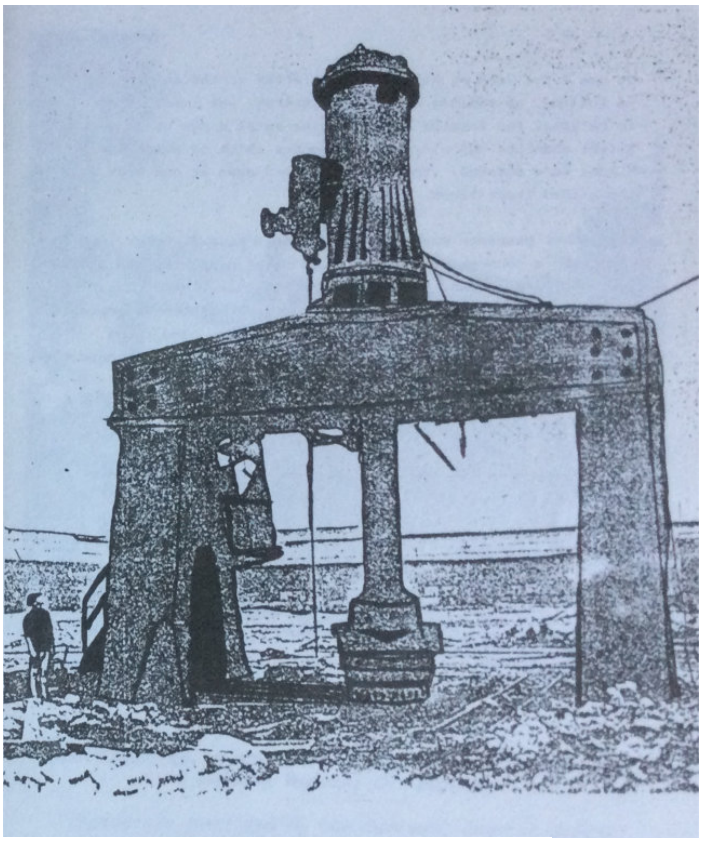
THE STEAM HAMMER - 'TINY TIM' by Henry Baker



Tiny Tim on site awaiting dismantling before transport to Beamish Museum

This huge relic of Britain's industrial past has marked on one of its legs 'Glasgow 1883, Rigby's Patent'. That year it was bought by and erected at Darlington Forge, County Durham.

Basically it was a 15 ton DROP HAMMER but with Rigby's patent valve gear; on the first half of the downward stroke the high pressure steam in the bottom of the cylinder was diverted to the top side of the piston to give added impetus and thereafter to atmosphere. The reason it was so wide between the legs was that Darlington Forge used it for making ships' stern frames so had to swing the forging sideways at times. At Darlington it was named 'Tiny Tim'.

In 1910 Darlington Forge decided to replace all their steam hammers by hydraulic presses and Tiny Tim was put up for sale. The writer's uncle - George Baker - bought it for only £250 which, even in those days, was very cheap because the hammer itself, excluding its blocks, weighed over 100 tons. There was a cogent reason for this, the site had to be completely cleared and this meant excavating around and lifting the three 40 ton cast iron blocks, one on top of another, which lay beneath it and loading on to railway wagons for transport to the Kilnhurst Steelworks of John Baker & Co Ltd which later, in 1929, became Baker Bessemer. In those days there was no heavy lifting tackle capable of doing this and all had to be done by the arduous process of jacking.

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It took 2 years to dismantle, transport and re-erect and in 1912 the writer, as a small boy of seven, was taken to witness its impressive performance; little realising that, 15 years later, he would be in charge of the forging team which worked on it and which has resulted in his present severe deafness, for there were no ear muffs in those days. The hammer could be heard 600 yards below ground in the workings of Kilnhurst Colliery and the ground vibration was so great that drinking glasses at the works canteen, 250 yards away, used to dance off the tables!!

It was first used at Kilnhurst Steelworks in the forging, prior to rolling, of railway disc wheel centres, but later it was found to be ideal for forging steam turbine rotor discs up to nearly 5 feet diameter and only 11/2 to 2 inches thick on which the blades were mounted. These were knocked down at one heat from the sliced ingot block.

When Baker Bessemer was nationalised in 1951 and, later in 1963, bought by a consortium of the United Steel Companies and English Steel Corporation and closed down in 1964, they gave 'Tiny Tim' to Beamish Museum, County Durham where it now forms an impressive entrance arch to the extensive museum grounds. The three afore-mentioned 40 ton blocks still remain 'in situ' to puzzle some industrial archaeologist in the distant future.