

## BUNDABERG FOUNDRY LOCOMOTIVES - NOTES

John Browning

Locomotive work began at the Foundry as early as 1894 and came to include the overhaul of QR steam locomotives. Many boilers were built for cane locomotives over the years.

John Fowler of Leeds, England, built their last steam locomotives in 1935 and these were very popular in the sugar industry. The only Australian manufacturer of 2ft gauge canefield steam locomotives was Perry Engineering in Adelaide. Post World War 2, steam locomotives were still in demand in the sugar industry and in 1949 Bundaberg Foundry offered to build some to an updated Fowler design. Unfortunately, the first were not produced until 1952 and only eight were built in all.

The desire to enter the new market for canefield diesel locomotives led to an agreement with Jenbacher Werke in Austria to build them locally. Jenbach produced thousands of small diesel locomotives for underground use, many of which were used in Queensland. The prototype built in Bundaberg in 1953 was a similar one for sugar mill use. It was followed by two mainline canefield locomotives. However, the locomotives produced by Clyde Engineering and Commonwealth Engineering in this period proved to be more successful for canefield use. The Bundaberg Foundry went on to produce eight small diesel locomotives for use underground in the Queensland coal industry between 1954 and 1956.

New more powerful bogie diesel-hydraulic locomotives were produced for the sugar industry in the early 1990s. One of the companies that entered this market was the Bundaberg Foundry, with a locomotive designed in association with the Hunslet Engine Company in Leeds, England. Two were built in 1991 for mills owned by Bundaberg Sugar, which by now owned the Foundry. Few of this new generation of locomotives were built because regauged government railway Walkers diesel-hydraulics soon proved their suitability at a much lower cost.

The Bundaberg Foundry went on to become a leading company involved in the rebuilding of these locomotives from QR, NSWGR and WAGR from 1992 to 2004.

### Bundaberg Fowler steam locomotives

Seven of these were 0-6-2T and one was an 0-4-2T. The designs were similar to locomotives produced for Queensland sugar mills by John Fowler in 1935. Although they all used the same boiler, with the exception of two locomotives built for Bingera Mill, all differed from each other to a greater or lesser extent. One reason for this was the variation in coupling heights between sugar mills but there were many other differences, major ones in some cases.

They were delivered in dark green livery, but the ones at Mossman, Millaquin and Qunaba mills ended up on yellow. As was common, the locomotives also received modifications in mill workshops. Because of the onset of dieselisation, they had relatively short working lives, during which time a couple were resold to other sugar mills for further service. Some of them remained in service long enough to haul chopped cane bins as well as the whole stick cane trucks they all hauled initially. All these locomotives survive, with some on regular service on tourist railways.

### Bundaberg Jenbach diesel locomotives

#### Models BJ15 & BJ20

The small 15hp type prototype closely followed the existing Jenbach design and was fitted with a Jenbach single cylinder diesel engine. It had a cab fitted with hinged doors but these were soon discarded as impractical. Subsequently, for the underground locomotives, the Foundry slightly enlarged the design to create a larger footplate space. The single 20hp locomotive was similar in

dimensions but with a larger buffer casting. One 15hp locomotive had wide frames to accommodate 3ft gauge.

The surface locomotive was delivered in green, while the other 15hp locomotives were painted mid blue, in line with Jenbach practice. This should have seen the 20hp locomotive delivered in maroon livery, but this has not been confirmed.

The mining locomotives operated underground and would only be seen on the surface when hauled up the incline for repair work to be carried out. The exception was where the coal was extracted not via a cable-worked incline but via an adit to emerge on the level, where the locomotive would haul coal to the surface processing facilities. This arrangement did happen at a few Queensland mines. As the small mines gradually closed, locomotives were commonly passed on and Bundaberg Jenbach locomotives operated at Queensland's last two small mines, Burgowan at Torbanlea and Acland on the Darling Downs. A number of these locomotives have been preserved, including the cane industry prototype.

#### **BJ100 & BJ220**

The cane haulage locomotives were unique to Australia although designed in Austria. Both were fitted with Jenbach engines, the first of 100hp, the second of 200hp, but externally they were to all intents and purposes identical. Both operated at North Eton Mill. They were delivered in a dark green livery with red buffer beams and frames, and apparently with yellow ends. These locomotives soon received replacement engines and went on to haul chopped cane bins. They later appeared in yellow livery with red buffer beams and frames. They were latterly significantly altered externally by the fitting of discarded cabs from Commonwealth Engineering locomotives. One later also received a new engine hood. Both are preserved.

In service, all these types of diesel locomotives could lose their side engine panels

#### **"Bundaberg Hunslet" diesel locomotives**

These two locomotives varied most obviously in coupler arrangements. They are unusual in that the drawgear is mounted on the bogies rather than on the mainframes as is common practice. There have been minor modifications, for example to steps, headlights and warning lights.

#### **Walkers rebuilds**

Twelve locomotives from QR, NSWGR and WAGR were rebuilt by Bundaberg Foundry. Similar work was done by Walkers, Tulk Goninan in Mackay and by a number of mill workshops. The frames on the NSWGR and WAGR locomotives were shortened and all have small diameter wheels using the existing bogies suitably modified. The superstructures have been modified extensively and the general arrangement of the locomotives altered with the elimination of a short end nose and relocation of the fuel tanks and radiators. There is much variation between various batches of these rebuilds.

#### **SUGAR CANE RAILWAYS**

The location of the sugar mills is well known. From a modelling perspective it is important to note that cane railways and QR intersect at many areas away from the mills including at level crossings, underbridges and overbridges as well as where cane railway lines run adjacent to the main line railway.

#### **COAL MINING LOCATIONS**

The small underground coal mines of the 1950s were commonly adjacent to, or connected by sidings to, the QR. The interface between the two was the point where coal would be loaded into QR rolling stock from an elevated structure. There are fascinating modelling opportunities at such locations.

The main locations of such installations included many on the Marburg branch, in the Acland area on the Cooyar branch, Baralaba in central Queensland, and the Burgowan collieries on the Urangan branch. Other similar sites were at Tannymoreland near Warwick, Bluff on the central line, Selene near Monto, and in numerous locations in the Ipswich area.

### Resources

*Built by Bundaberg Foundry* by Browning & Webber (2012) contains many photos of all types as well as more technical detail.

