The Shay Lokomotive

märklin

TRIX

E

HO

The History

The Industrial Age also marked the beginning in the USA of systematic development of natural resources which provided the material for rapid progress. Coal became the most important source of energy and wood was needed in large quantities for the construction boom across the country. However, there were many extensive forest areas and also large coal deposits often in remote regions that were difficult to access. The sawmill owner Ephraim Shay developed a gear-driven steam locomotive around 1873 in order to open these areas up better. Its design allowed it to pull heavy loads on difficult, curving routes. At high speeds it could not manage the job. Starting in 1880 the large locomotive builder LIMA Locomotive Works took over its construction and continuously refined it. The basic principle remained the same:
A vertically installed steam engine mounted on the right side drove all the axles using a gear drive and thereby provided optimal pulling power, whereby the boiler had to be mounted offset to balance the weight distribution. The maximum speed was limited to about 25 km/h / 15 mph due to the small gear reduction.

Hunter Library, Western Carolina University

Picryl - Ephraim Shay

The Shays turned out very well and became a mystique among steam locomotives not only due to their unusual technology but also because of their massive appearance. In the end, a respectable 2,770 Shay locomotives were built by 1945. Most ran on forest logging railroads, although a number of units were also delivered to important railroad companies. The Western Maryland Railway (WM), developing the numerous coal reserves in the eastern part of the USA, bought large Shays for branch lines to coal mines. There grades of up to 10% and curves of under 100 meters / 325 feet had to be mastered.
By 1945 the WM used the massive, 136 ton four-truck Shay Number 5 in the Appalachians. It was replaced by the most powerful Shay ever built, Number 6, which still currently steams through the mountains of West Virginia in tourist service.
The new Märklin Shay is entering the fascinating world of model railroading with this quite unusual chapter in locomotive history.

A Steam Engine Locomotive

Steven Fine (Wikimedia Commons)

The Shay locomotives are ingeniously designed locomotives for use on steeply graded routes with many curves. Ephraim Shay invented a steam engine locomotive to reach a high gear ratio and thereby the best possible power transmission for these route segments.
He arranged the cylinders vertically on the right side of the locomotive. There the steam engine directed the power using crankshafts to the cardan shafts, whose gears powered the bevel gears of the trucks. Another advantage of this design is the ease of maintenance. All of the running gear parts are easy to access and can be repaired or changed easily without large workshop facilities and with few workers.

National Railway Historical Society Photographic Archives (USA)

The characteristic look of the Shays is based on the boiler offset to the left to ensure a balanced weight distribution. There were four types: The Class A had two cylinders and two trucks, the Class B two cylinders and three trucks, the Class C three cylinders and three trucks, and the Class D three cylinders and four trucks. Admittedly, most Shays were bought by logging and industrial railroads. However, there were also standard gauge Shays that were used by large railroads on branch lines in mountainous regions pulling heavy freight trains.

Scriptunas Images

Experience the mystique of the Shay steam locomotive even today in the mountains of West Virginia.
Even if our real life prototype was retired after 1945, its successor still pounds the rails in tourism service.

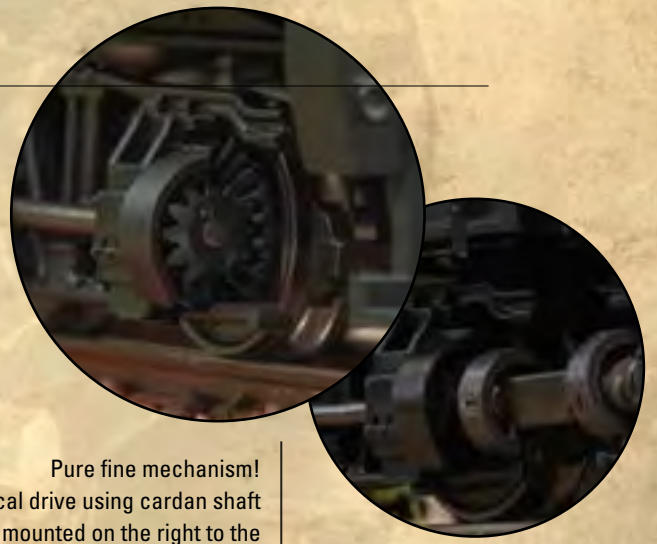

WESTERN MARYLAND


5
5
5

The Shay · Lokomotive ·

38700 | 25700 US Shay Design Gear Drive Steam Locomotive

The type class D with three cylinders, four power trucks, and its characteristic boiler offset to the left in the version as Western Maryland locomotive Number 5 as it looked in the Forties.



