

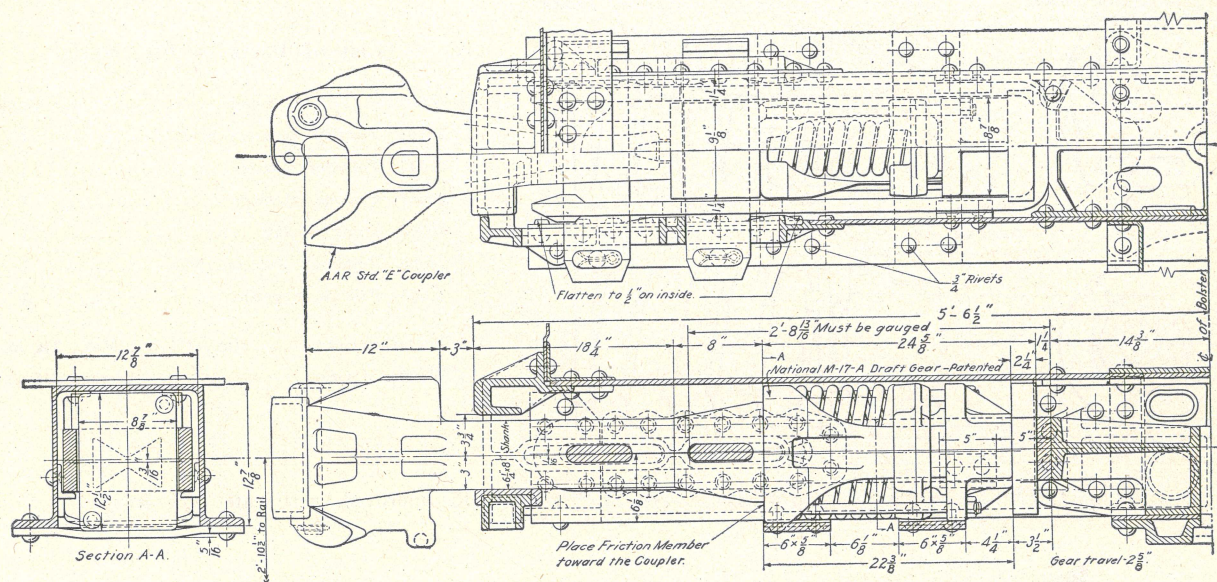


Fig. 10.71—National friction draft gear, Type M-17-A, applied to A.A.R. type car in combination with A.A.R. Standard E Coupler and horizontal cast steel yoke.