#### Bundaberg Fowler

Eddie Mol's series of articles on building a 7½ gauge Bundaberg Fowler in 24 parts appeared in *Australian Model Engineering* in issues 79-102 and is probably well known.

#### 100hp/200hp Bundaberg Jenbach

Dave Webb's 7½ gauge Bundaberg Jenbachs from Boulder Creek Tramway:

[http://www.zelmeroz.com/album\\_model/members/webb/BCT\\_BundabergJenbach.pdf](http://www.zelmeroz.com/album_model/members/webb/BCT_BundabergJenbach.pdf)

Bob Dow's Bundaberg Jenbach: <http://www.ozbob.com/project1.html>

#### 15hp/20hp Bundaberg Jenbach

Jenbach small JW20 in Gn15 [http://www.g-spur.at/GN15Spezial/GN15Spezial\\_low.pdf](http://www.g-spur.at/GN15Spezial/GN15Spezial_low.pdf)

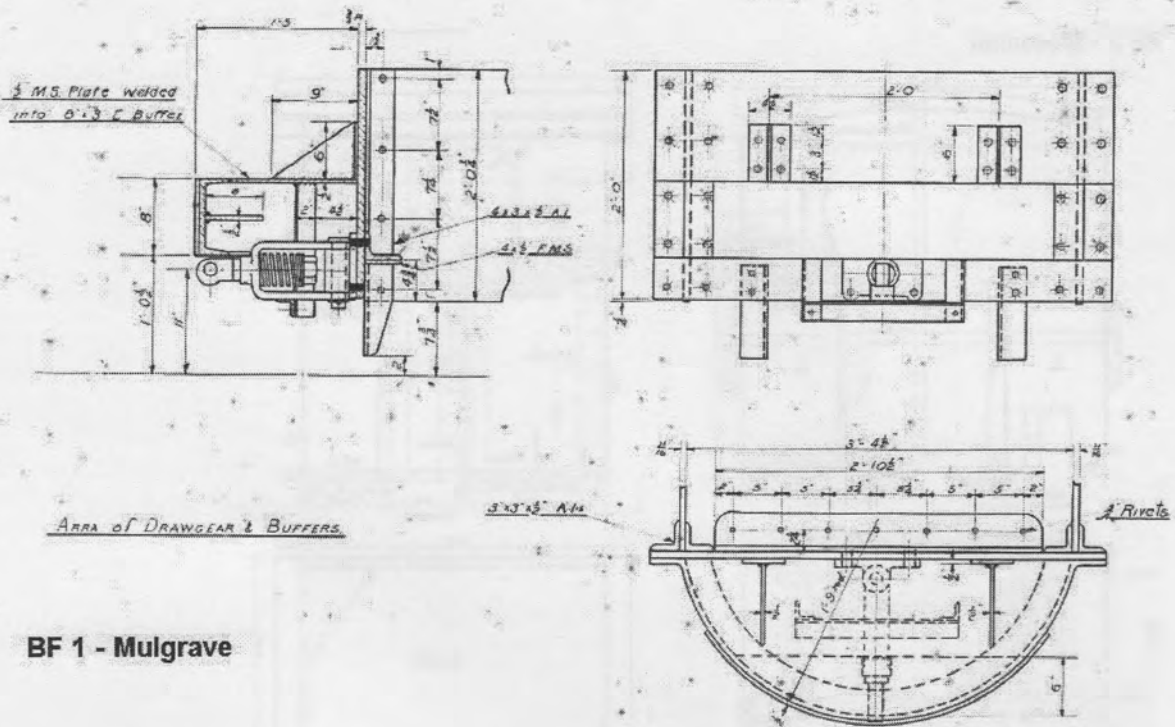
The Gnatbox (small JW20): <http://forum.gn15.info/viewtopic.php?t=6152>

#### Bundaberg Hunslet

For "Bundaberg Hunslet", see *Rail Australia* 22 (1992).

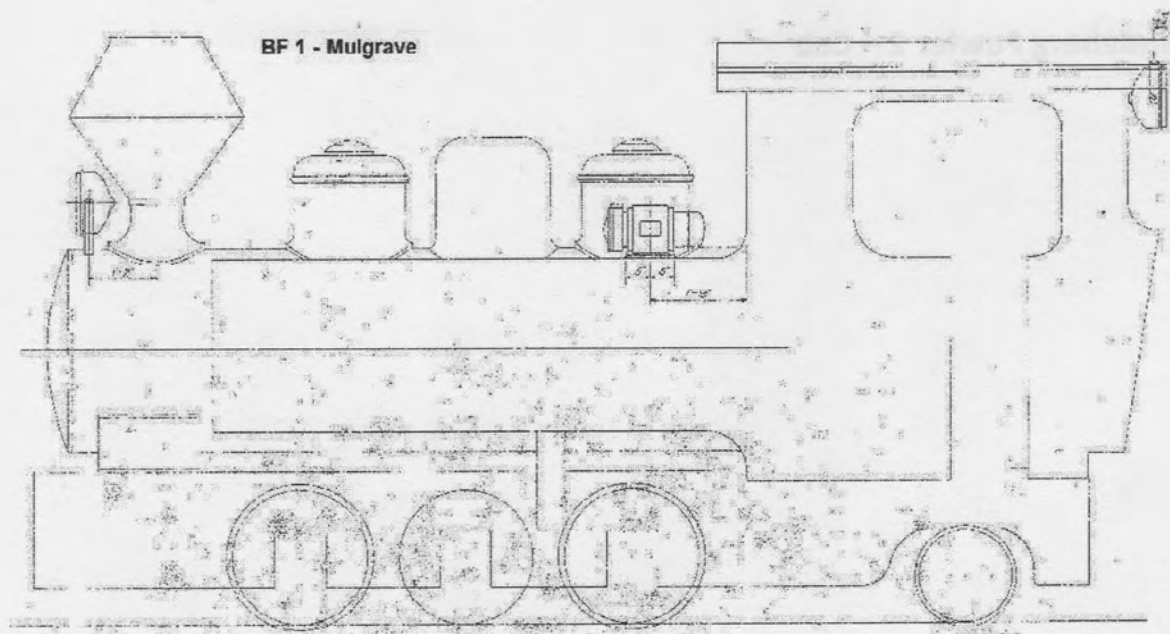
For rebuilding of Walkers locos, including indicative drawings, see *One for the Road* by Andrew K Roberts (1999).

