

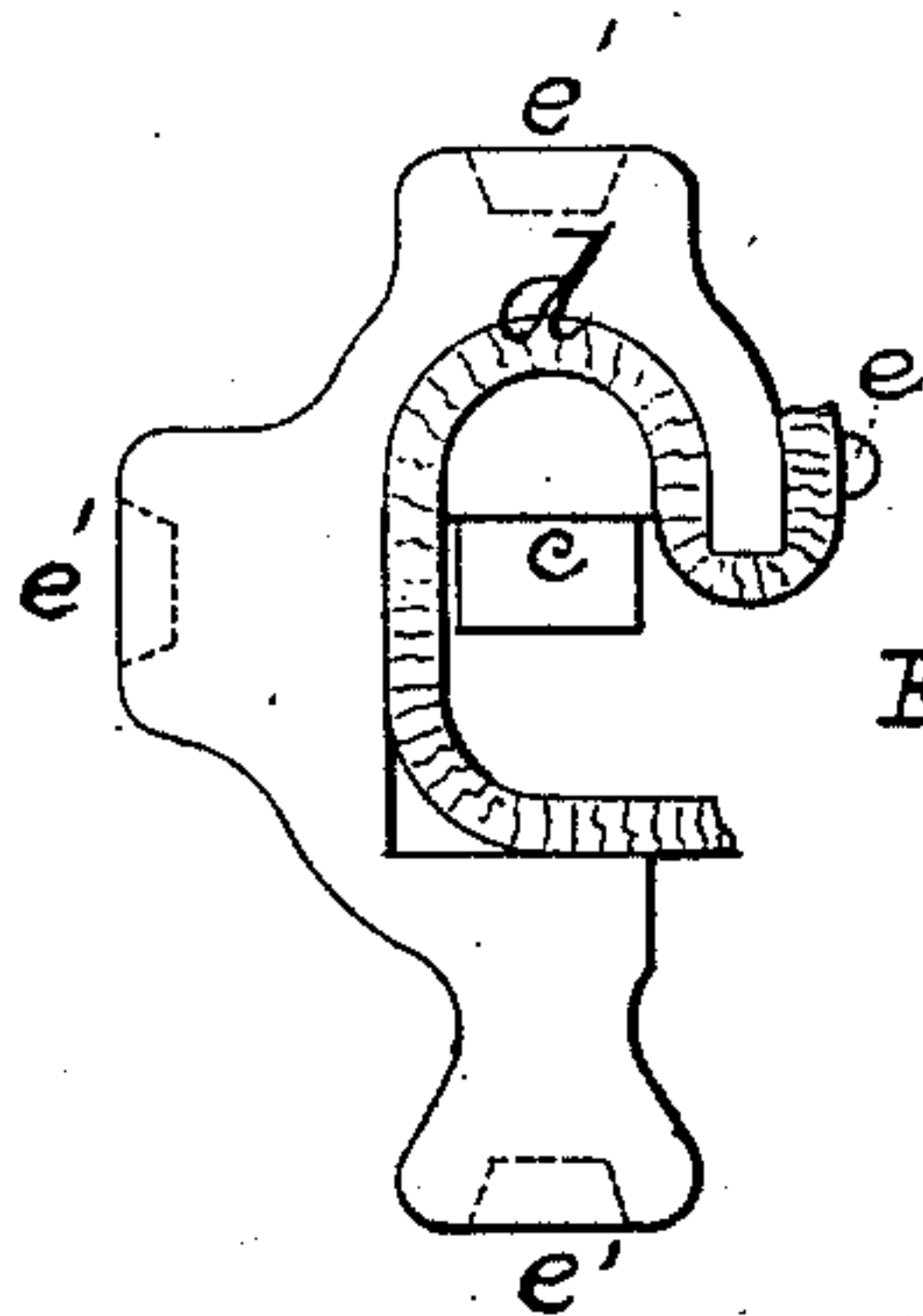