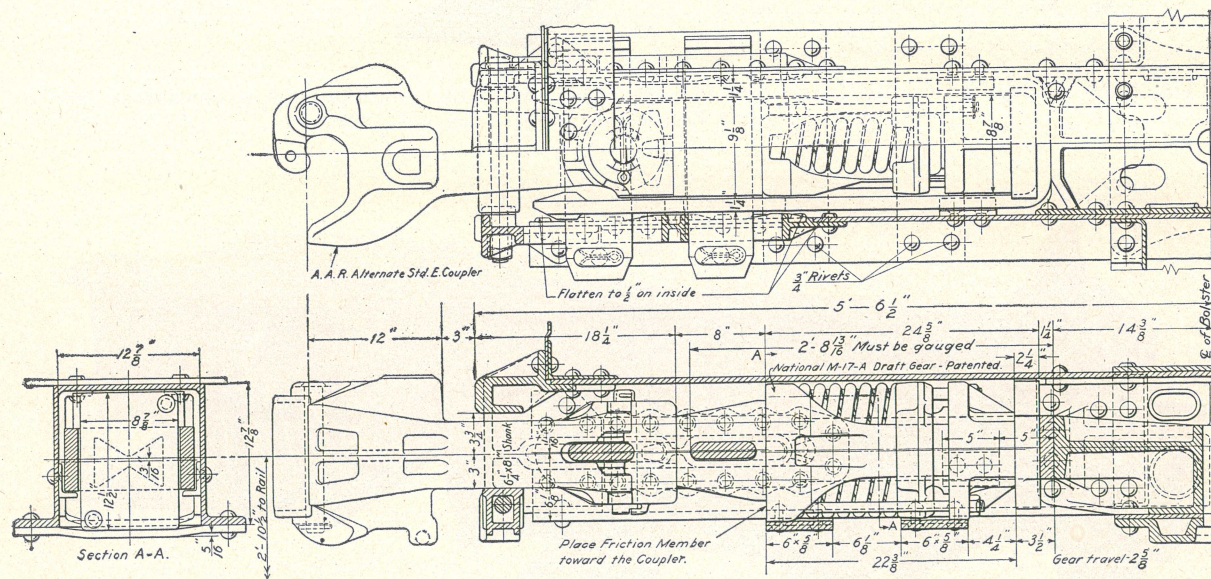
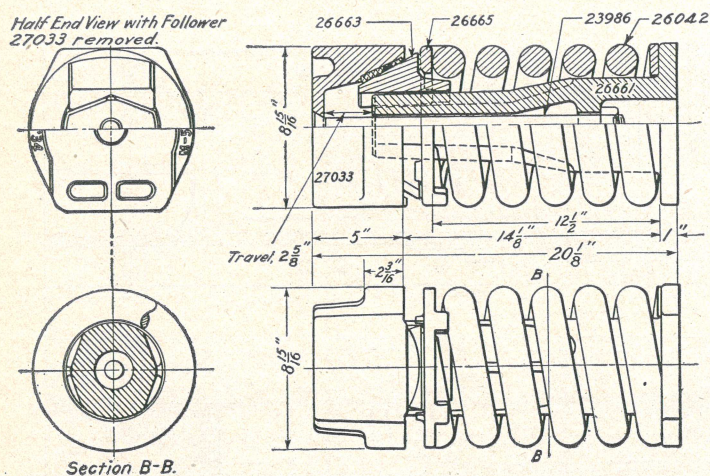


Fig. 10.72—National friction draft gear, Type M-17-A, applied to A.A.R. type car in combination with Alternate Standard E Coupler, swivel butt casting and horizontal cast steel yoke.

National Malleable and Steel Castings Company

(See also Pages 953, 959)



List of Parts of Fig. 10.73

NUMBER	NAME	NO. PER GEAR
26665	Friction Segment Seat.....	1
27033	Follower Wedge	1
26661	Friction Member	1
26042	Draft Spring	1
23986	Retaining Rod and Nut.....	1
26663	Friction Segment	2

Travel of Gear.....Min., $2\frac{1}{2}$ in.; Max., $2\frac{3}{4}$ in.
Weight of Gear.....Average 245 lb.

Fig. 10.73—National friction draft gear, Type M-50-B. A.A.R. approved, certificate No. 10.