For coal mine/QR infrastructure, see *The Marburg Branch* by Greg Cash (2012)



BF 1 - Mulgrave

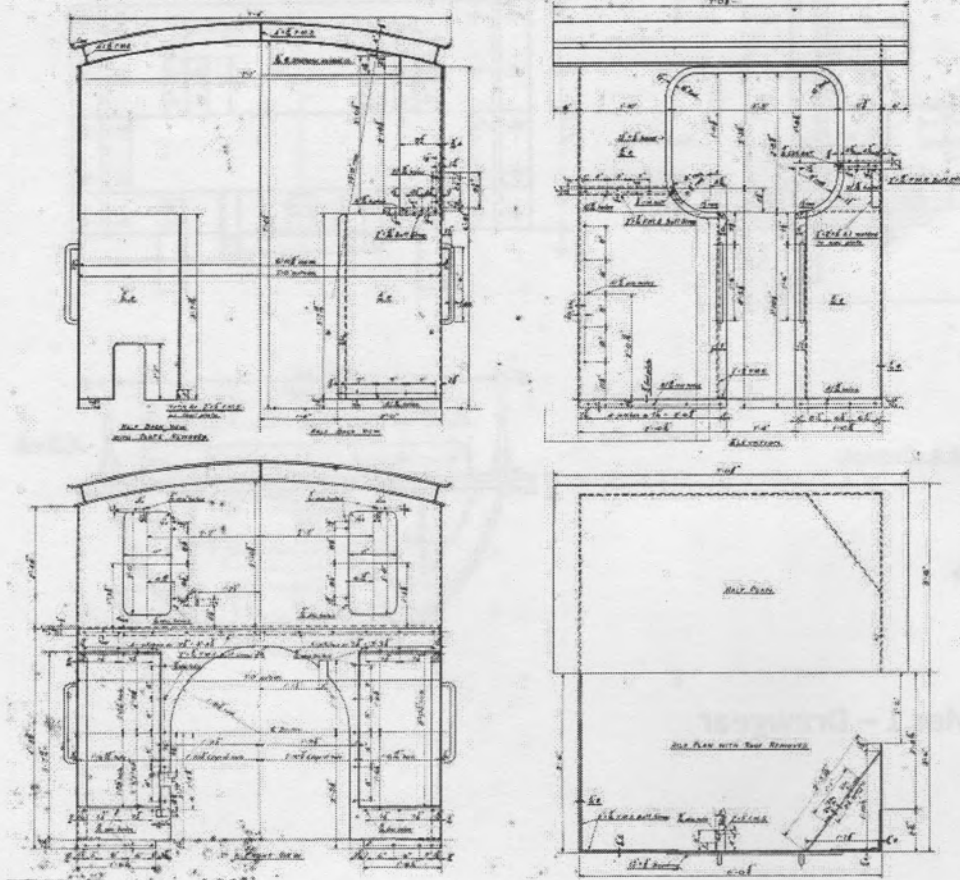
Bundaberg Fowler 1 – Drawgear



Bundaberg Fowler 1 – Turbo

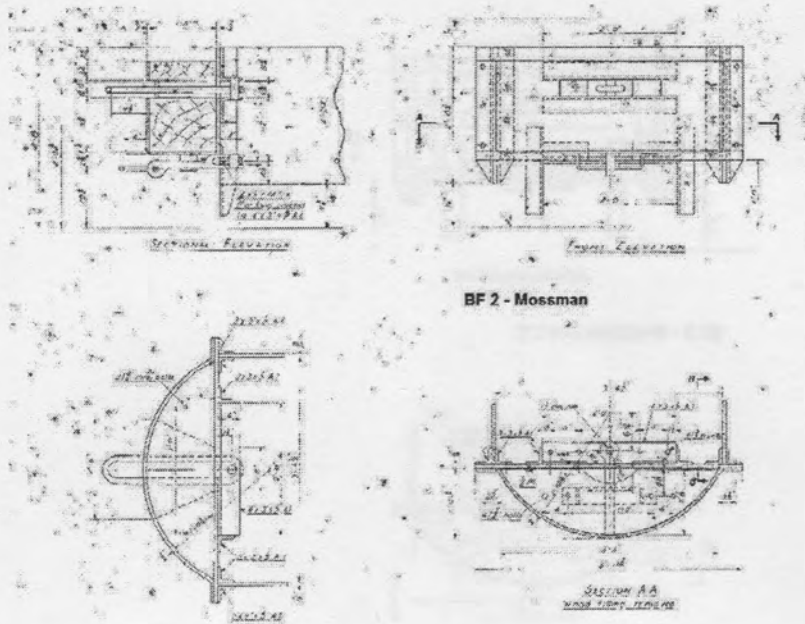


BF 2 - Mossman