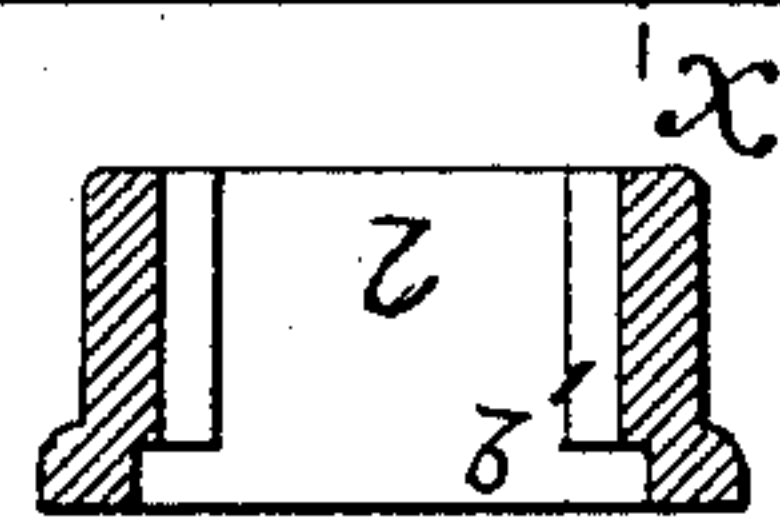
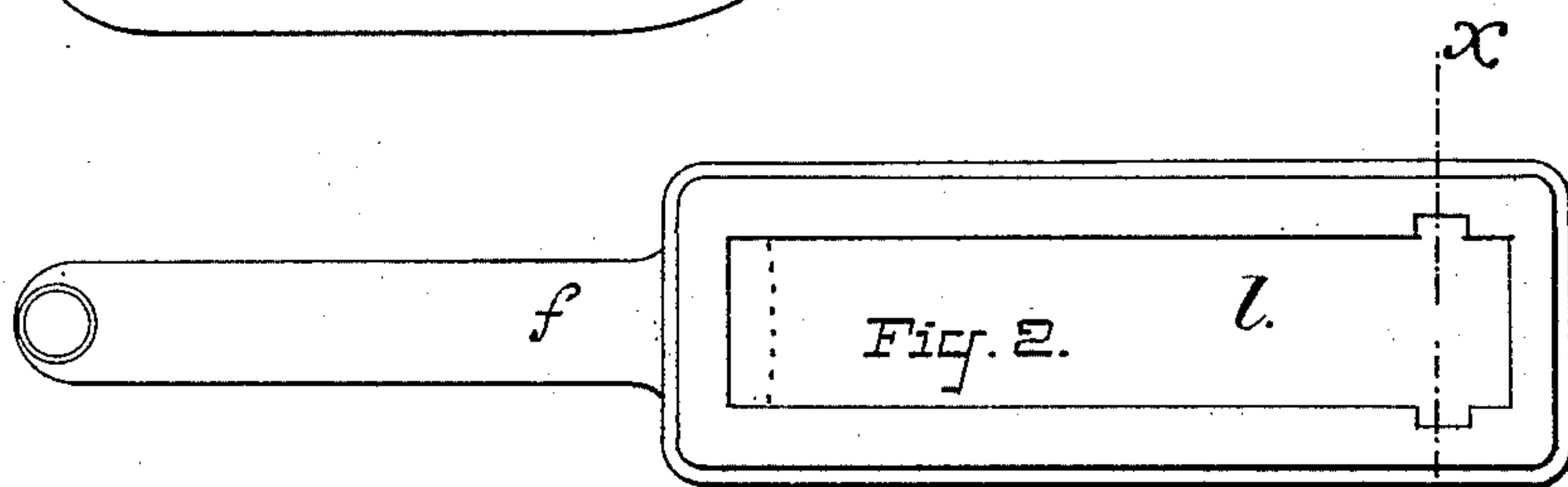
