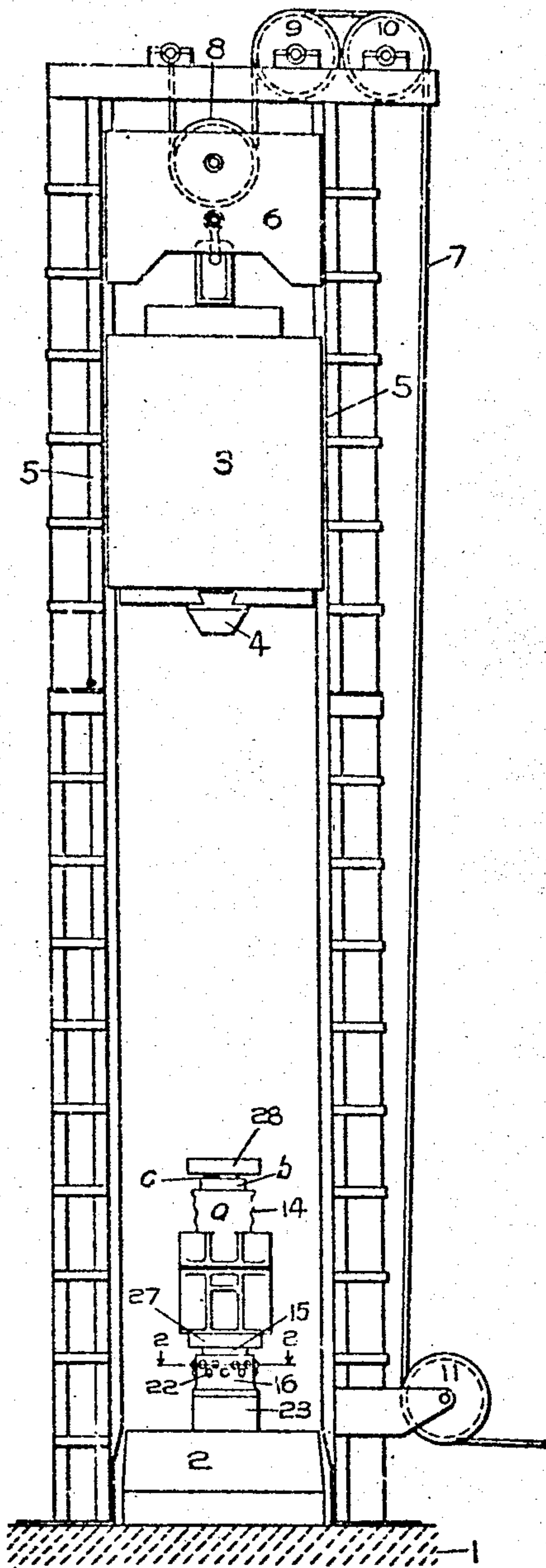


J. F. O'CONNOR.  
TESTING MECHANISM.  
APPLICATION FILED FEB. 25, 1911.

994,531.

Patented June 6, 1911.