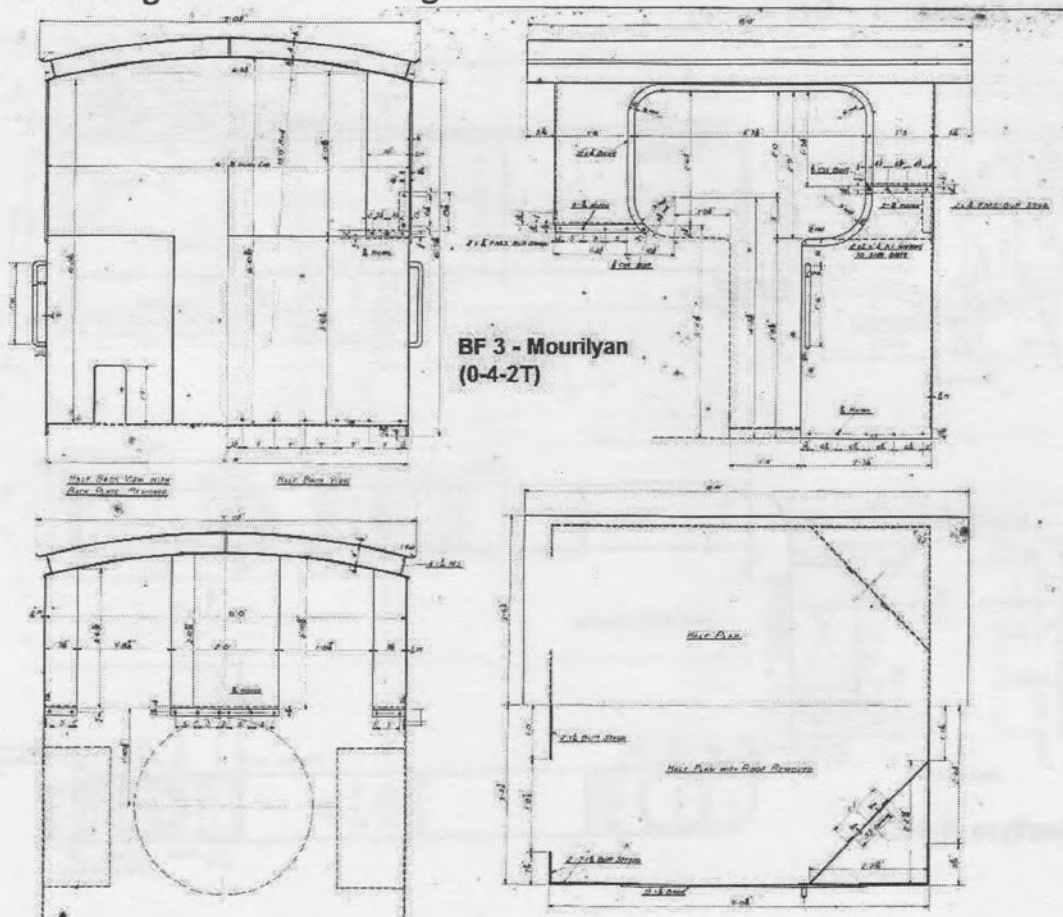


Bundaberg Fowler 2 – Cab

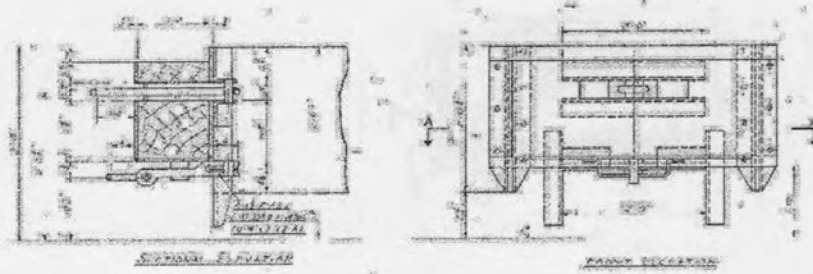




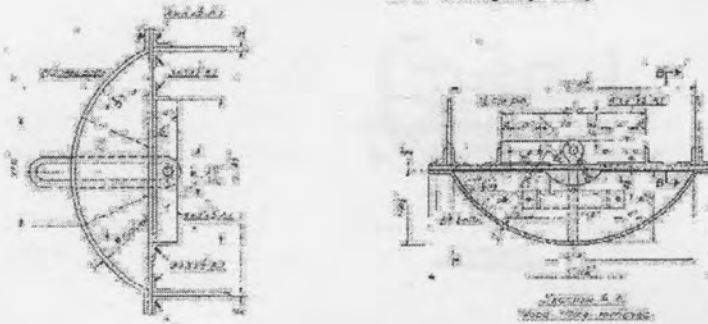
### Bundaberg Fowler 2 – Drawgear



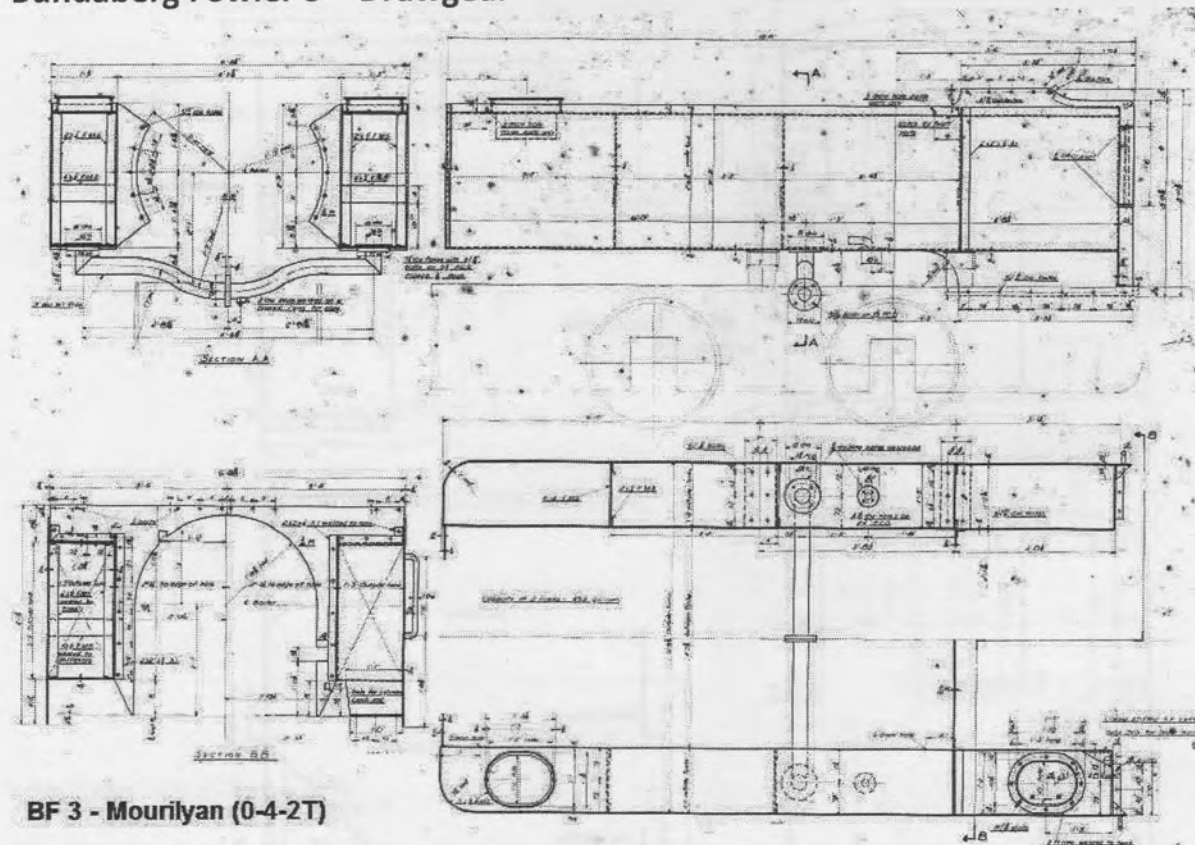
### Bundaberg Fowler 3 – Cab



BF 3 - Mourilyan (0-4-2T)

