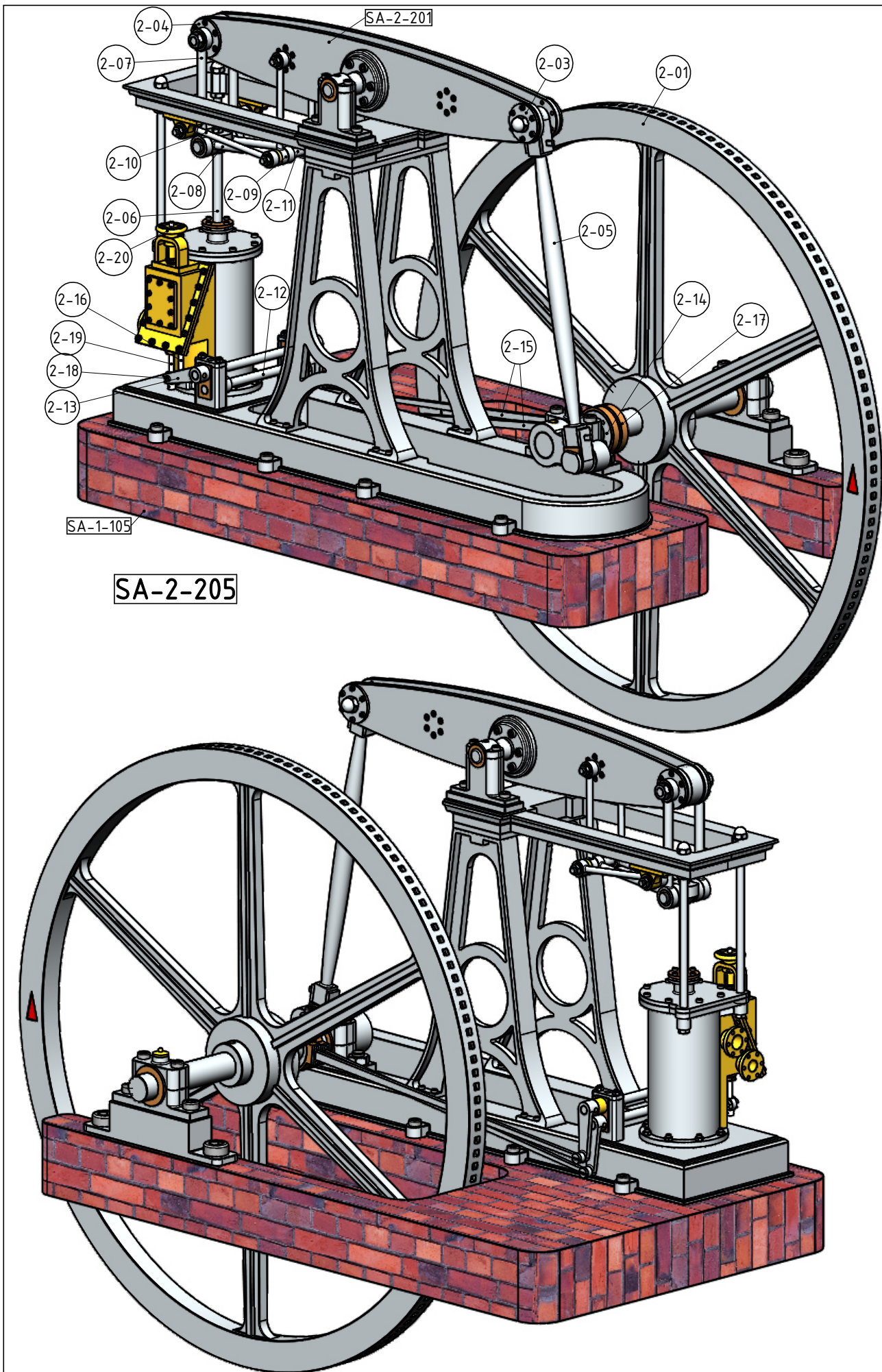
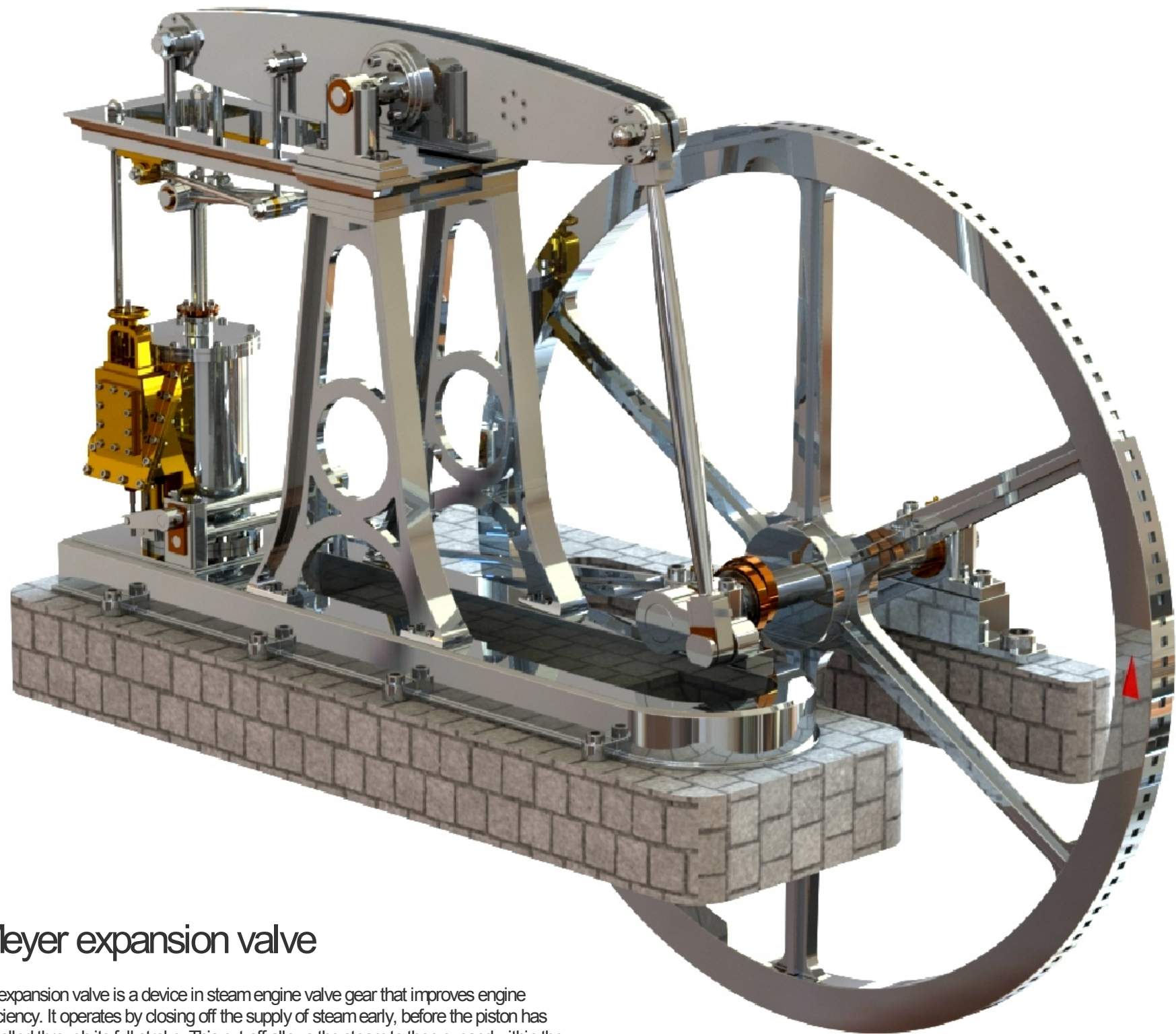