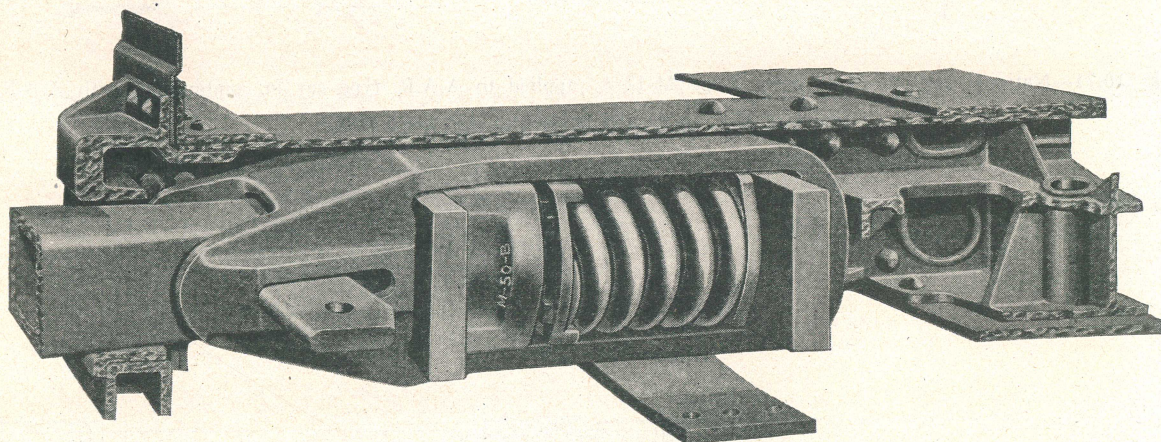


Fig. 10.74—National friction draft gear, Type M-50-B, A.A.R. approved, applied to car in combination with A.A.R. Standard E Coupler and vertical cast steel yoke.

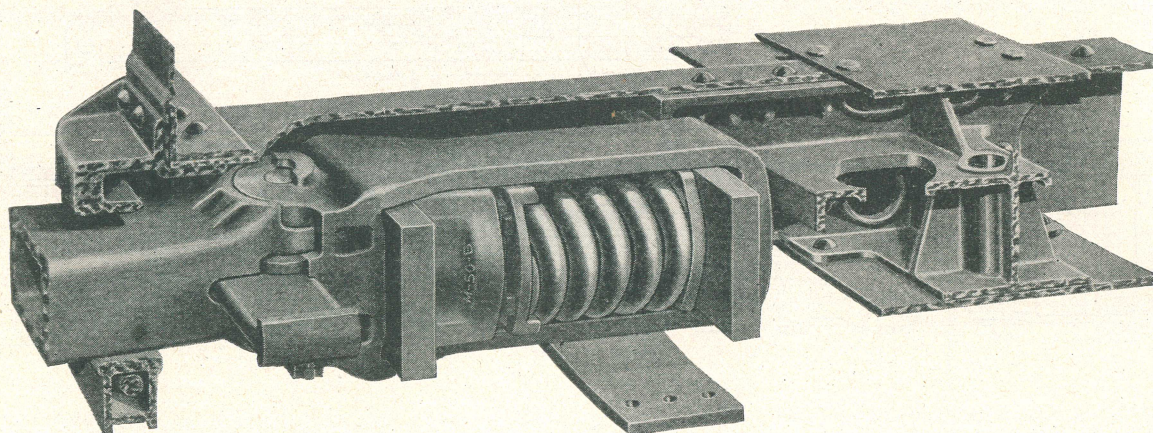


Fig. 10.75—National friction draft gear, Type M-50-B, A.A.R. approved, applied to car in combination with A.A.R. Alternate Standard E Coupler with vertical cast steel swivel yoke.