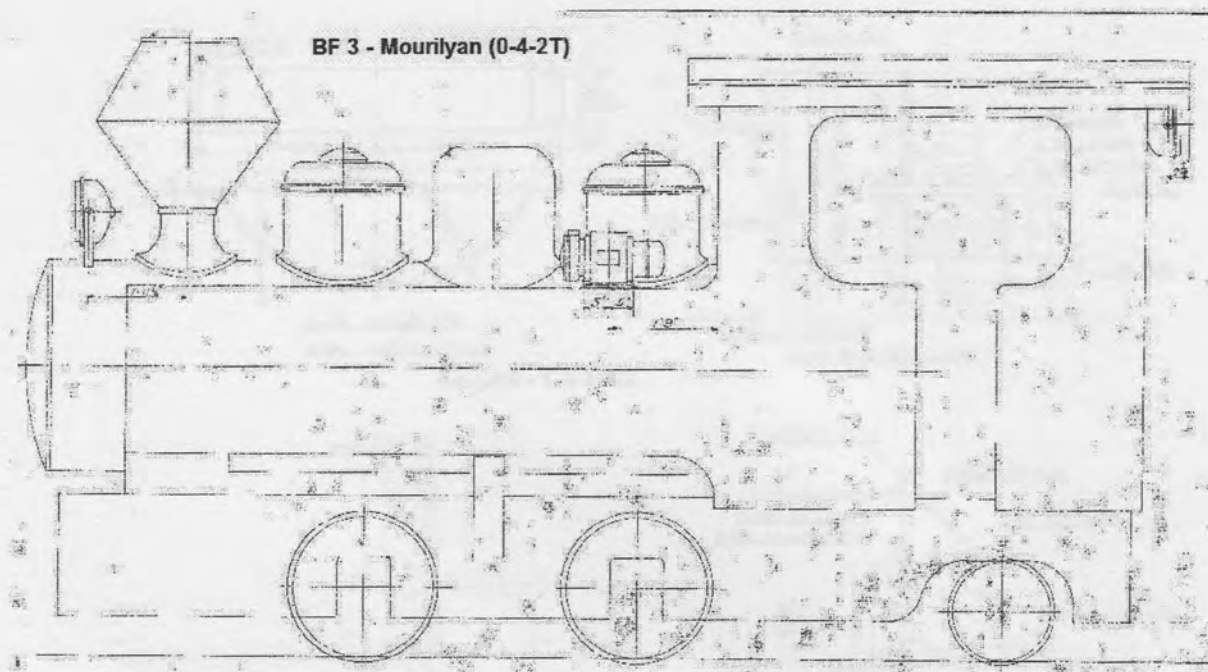


### Bundaberg Fowler 3 – Drawgear

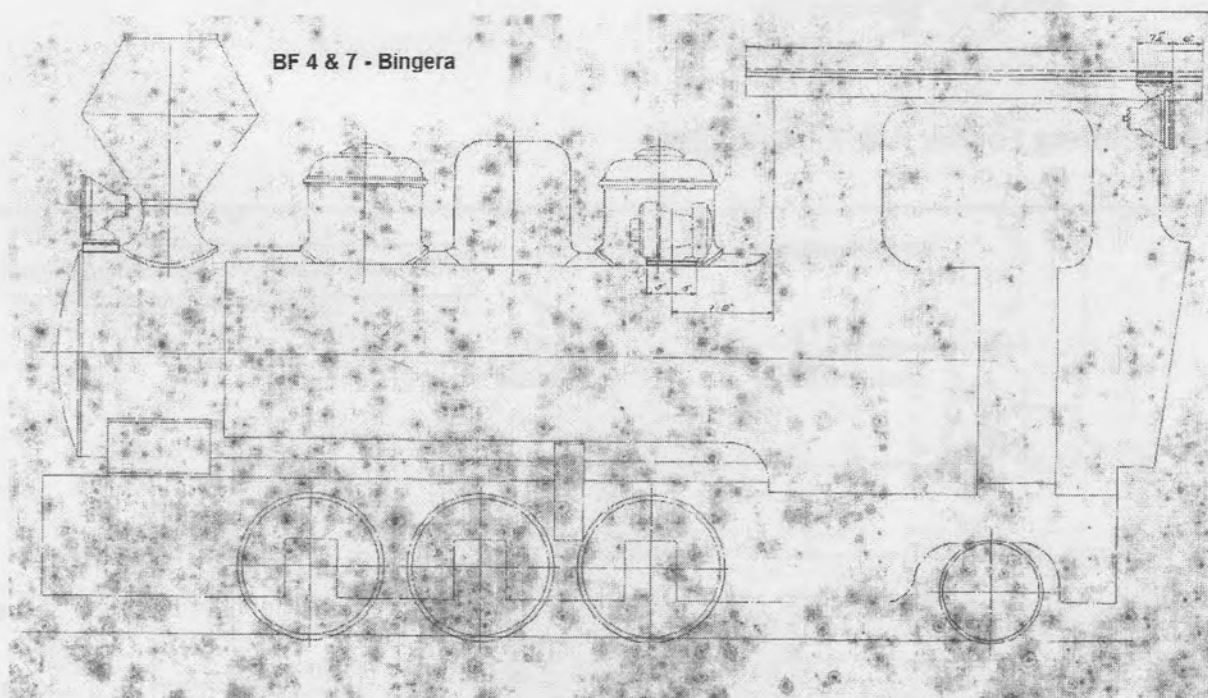


BF 3 - Mourilyan (0-4-2T)