Meyer expansion valve

An expansion valve is a device in steam engine valve gear that improves engine efficiency. It operates by closing off the supply of steam early, before the piston has travelled through its full stroke. This cut-off allows the steam to then expand within the cylinder. This expanding steam is still sufficient to drive the piston, even though its pressure decreases as it expands. As less steam is supplied in the shorter time for which the valve is open, use of the expansion valve reduces the steam consumed and thus the fuel required. The engine may deliver two-thirds of the work, for only one-third of the steam.

An expansion valve is a secondary valve within a steam engine. They represent an intermediate step between steam engines with non-expansive working and later valve gears that could provide for expansion by controlling the motion of a single valve. Expansion valves were used for stationary engines and marine engines. They were not used for locomotives, although expansive working was achieved by the use of the later variable expansion valve gears.

THIS ARTICLE WAS TAKEN FROM THE INTERNET

NOTES: FOUND ORIGINAL DRAWING/PRINT ON THE INTERNET. DRAFTER/DESINGER CHAY W. TIAY DATED 1948 TITLE: "BEAM PUMPING ENGINE, BY EASTONS & ANDERSONS CICA 1870, INSTALLED AT BANSTEAD HOSPITAL, SURREY."

TITLE 1 CYLINDER NON REVERSING BALANCED BEAM
ENGINE WITH MEYER'S VARIABLE EXPANSION
SLIDE VALVES (BORE=40mm STROKE=84mm)

DRAWING CONTENTS

PARTS AND ASSEMBLIES,
RENDERED PICTURE

PROJECT No 09E-53-00

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PROJECTION

DATE MAY 2021

SHEET: 06 OF 06

JDWDS

MODEL SCALE: 1:1

DWG SCALE: 1:1 @A3 OR AS SHOWN

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A3 No: 09E-53-00-SHT06

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