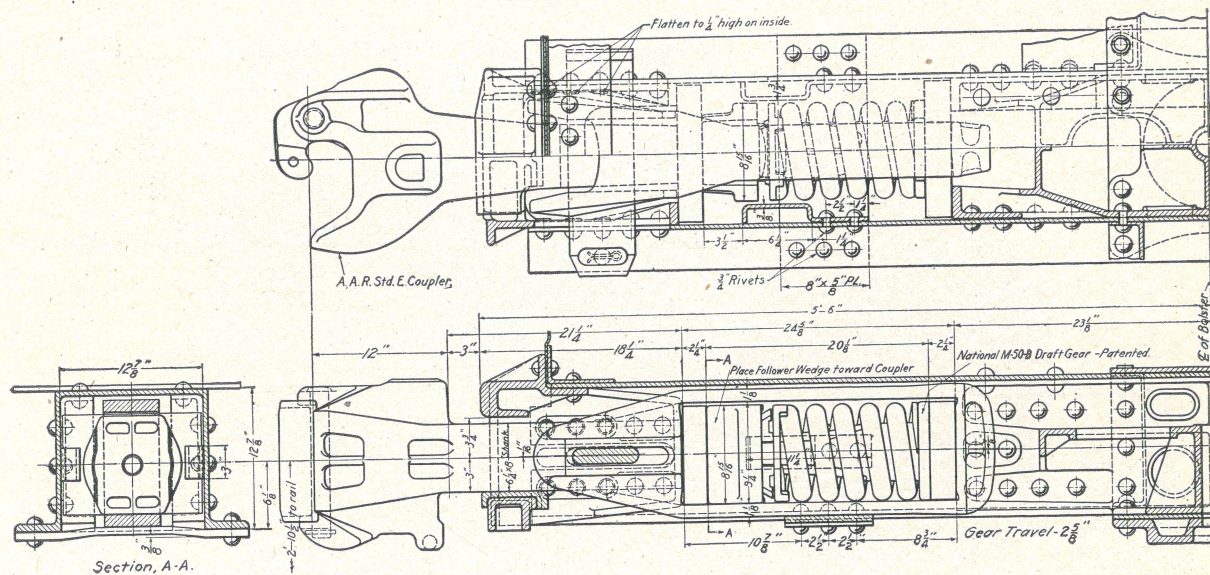


Fig. 10.76—National friction draft gear, Type M-50-B, applied to A.A.R. Type car in combination with A.A.R. Standard E Coupler and vertical cast steel yoke.

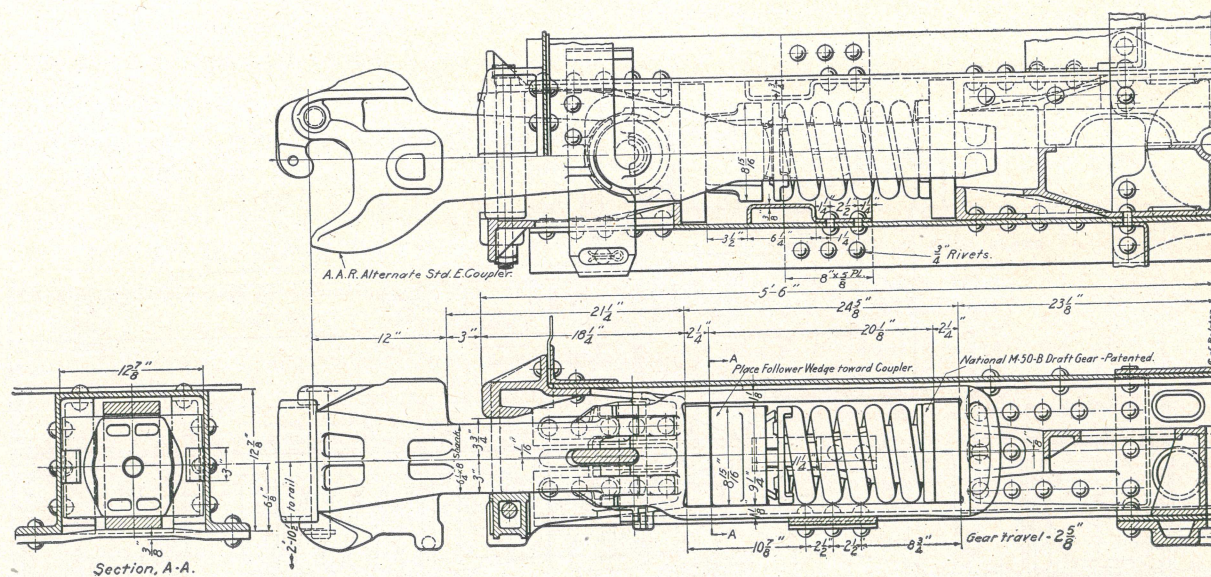


Fig. 10.77—National friction draft gear, Type M-50-B, applied to A.A.R. Type car in combination with A.A.R. Alternate Standard E Coupler and vertical cast steel swivel yoke.