### Bundaberg Fowler 3 – Tanks

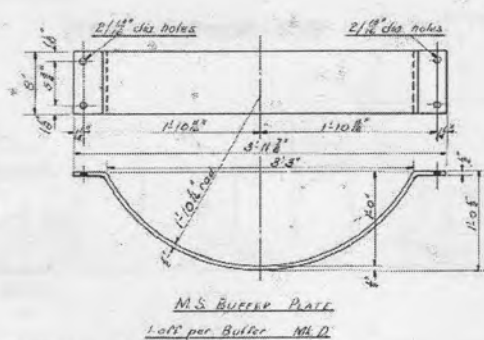


**Bundaberg Fowler 3 – Turbo**

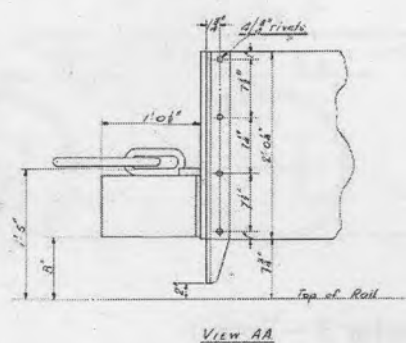
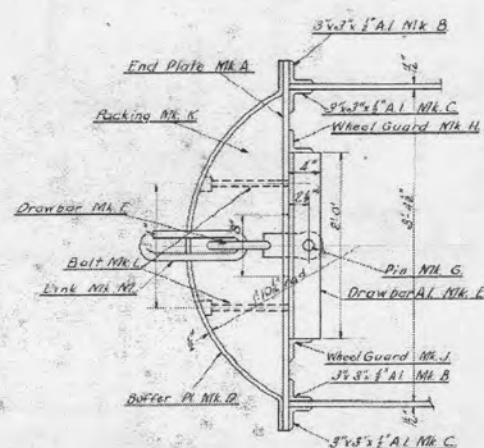


**Bundaberg Fowler 4 & 7 – Turbo**





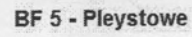
**BF 4 & 7 - Bingera**

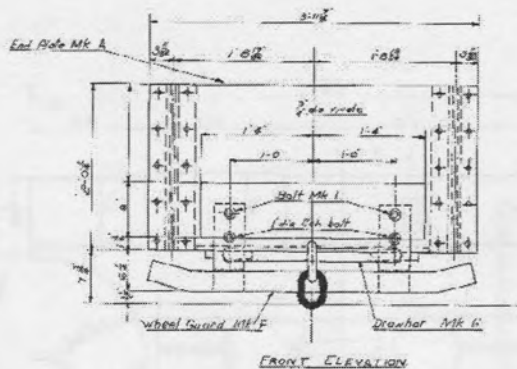
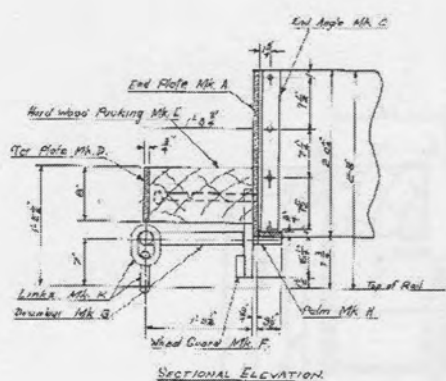


BF 5 - Pleystowe

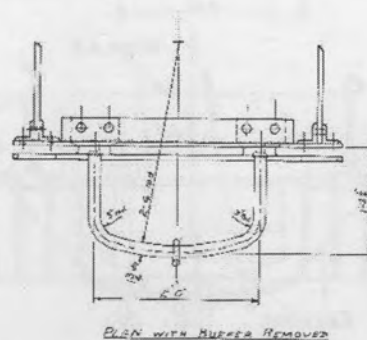
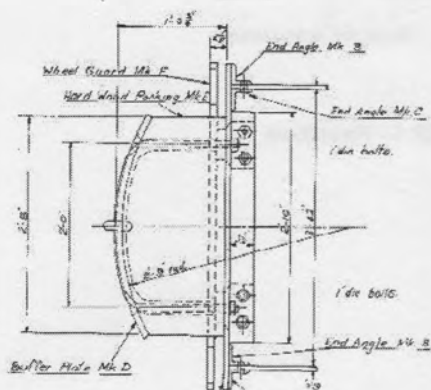
Architectural drawing of a steam locomotive, labeled "BF 5 - Pleystowe". The drawing shows the side profile of the locomotive, including the boiler, smokestack, wheels, and various mechanical components. The drawing is a technical sketch with some handwritten notes and dimensions.

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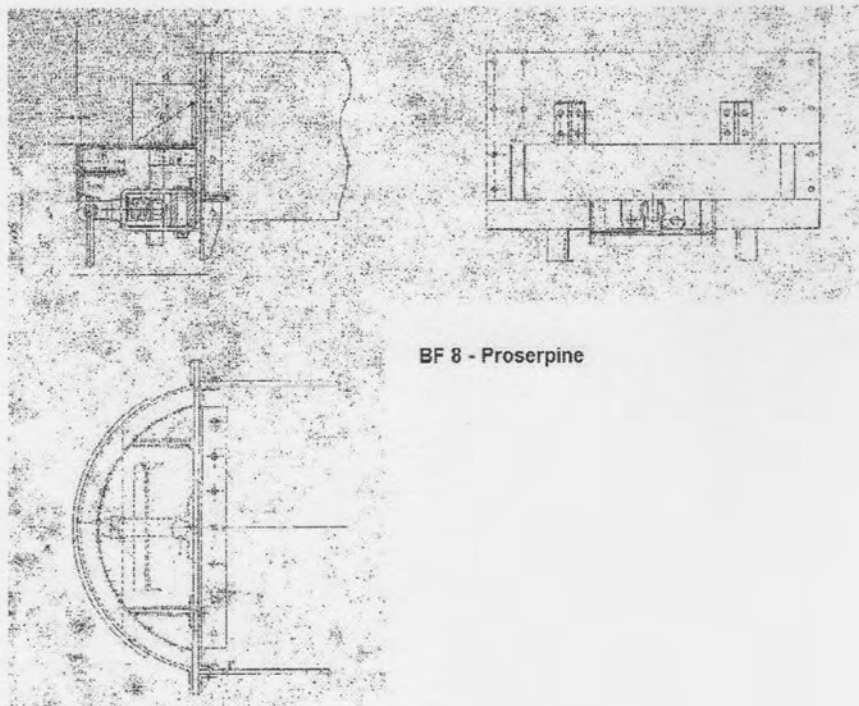




