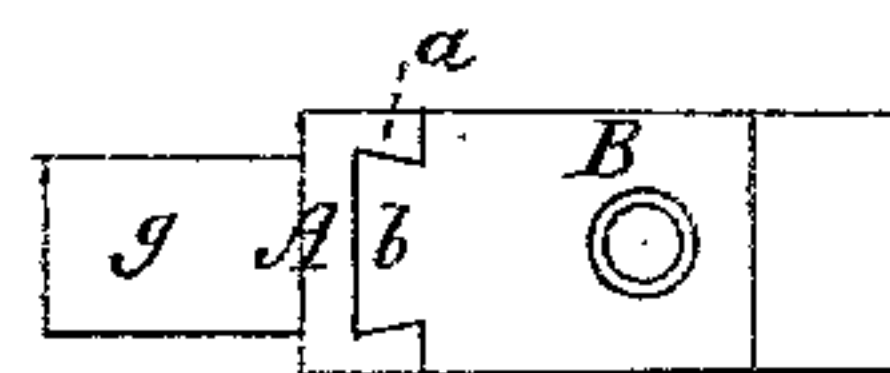


Fig. 6.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRANK SEDGWICK DUELL, OF ABINGTON, MASSACHUSETTS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 331,951, dated December 8, 1885.

Application filed October 14, 1885. Serial No. 179,851. (No model.)

To all whom it may concern:

Be it known that I, F. S. DUELL, of Abington, in the county of Plymouth, of the Commonwealth of Massachusetts, have invented a new and useful Improvement in Wrenches; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, and Fig. 2 a longitudinal section, of a wrench containing my invention, the nature of which is defined in the claim hereinafter presented. Fig. 3 is a transverse section taken through the handle and the gear within it for revolving the jaw-head, to be described. Fig. 4 is an edge view, and Fig. 5 a rear end view, of the said gear. Fig. 6 is an end view of the jaw-head, showing one of its movable jaws.

In such drawings, A denotes the jaw head or carrier, which has a dovetailed groove, *a*, in its front longitudinally thereof. Into the said groove is a dovetail, *b*, extending from each of a pair of jaws, B B. Screwed through these jaws are two screws, *c c'*, formed on a rod, *t*, provided at one end with a head, *e*, for revolving it, one screw-thread being pitched in a direction the reverse of that of the other, as represented. The said rod at its middle is grooved transversely of and around it to receive a furcated projection, *f*, extending from the middle of the jaw head or carrier A. On turning the screw-threaded rod one way the jaws will be caused to advance toward each other, a reverse motion of the rod causing them to move apart. From the head A a prismatic shank, *g*, extends into a correspondingly-shaped eye, *h*, of a gear, D, provided at one end with a flange, *i*, as shown. This gear is arranged in a cylindrical aperture, *k*, of like diameter, made through the head *l* of the handle E. A metallic disk, F, applied to the outer faces of the gear D and head *l*, and secured to the gear by screws *m*, serves to hold the gear within the said head, the shank *g* being held in the gear by means of a screw, *o*, arranged as shown in Fig. 2. The handle E is tubular, and has within its bore *p* a round rod, H, such rod having its upper end acute

angular, essentially as represented. At its lower part the rod extends loosely through and beyond a nut, *q*, screwed into the lower end of the handle. Between such nut and a pin, *r*, going through the rod transversely of it, is a spiral spring, I, which encompasses the rod and presses it into engagement with the gear D. The rod can be revolved in the handle, so as to carry the curved upper end or part *s* of the rod into either of two positions in order for the rod to slip over a tooth of the wheel when the handle is vibrated either forward or drawn backward, the object being to intermittently revolve the gear either way, as occasion may require, while the handle is being reciprocated. By taking hold of the projecting part *t* of the rod and pulling the rod downward against the pressure of the spring, the upper or cam-shaped end of the rod may be drawn out of engagement with the gear, and the rod be revolved one hundred and eighty degrees. On releasing the rod the spring will force it into engagement with the gear. By turning the gear the jaw head or carrier will be revolved, when the jaws are hold of a nut or head of a screw.

I do not claim a wrench constructed as represented in either of the United States Patents Nos. 275,079, 277,256, 322,937.

In the described wrench I claim—

The combination of the carrier A, having the prismatic shank *g*, together with the two jaws B and their adjusting screw-threaded rod *t*, and its supporting projection *f*, the gear D, provided with the flange *i*, and also with the eye *h*, the metallic disk F, fastened to the said gear by screws, the headed screw *o*, extending through the disk and screwed into the shank *g*, the tubular handle E, and the angular-pointed cylindrical rod H, and its operative spring I, such rod and spring being arranged within such handle and supported therein, essentially as described, and all being to operate substantially as set forth.

FRANK SEDGWICK DUELL.

Witnesses:

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