National Malleable and Steel Castings Company

(See also Pages 953, 959)

National Draft Gear, Type K-4

Designed to meet the exacting requirements of passenger and caboose equipment service

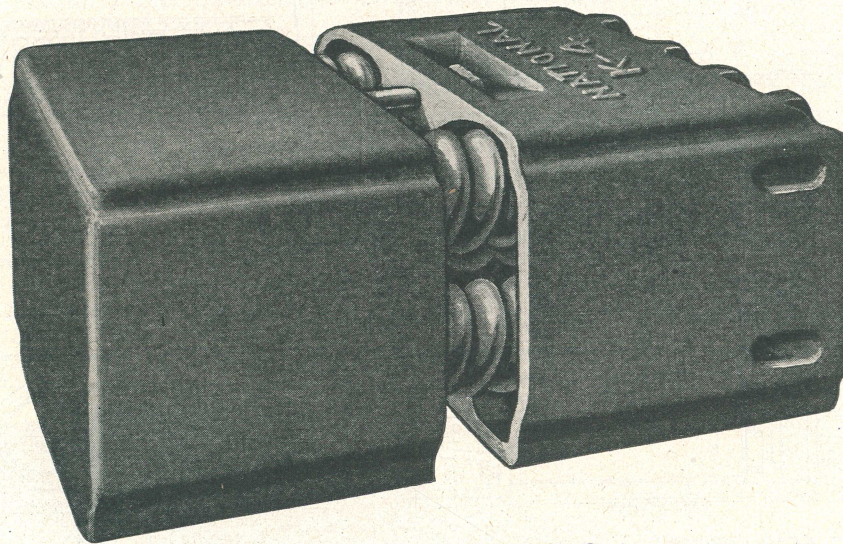


Fig. C—National Type K-4 Draft Gear

THE National Type K-4 Passenger and caboose Draft Gear embodies a combination of spring and friction resistance, the first one and one-half inches of travel in buff or draft being resisted by spring action, while for the remainder of the travel the spring action is augmented by frictional resistance to cushion the occasional heavier shocks incident to coupling, slack run-in, etc. This gear is of standard dimensions, $8\frac{7}{8}$ in. by $12\frac{1}{2}$ in. by $22\frac{3}{8}$ in., and requires one follower. The total nominal travel is $2\frac{1}{2}$ in.

Figure D shows a typical closure curve for this gear. The initial spring compression is approximately 3,000 pounds. This spring resistance increases as the gear closes, until at $1\frac{1}{2}$ inches compression it is 45,000 pounds. After this the resistance increases more rapidly as the friction system comes into action.

The internal construction of this gear is such that as the gear releases, the friction system releases first, followed by release of the spring system. This means that the frictional cushioning capacity of the gear is always available, even in the case of a rapid succession of blows. The spring resistance and

frictional resistance are so proportioned that pulsations in locomotive tractive effort are absorbed by the gear, thus insulating the cars from such disturbances.

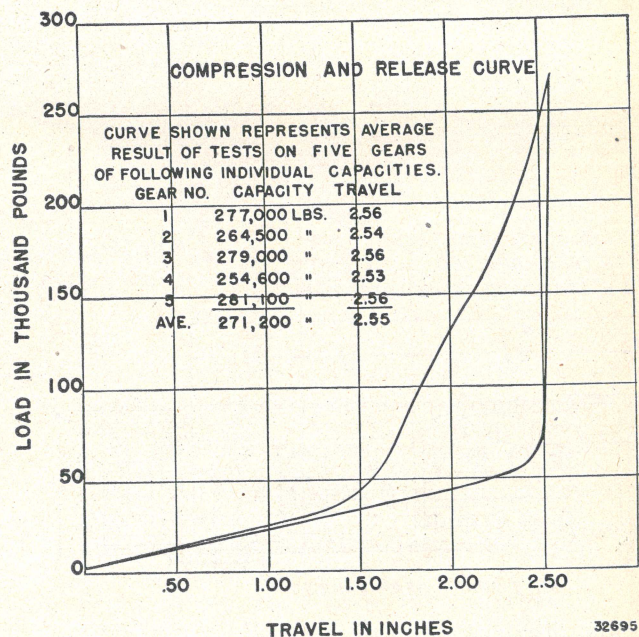


Fig. D—Closure Chart for Type K-4 Gears

NATIONAL MALLEABLE AND STEEL CASTINGS CO., CLEVELAND 6, O.