**BF 6 - Millaquin**

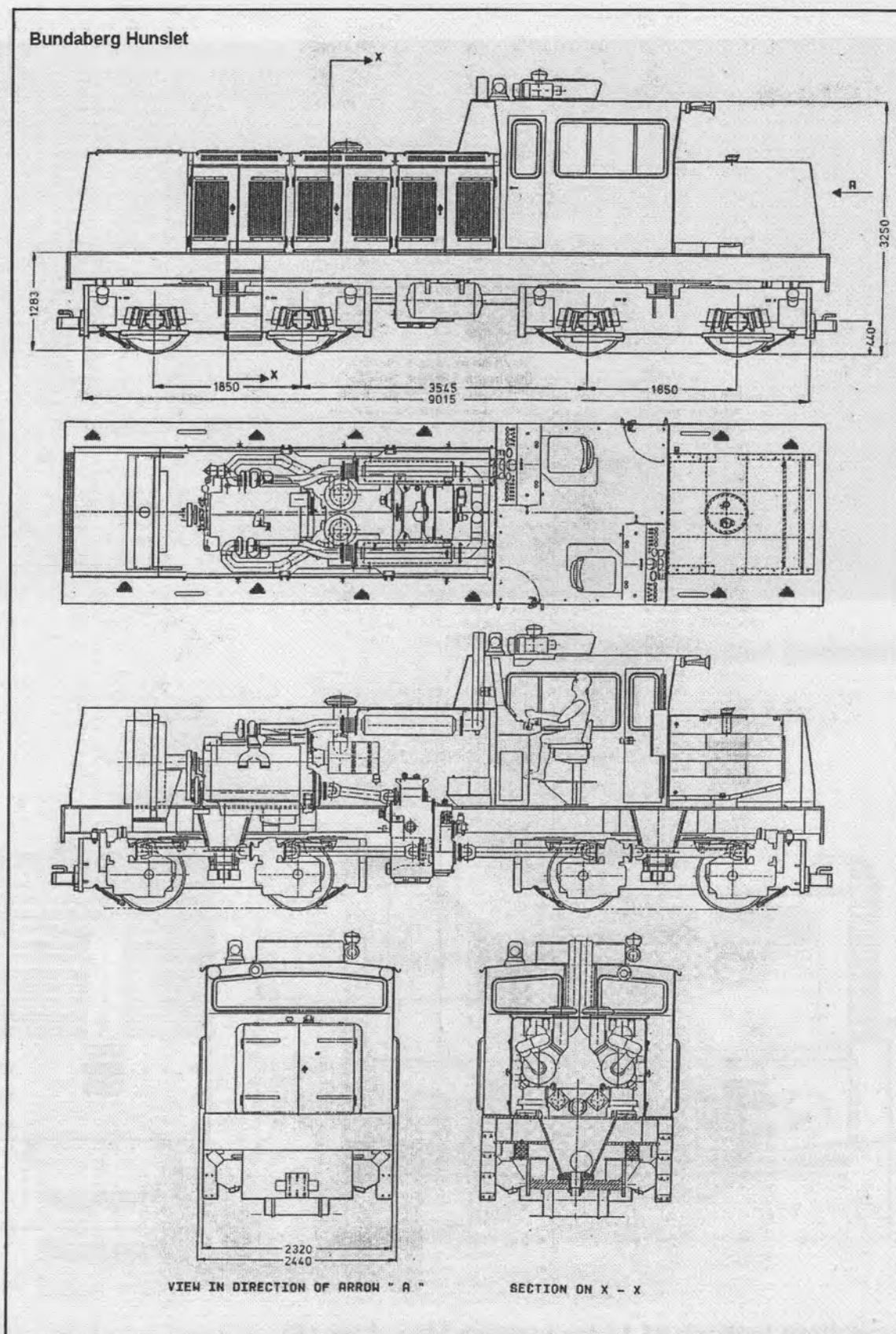


## Bundaberg Fowler 6 – Drawgear



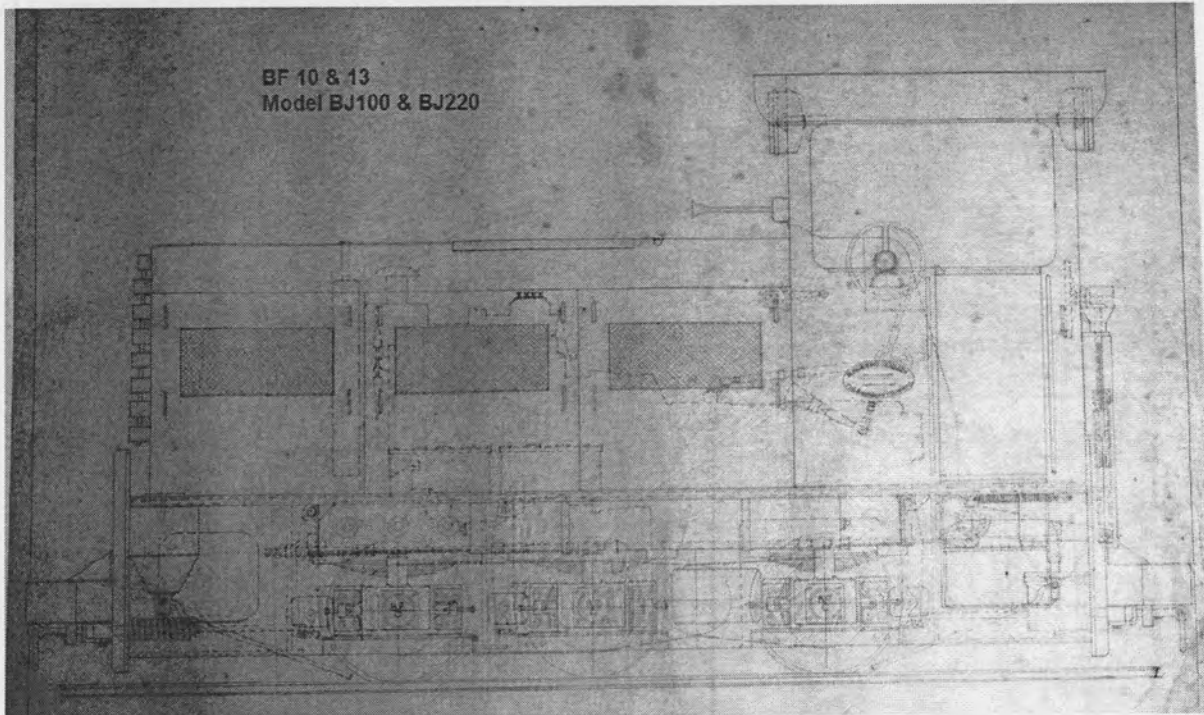
**BF 8 - Proserpine**

## Bundaberg Fowler 8 – Drawgear

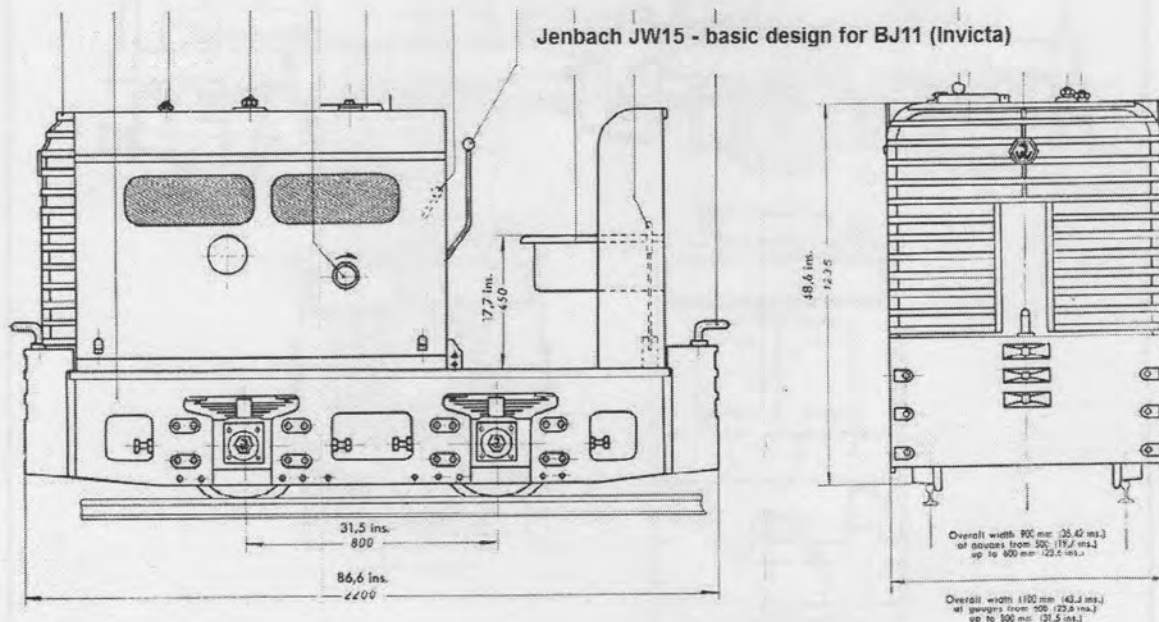




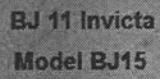
