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THOMAS DAMON.

Improvement in Apparatus for Transmitting and Applying Power.

No. 121,854.

Patented Dec. 12, 1871.

Fig. 2.



Fig. 1.

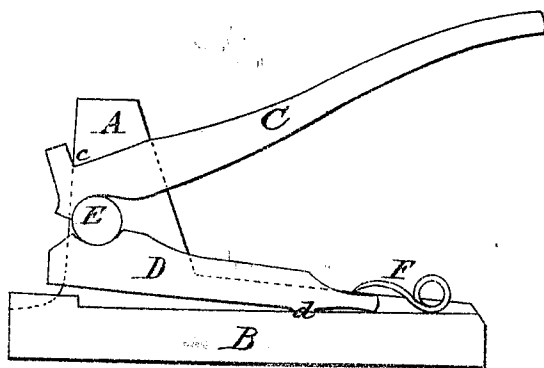


Fig. 3.

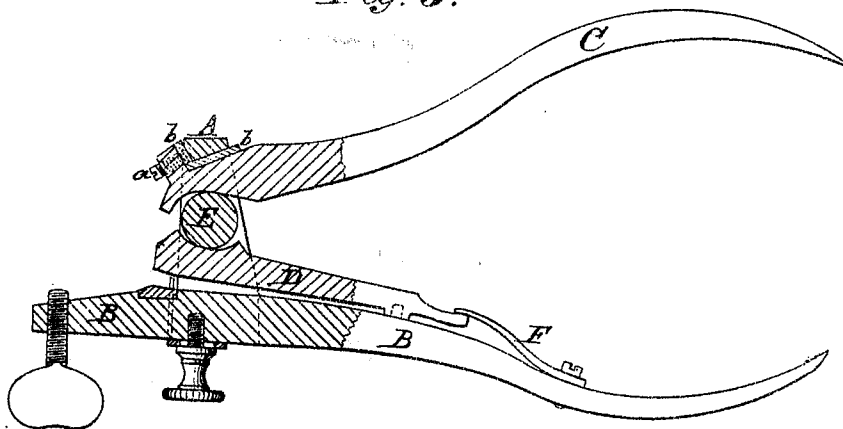
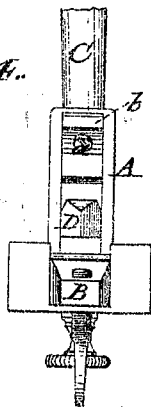


Fig. 4.



Witnesses:

J. C. Brecht.

Inventor

Thomas Damon
By his Attorney
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UNITED STATES PATENT OFFICE.

THOMAS DAMON, OF THOMPSONVILLE, CONNECTICUT.

IMPROVEMENT IN APPARATUS FOR TRANSMITTING AND APPLYING POWER.

Specification forming part of Letters Patent No. 121,854, dated December 12, 1871.

To all whom it may concern:

Be it known that I, THOMAS DAMON, of Thompsonville, in the county of Hartford and State of Connecticut, have invented a new and useful Mechanism for Transmitting and Applying Power; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of a pair of metal shears having my invention applied. Fig. 2 is an end elevation of the same. Fig. 3 is a side elevation, partly in section, of a saw-set having my invention applied. Fig. 4 is an end elevation of the same.

The same letter refers to the same part wherever it occurs.

My invention relates to an improved arrangement and combination of mechanical elements for the more perfect transmission and application of power, specially suitable to hand machinery for cutting, pinching, punching, pressing, setting, stamping, or swaging metals or other substances, and for other analogous purposes demanding great power exerted through a short distance. It consists in the interposition between a lever and an inclined plane of a free roller which receives, transmits, and applies the power to the precise point required—the three elements being arranged to operate together without pivots or the other friction-producing connections common to ordinary devices for similar purposes.

By this principle of construction the leverage is greatly increased, and the power conveniently and efficiently applied to the desired point.

In the drawing I have represented the invention as applied to metal shears and to a saw-set, but I contemplate its application to hand-punches and presses, saw-gummers, cutting-pliers, and other analogous implements or machines.

In Figs. 1 and 2, A marks the upright arm, and

B the base of the frame of the shears. C is a lever lying under the head of arm A, and having its fulcrum at *c*. D is the upper jaw of the shears, having its fulcrum at *d*, and forced upward by the action of spring F on its short arm. E is a free roller interposed between lever C and the inclined plane formed by the upper surface of jaw D. No pivots or friction-producing connections are used, and the power applied to lever C is transmitted without loss through the roller E to the jaw D at the precise point where the work is to be done.

In Figs. 3 and 4 the same construction is shown as applied to a saw-set. The various parts here operate in substantially the same manner and the same principle as in the case of the shears.

A device for adjusting the position of the upper jaw of the set is here shown, the same consisting of the angular plate *b b* inserted under the V of the frame A, which forms the fulcrum of lever C. A set-screw, *a*, passing through the head of said lever, impinges against the plate *b* and regulates the distance of the head from the plate. As the head of C is forced away from the plate the roller E and jaw D are driven down, and vice versa.

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

The mechanism, hereinbefore described, for transmitting and applying power, the same consisting of the combination of the lever C, roller E, and inclined plane D, substantially in the manner and for the purposes set forth.

The above specification of my said invention signed and witnessed at Washington this 9th day of November, A. D. 1871.

THOMAS DAMON.

Witnesses:

R. A. HYDE,
CHAS. F. STANSBURY.

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