Products and Branch Offices Are Listed in the Classified Indexes

Sec. 10—959

FreightCar America, Ex. 1054

IPR2025-01046, -01047

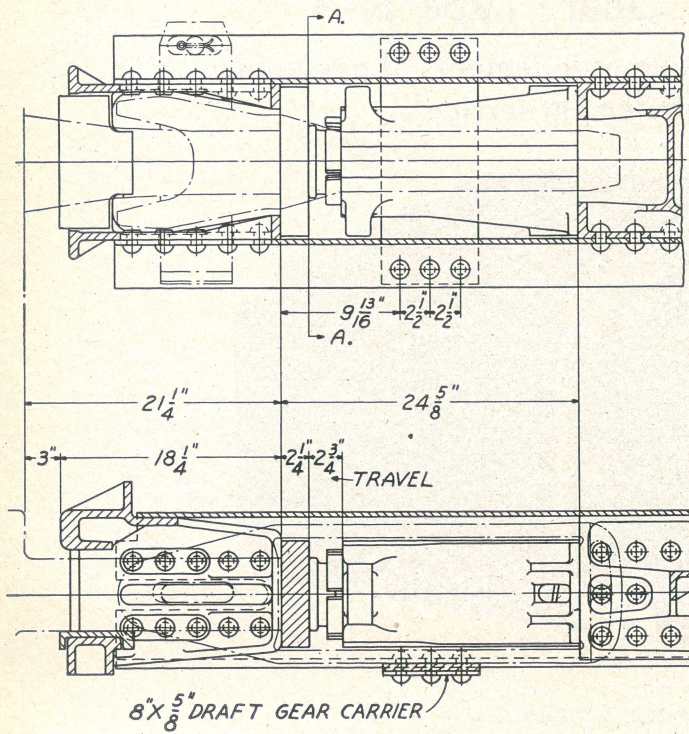


Fig. 10.81—Application of Peerless Type "H-1-B" friction draft gear with A.A.R. standard vertical yoke.

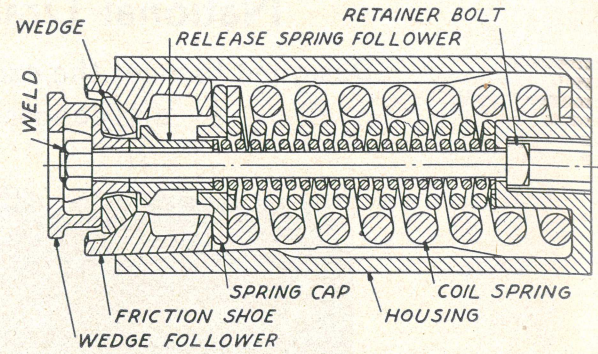
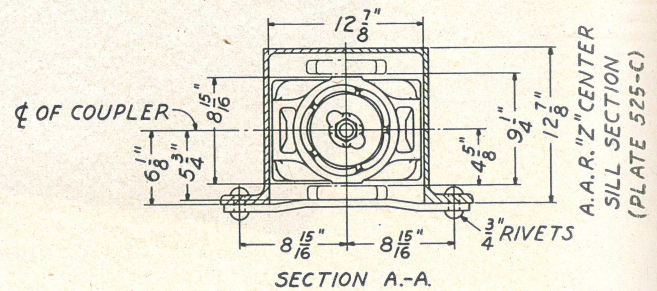


Fig. 10.80—Peerless Type "H-1-B" friction draft gear. A.A.R. approved.



NOTE:

NO OLD SPRING LESS THAN 9 5/16" FREE HEIGHT OR MORE THAN 7 1/16" SOLID HEIGHT SHOULD BE USED.

