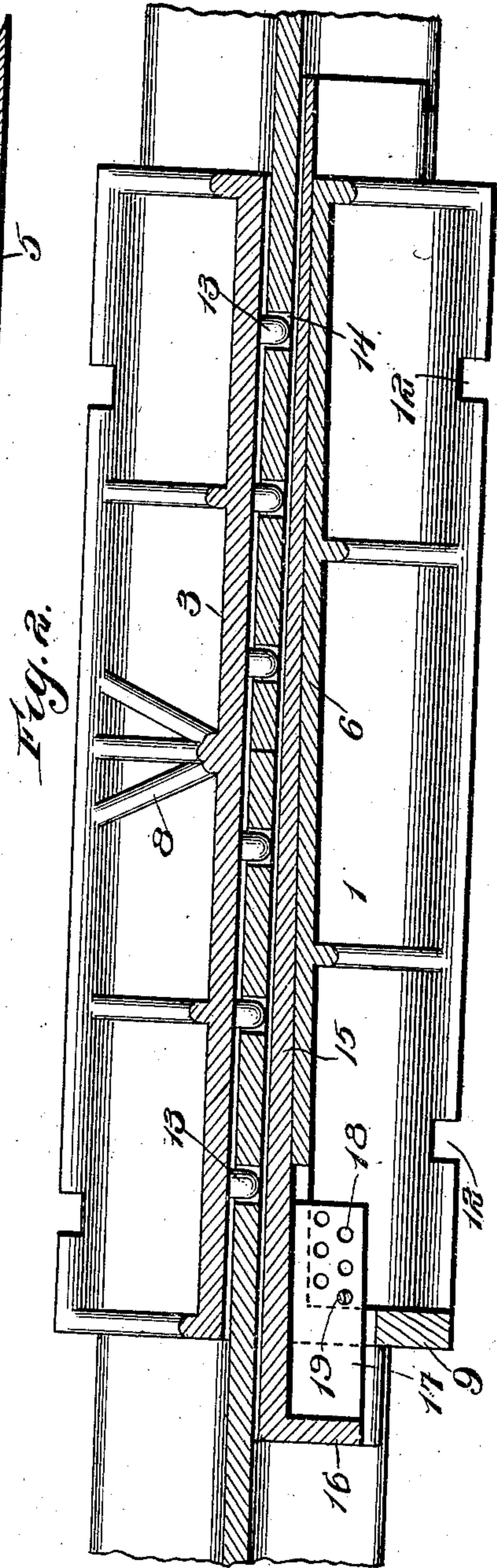
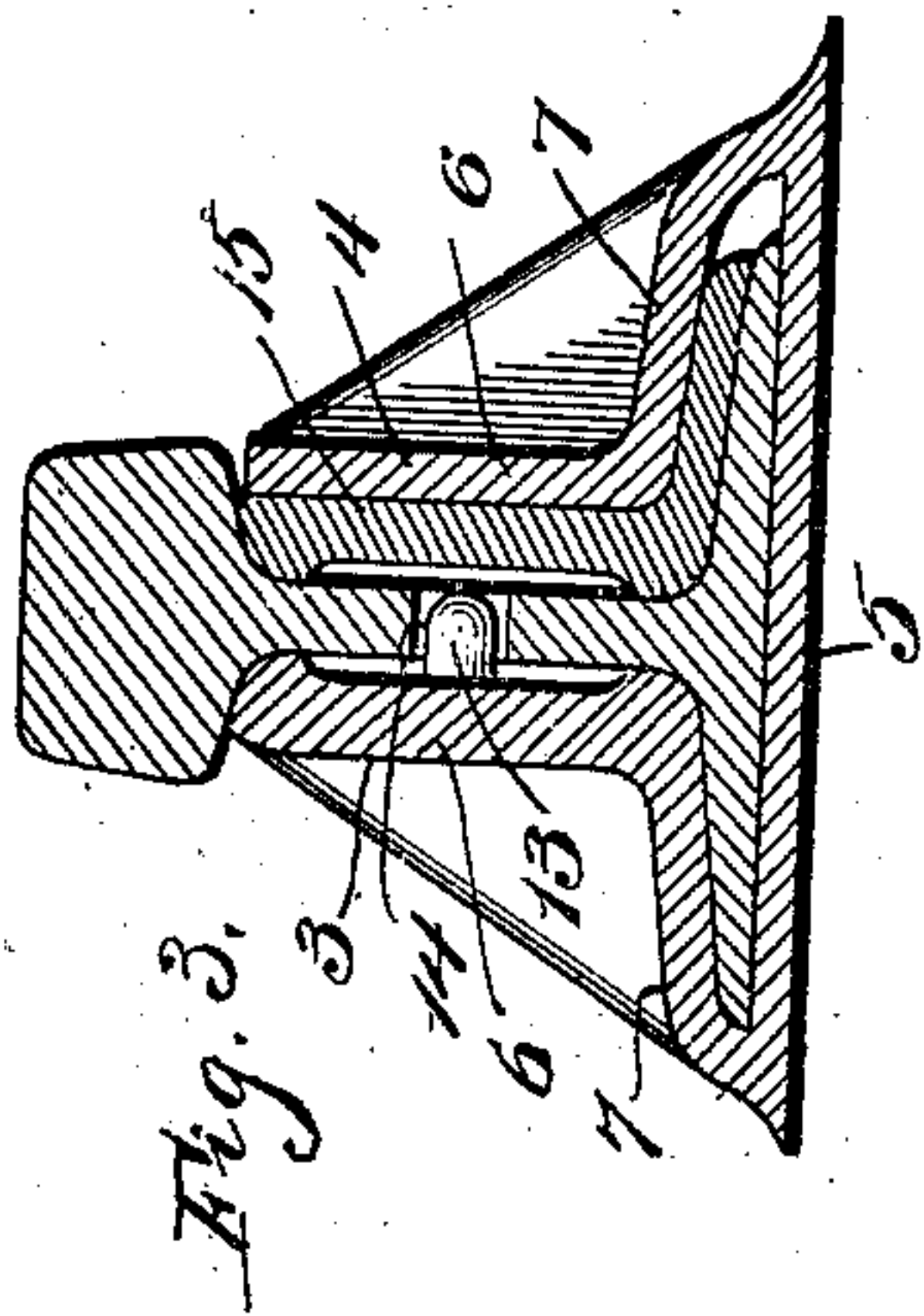