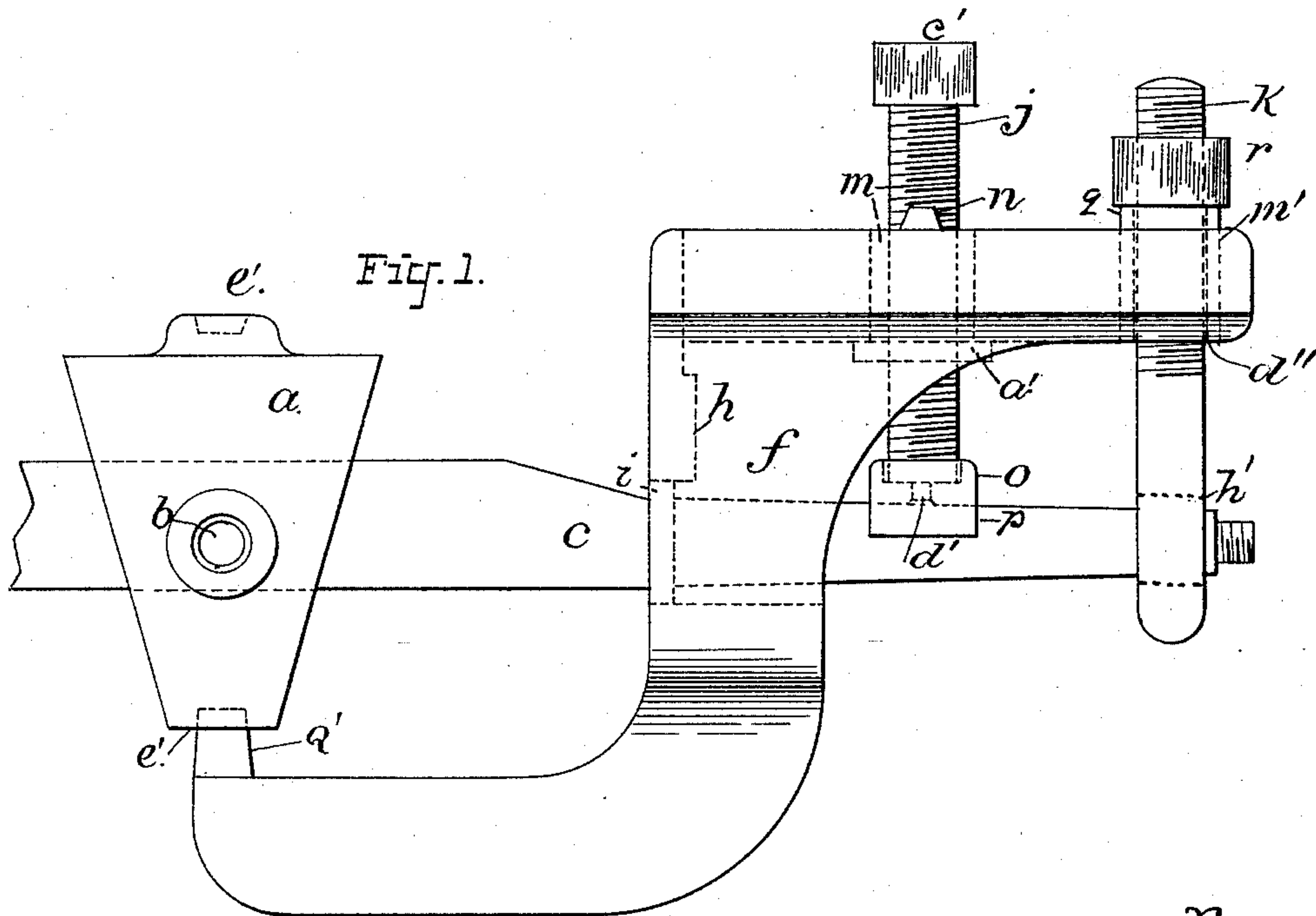
(No Model.)