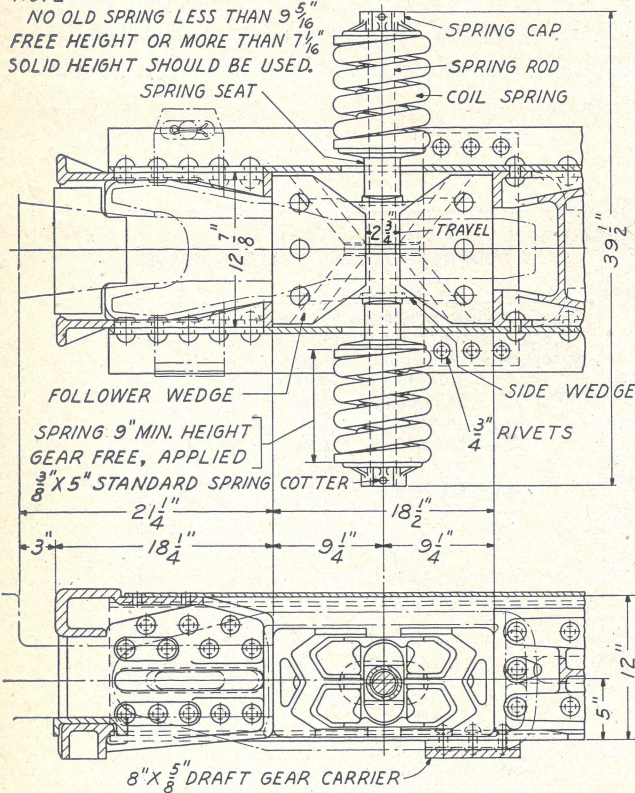


Fig. 10.82—Peerless Type "KC" friction draft gear.

NOTE:

NO OLD SPRING LESS THAN 9 5/16" FREE HEIGHT OR MORE THAN 7 1/16" SOLID HEIGHT SHOULD BE USED.

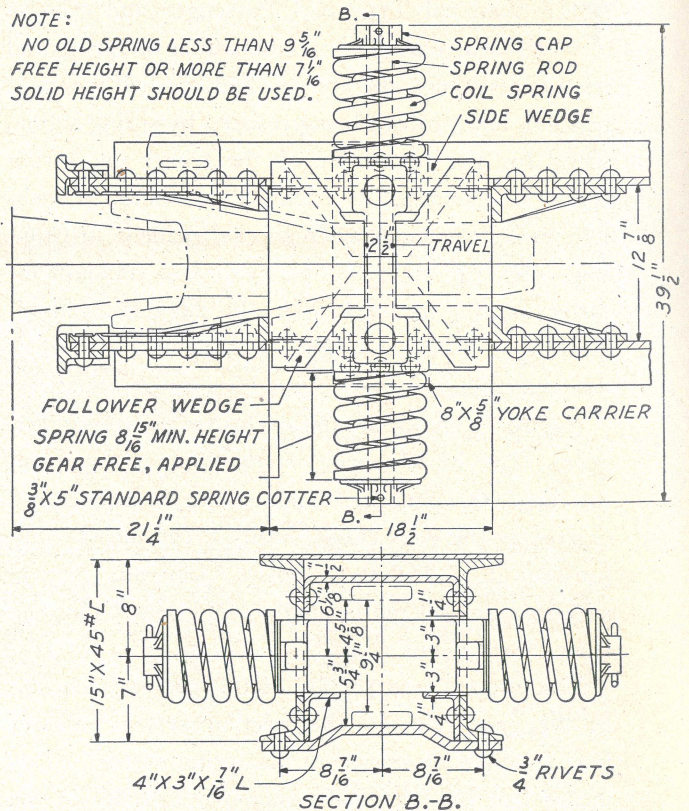


Fig. 10.83—Peerless Type "C" friction draft gear.

Peerless Equipment Company.

(See also Page 961)