FIG-1



WITNESSES

Calvin B. Patch  
H. W. Munday

FIG-2

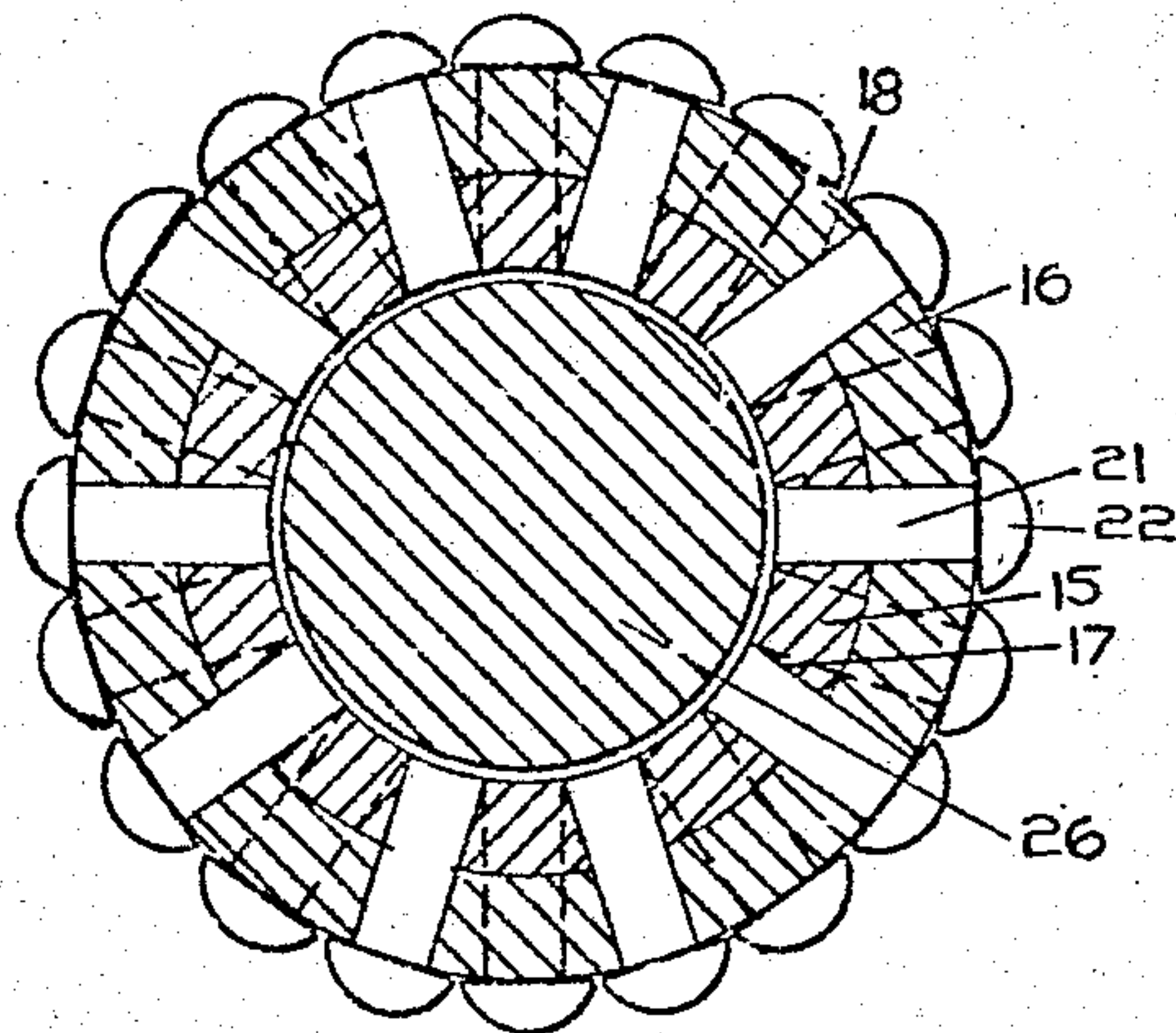
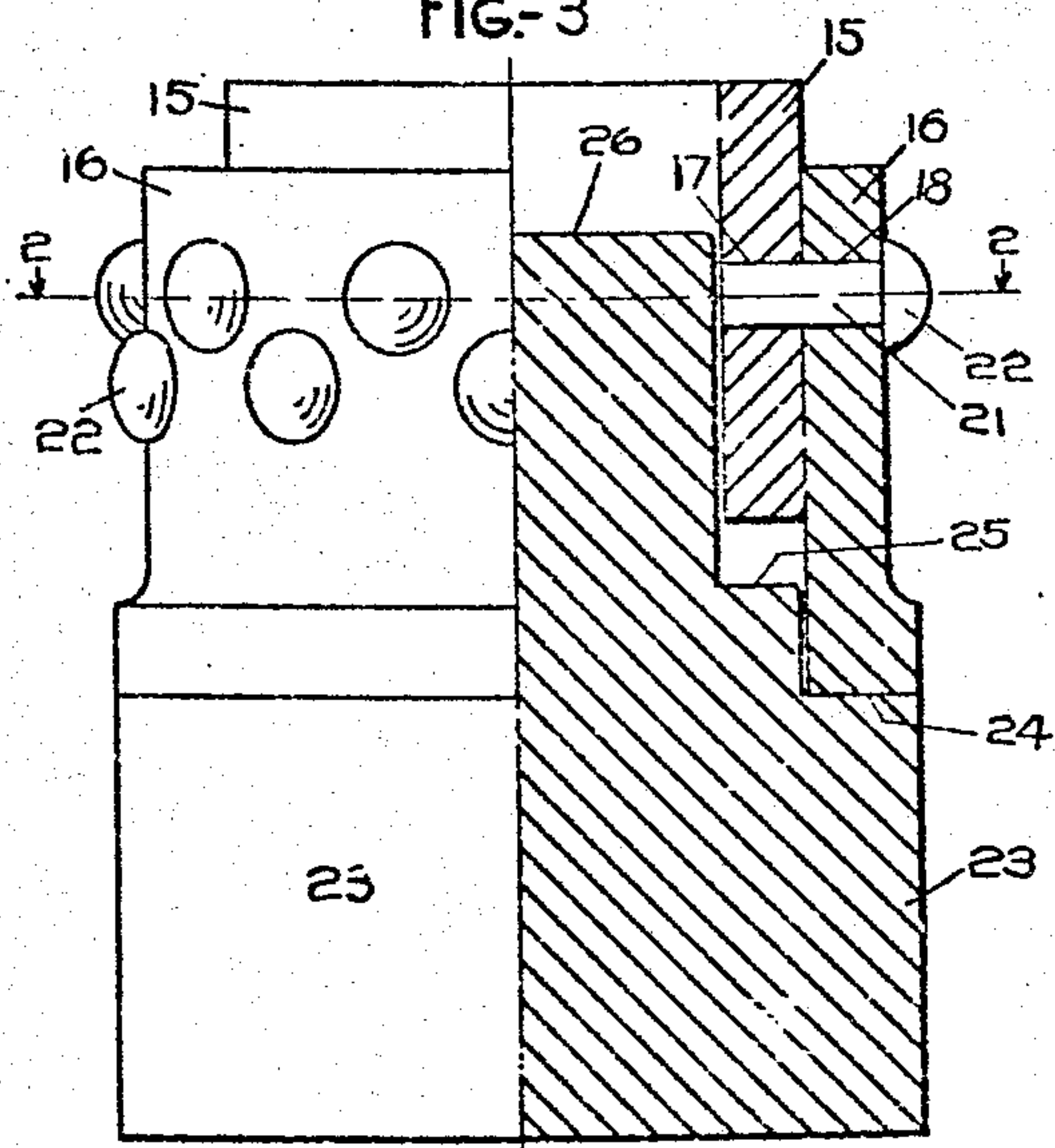