## Bundaberg Hunslett



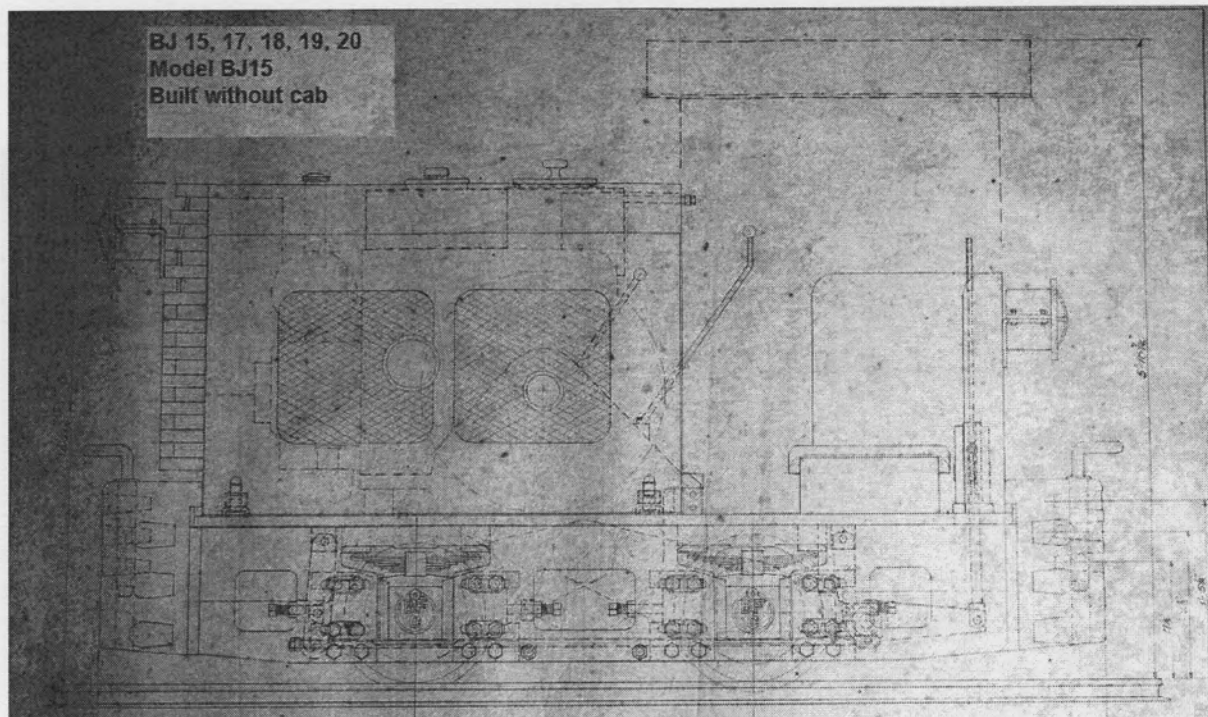
## Bundaberg Jenbach BF 10 & 13



## Bundaberg Jenbach BF 11 (as Jenbach Model JW 15)



**John Browning**



BJ 15, 17, 18, 19, 20  
Model BJ15  
Built without cab

Bundaberg Jenbach BF 15, 17, 18, 19, 20