J. OWEN.

AXLE STRAIGHTENER.

No. 328,137.

Patented Oct. 13, 1885.



ATTEST:

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Herman G. Law

INVENTOR:

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UNITED STATES PATENT OFFICE.

JOSEPH OWEN, OF DUNELLEN, NEW JERSEY.

AXLE-STRAIGHTENER.

SPECIFICATION forming part of Letters Patent No. 328,137, dated October 13, 1885.

Application filed June 12, 1885. Serial No. 168,543. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH OWEN, a citizen of the United States, residing at Dunellen, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Axle-Straighteners, of which the following is a specification.

My invention relates to improvements in devices for bending or straightening axles; and the purpose of my improvement is to provide a machine which is simple in construction and capable of being readily adjusted to axles without their being removed from the carriage, and is arranged for setting or straightening any portion of the axle, in whatever direction it may be bent.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a side elevation of my improved device, shown applied to an axle. Fig. 2 is a top view of the arm of the same. Fig. 3 is a cross-section taken on line *xx* of Fig. 2, and Fig. 4 is a side view of the supporting-block.

Let *a* in general represent a supporting block or saddle provided with a suitable recess, *b*, for receiving the bed-iron of the axle *c*, which fits into it, as shown in Fig. 4. The entire inner surface of the recess is cushioned, preferably with leather, to prevent the mar-
ring of the axle or the rubbing off of the paint of the wood-work. The cushion *d* extends over the exposed upper edge of the saddle, and is secured by a screw, *e*, to its outer surface, thus preventing any danger of rubbing the wood-work in the operation of inserting or removing the axle. A similar tapering recess, *e'*, is provided in the top, bottom, and side portions, for receiving a tapered pin on the end of the detachable arm *f*, in which arm are mounted the pressure and lifting screw-bolts, by which means the arm may be changed from one to the other side of the block, according to the direction in which the power should be applied. The rear part of the arm *f* is provided with an aperture, through which the axle passes, and its inner wall is cut away to form a shoulder at the point *h*, which bears against the shoulder *i* on the axle. *j* is a screw-bolt adapted to give a downward pressure, and *k* is a similar bolt arranged to draw up-
ward. The end of the axle is supported in

the eye *h'*, formed in the bolt *k*. The bolts *j* and *k* are arranged to have a lateral movement on the arm *f*, so that they are readily adjusted at any point over the axle where power is required. The upper portion of the arm *f* is provided with a slot, *l*, extending nearly from end to end, and movable blocks *m* and *m'*, carrying the screw-threaded bolts *j* and *k*, are arranged to traverse to and fro in this slot. The carrier *m* has a screw-threaded aperture for receiving the screw-bolt *j*. Lugs *n n* are provided on its upper portion, which rest on the edge of the arm, and side flanges, *a'*, on its bottom part are made to bear against a shoulder, *b'*, formed within the slot, by which the carrier is held in position. The screw-bolt *j*, which is designed for giving a downward pressure on the axle when in the position shown in Fig. 1, has a square head, *c'*, and is secured at its lower end by means of a pin, *d'*, to a swivel-block, *o*, which has its under surface made concave to adapt it to fit over the axle, as shown at *p*.

The carrier *m'* is provided with a smooth hole, *d''*, through which the screw-bolt passes, and in which it has a free rotary movement. Side flanges, *q*, on the top edge of the carrier prevent it from slipping through the slot.

The screw-bolt *k* serves as a lifting-screw for straightening out a downward bend in the axle. *h'* is an eye formed on the lower end of the bolt for receiving the axle-arm. *r* is a screw-nut working on the bolt.

The arm *f* is detachably connected to the supporting-block *a* by means of the pin *Q'*, fitting into the socket *e'* in the block. Instead of the pin, however, I may use a screw passing through a screw-threaded aperture in the end of the arm, when by turning the screw until its end fits up tightly in the socket an accurate connection is effected.

As both screw-bolts are movable, it follows that the power desired may be applied at any point on the axle. Should there be a kink in the axle, the pressure-bolt *j* is moved to a position over it and then turned until the proper degree of pressure is obtained. If, however, the axle is bent downward at any portion of its length, the lifting-screw is brought into operation by inserting the end of the axle through the eye of the screw and turning the bolt until

the axle is drawn up to a horizontal position.

What I claim as new, and desire to secure by Letters Patent, is—

5 1. In a device for straightening axles, the combination of a supporting-block, a bent arm detachably secured to said block provided with a longitudinal slotted portion, and adjustable movable screw-bolts arranged within said slot, as and for the purpose set forth.

10 2. The combination of a supporting-block provided with a tapering recess in three of its sides with a bent arm provided with a conical plug for attachment to said block, and having a shoulder portion adapted to bear

against the shoulder of the axle, with laterally- 15 sliding power-screws mounted in said arm, as and for the purpose set forth.

3. The combination, with the arm *f*, of the carrier-block *m*, arranged to work in a slot in said arm and provided with a screw-threaded 20 aperture, with screw-bolt *j*, having pressure-head *o*, and carrier *m'*, with screw-bolt *k*, to receive the axle, and nut *r*, all arranged as set forth.

JOSEPH OWEN.

Witnesses:

HERMAN G. LOEW,

K. NEWELL.