FIG-3



INVENTOR

John F. O'Connor  
Munday, Coats, Adcock & Holark  
BY

HIS ATTORNEYS



# UNITED STATES PATENT OFFICE.

JOHN F. O'CONNOR, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM H. MINER, OF CHICAGO, ILLINOIS.

## TESTING MECHANISM.

994,531.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed February 25, 1911. Serial No. 610,701.

*To all whom it may concern:*

Be it known that I, JOHN F. O'CONNOR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Testing Mechanism, of which the following is a specification.

My invention relates to improvements in testing mechanism.

10 The object of my invention is to provide a testing mechanism for draft rigging of railway cars, which will be of a simple construction, and efficient and reliable in operation, and by means of which the practical operativeness or efficiency of a draft rigging in preventing the shearing of the rivets which connect the stop members of a draft rigging with the center sills or frame members of a car, may be practically and reliably ascer-  
20 tained.

My invention consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described and more particularly specified in the claims.

In the accompanying drawing forming a part of this specification, Figure 1 is a front elevation of a rivet shear draft rigging testing apparatus embodying my invention. Fig. 2 is a horizontal section on line 2—2 of Fig. 1, the section line 2—2 being also shown on Fig. 3. Fig. 3 is a detail elevation, partly in central, vertical section of the rivet shear testing sleeves and their holder block.

35 In the drawing, 1 represents an anvil bed of masonry, 2 an anvil, 3 a drop hammer, preferably of about 9000 pounds weight, 4 the nose or striking plate of the hammer, 5 the upright guides or frame of the drop hammer, 6 the cross head, 7 the hoisting line, preferably wire rope, and 8, 9, 10, 11 pulleys for the hoisting rope. All these parts may be of any ordinary or suitable construction.

14 represents a railway draft rigging to be tested as to its effectiveness in cushioning blows and consequent prevention of rivet shearing on the rivets which connect the stop members of the draft rigging with the center sills or frame members of the car.

50 15, 16 are a pair of rivet shear testing sleeves accurately turned to fit snugly and telescopically together. Each of these rivet testing sleeves 15, 16 is furnished with accurately drilled and registering rivet holes 17,

18, preferably twenty in number, in which the rivets 21 accurately and snugly fit but with sufficient looseness to enable the rivets to be slipped or pushed in by hand in order that they may be quickly inserted, and also to secure absolute uniformity of conditions in testing. The rivets 21 are preferably one and a quarter inches in diameter, and each furnished with a head 22, and the rivets are preferably made just long enough to pass through both of the testing sleeves 15, 16.

23 is an anvil block or holder for the testing sleeves. It is furnished with an annular shoulder 24 against which the outer testing sleeve 16 abuts at its lower end, and a further annular shoulder 25 which is spaced apart from the lower end of the inner testing sleeve 15, preferably the diameter of a rivet, and against which stop shoulder 25 the inner testing sleeve 15 may abut after the rivets 21 connecting the testing sleeves have been sheared by action of the drop hammer 3. The testing sleeve holder or supplemental block 23 is preferably furnished with a guide extension 26, which fits loosely within the inner testing sleeve 15.

27 is a metal block or plate, preferably two or three inches in thickness, which rests on top of the inner rivet shear testing sleeve 15 and 28 is a similar metal plate or block which is placed on the upper end of the draft rigging 14 as a striking plate for the nose 4 of the hammer 3 to engage.

The draft rigging 14 to be tested may of course be of any known construction. As represented in the drawing, it comprises a friction shell as *a*, friction shoes as *b*, and a wedge as *c* and a spring within the friction shell.

In operation, the rivet holes of the testing sleeves are first filled with rivets and then subjected to a blow from the drop hammer falling from a height sufficient to shear the rivets when no draft rigging or cushioning mechanism is interposed between the striking blocks or plates 27, 28. The draft rigging to be tested is then inserted between the plates 27, 28 and the increased height from which the hammer 3 is required to drop in order to shear the rivets will represent the relative efficiency of the draft rigging as compared with the solid or unyielding connection between the hammer and the testing sleeves.



I claim:—

1. A testing apparatus for draft rigging, comprising in cooperative combination an anvil, a drop hammer, a pair of rivet shear  
5 testing sleeves furnished with registering rivet holes into which rivets may be slipped, and a supplemental anvil block or holder for said testing sleeves, having an annular shoulder for one of the testing sleeves to  
10 abut against, and a stop shoulder for the other testing sleeve to abut against in the shearing of the rivets, substantially as specified.

2. In a testing apparatus, the combination  
15 with an anvil and drop hammer, of a pair

of rivet shear testing sleeves between the hammer and anvil and furnished with rivet holes, substantially as specified.

3. In a testing apparatus, the combination with an anvil and drop hammer, of a pair  
20 of rivet shear testing sleeves furnished with rivet holes, and a holder for said testing sleeves having a pair of stepped annular shoulders and also provided with a central  
25 extension adapted to fit within the inner testing sleeve, substantially as specified.

JOHN F. O'CONNOR.

Witnesses:

F. SEYMOUR CLARK,  
M. GRACE RAPP.