Digital decoder with extensive light and sound functions as well as a buffer capacitor

Minimum radius for operation 360 mm / 14-3/16“
Length 25.2 cm / 9-7/8“

Sound of an original Shay from Felton, California included

Cab includes locomotive engineer, fireman, and digitally controlled cab lighting

Pure fine mechanism!
Prototypical drive using cardan shaft mounted on the right to the beveled gears on the power trucks

Gear reduction adapted to the original speed of a Shay

Technology. Operation. Fascination.

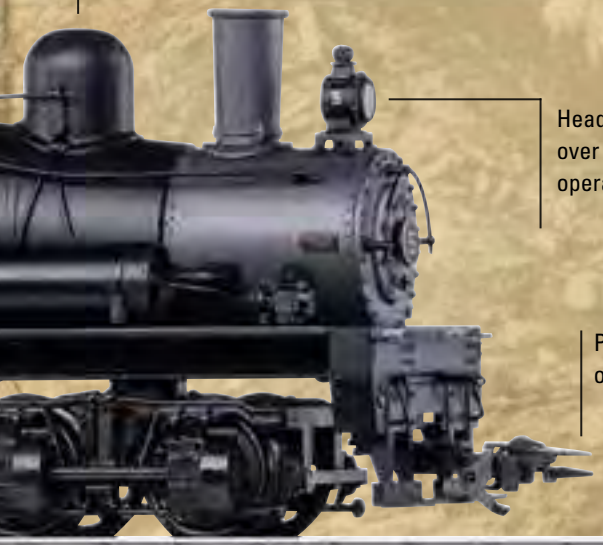
märklin HO

TRIX HO

Our Shay with all its challenges in construction and production is Märklin's objective. Like many other models from our company, it is unique. It demonstrates the highest level of craftsmanship and a technical perfection without equal.

Controlled high-efficiency with a flywheel in the boiler that is mounted characteristically offset to the left

Factory-installed smoke unit that will work in conventional operation and that can be controlled digitally



Headlights on the locomotive and tender that change over with the direction of travel, work in conventional operation, and that can be controlled digitally

Point-mounted standard NEM coupler pockets on the locomotive and tender

The new tooling for the flat car impresses the observer with its modelling and even without the load has enough weight on the rails.

Magnets as refined loading and unloading aids are used to fix the loads in place

45600 | 24922 US flat car set with mining timber

Three four-axle 40-foot Western Maryland Railroad US flat cars loaded with mining timber as the cars looked in the Forties.

45600 | 38700 / 25700 (Trix)

In Action

märklin HO

TRIX HO

Experience our Shay and its prototypical propulsion along with the sound of an original Shay in action.

www.maerklin.de/youtube

Märklin TV - The magazine for model railroad fans and collectors. Experience in entertaining episodes all the new items and highlights revolving around the themes of model railroading and model building. All the episodes are offered in German and English versions.

Deutsche Standards
MARKE DES JAHRHUNDERTS 2025
märklin
www.deutsche-standards.de

Märklin is again the brandof the century. For the fourth time in succession an expert committee consisting of brand specialists has chosen Märklin as the brand of the century. As the brand of the century Märklin is represented in the globally recognized brand registry "Deutsche Standards" / "German Standards".

4 031111 206124

TÜV SÜD ISO 9001
Zertifiziertes Qualitätsmanagementsystem
www.tuev-sued.de/ms-zert

Märklin fulfills the requirements for a quality management system according to the ISO 9001 Standard. This is regularly checked and certified by the TÜV Süd testing organization. You thereby have the assurance of buying a quality product of a certified firm.

FR

Dealer Field

Gebr. Märklin & Cie. GmbH
Stuttgarter Straße 55–57
73033 Göppingen
Germany

www.maerklin.de

Service:
Telephone: 650-569-1318
E-mail: digital@marklin.com

We reserve the right to make changes and delivery is not guaranteed. Pricing, data, and measurements may vary. We are not liable for mistakes and printing errors.

Prices are current as of the print date for this catalog – we reserve the right to change prices between years – prices are in effect until the release of the next price list / next catalog. Some of the images are hand samples, retouched images, and renderings. The regular production models may vary in details from the models shown.
Märklin reserves the right to cancel announced new items in the event of insufficient demand.

If these edition of the presentation book does not have prices, please ask your authorized dealers for the current price list.

Printed in Germany.

421 127 – 03 2025

Visit us: www.facebook.com/maerklin
Please visit our LGB Facebook page too: www.facebook.com/LGB