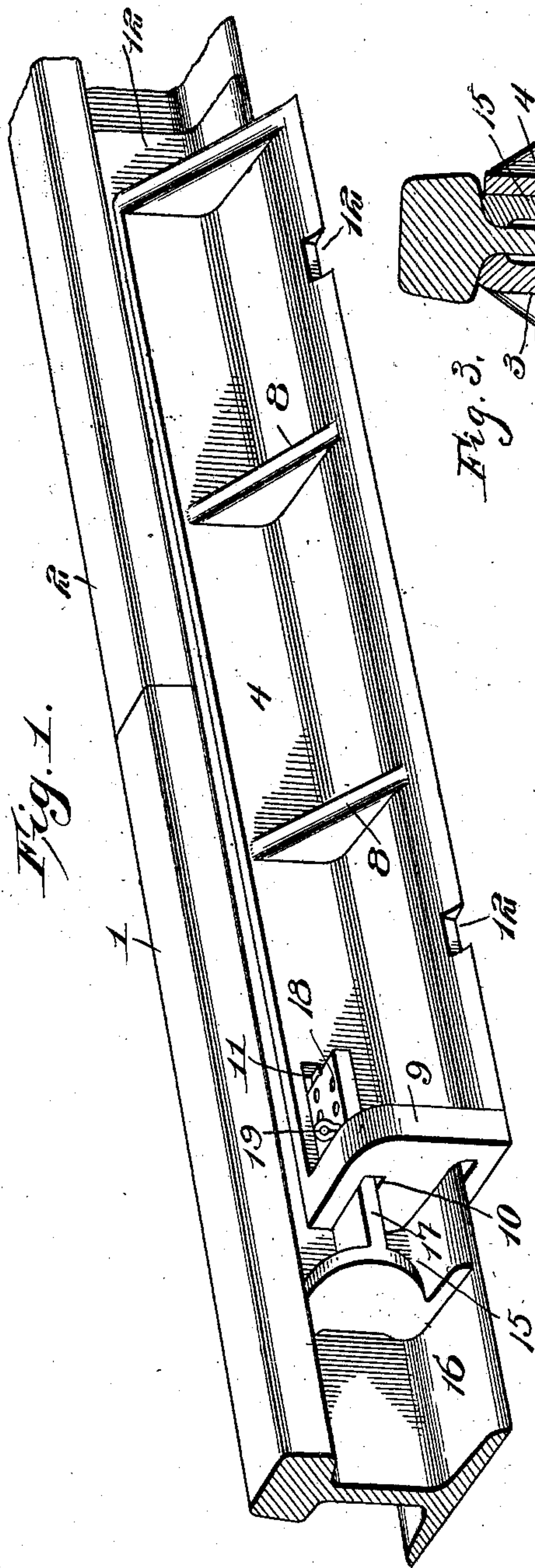


No. 840,424.

PATENTED JAN. 1, 1907.

J. E. BEAVER.
RAIL JOINT.

APPLICATION FILED MAR. 20, 1906.



Witnesses

Louis R. Heinichs
C. C. Hiner

J. E. Beaver
Inventor

By

Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

JOHN E. BEAVER, OF WARWICK, OHIO.

RAIL-JOINT.

No. 840,424.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed March 20, 1906. Serial No. 307,080.

To all whom it may concern:

Be it known that I, JOHN E. BEAVER, a citizen of the United States, residing at Warwick, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to improvements in rail-joints or fastenings for connecting the meeting ends of rails, the object of the invention being to provide a simple and inexpensive construction of joint which obviates the use of bolts and similar fastenings embodying parts which are liable to work loose and allow the rails to spread.

In the accompanying drawings, Figure 1 is a perspective view of the device as employed for connecting the meeting ends of rails. Fig. 2 is a horizontal section of the same. Fig. 3 is a transverse section.

Referring to the drawings, 1 and 2 designate the meeting ends of adjoining rails connected by my improved boltless fastening, the latter comprising opposite splice-plates 3 and 4, arranged in proper relation to lie upon the opposite sides of the rails and to serve the function of fish-plates, the said splice-plates being preferably connected by and formed integrally with a base-plate 5, forming a seat for the base portions of the rail ends. Each plate 3 and 4 is of angular form and comprises a vertical portion 6 to lie parallel with the web of the rail and a horizontal portion 7, corresponding in shape to and adapted to extend over the base-flange of the rail and connected at its outer edge to the base-plate 5. The parts 6 and 7 of each plate are joined and strengthened by angular bracing-webs 8, the plate 3 being preferably provided with a plurality of such webs opposite the abutting ends of the rails and being otherwise similar in general form to the plate 4 except that the brace at one end of the latter is made in the form of a rectangular head 9, provided with a horizontal slot 10, intersecting a similar slot 11 in the adjacent end of the vertical portion 6 of said plate. The outer edges of the two plates are formed with notches 12 for the passage of spikes to fasten the same to the ties, while the vertical portion of the plate 3 is provided with projections 13 to enter openings 14 in the webs of the rails to mutually hold the rails and fastenings from relative

longitudinal movement. The openings 14 are preferably sufficiently elongated to allow expansion and contraction of the rail to the necessary extent without permitting undue shifting of the parts. The plate 3 is arranged to bear against the adjacent side of the rail, while the plate 4 is spaced from the opposite side of the rail for the introduction between the same and the rail of a locking-key 15, conforming in shape with said plate 4, the outer face of the key and inner face of the portion 6 of the plate 4 being tapered or inclined to secure a wedging action when the key is inserted to cause the rails to be securely clamped between the opposing plate 3 and key. The key is adapted to be inserted and withdrawn by longitudinal sliding movement at the enlarged end of the space or passage and is formed at one end with a head 16 to receive blows from a hammer or other tool, whereby it may be driven into position and dislodged when it is desired to disconnect the rails. Also formed upon the key and extending longitudinally from the head is a locking-plate 17, adapted, when the key is applied, to seat within the slots 10 and 11. The plate 17 is provided with one or more rows of openings 18, spaced a different distance apart to receive a split pin 19, adapted to abut against the head 9 of the member 4 and hold the key from outward movement.

It will be understood that the ends of the rails are inserted in position between the plates 3 and 4 and engaged with the projections 13, after which the wedge-key is inserted and locked in position, thereby securely connecting the parts. This construction results in the production of a joint-fastening which will securely hold the rails connected without the use of fastenings, such as bolts and the like, embodying parts which are liable to work loose. The construction furthermore permits the rails to be conveniently disconnected when occasion requires.

It will be observed that the rails are of the usual commercial or standard construction and that my improved joint-fastening may be employed in connection with such rails without varying the construction thereof in any particular.

Having thus described the invention, what is claimed as new is—

A rail-chair comprising a base, opposite

splice-plates carried thereby, one of said
splice-plates having at one end a slot and a
head provided with a communicating slot,
a wedge arranged to cooperate with said
5 splice-plate and provided at one end with a
vertical driving-head having a horizontally-
projecting locking-plate adapted for inser-
tion in said slots, and a key cooperating with

the head on the splice-plate and locking-plate
to secure the wedge in position.

In testimony whereof I affix my signature
in presence of two witnesses.

JOHN E. BEAVER.

Witnesses:

BENJAMIN WHEELER,
B. F. WHEELER.