Log Splitter

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The axle and wheels were from a Volkswagon front end. The steering spindles were welded so the wheels would stay parallel. The end of an eight inch piece of pipe was fishmouthed so it could be welded to the axle. On the top of the pipe a piece of steel was welded and clamped to the frame. It would be welded in place when the assembly was finished. When the logsplitter is complete it could be adjusted so the weight would be equally distributed.

For the frame 5 x *W* channel iron was purchased at a local scrap yard. A box frame, 24" x 97" was made from this, an I beam for the center was made by welding two pieces of channel iron back to back.

A bent ram was salvaged from a John Deere 690 power shovel. This was to be used to push the logs into the wedge. It was straightened at a local machine repair shop so it would be suitable for our use. It was then mounted in the front with a *W* x 5" x 7" steel plate on each side. In each of these plates a 2" hole was bored. A bolt was passed through the ram and the two plates. These plates were perpendicularly welded to the frame with a piece of 4" x *W* angle iron for reinforcement. The part of the ram that extends was held down by a slider bracket. These are plates on both sides of the ram that slide along the I beam keeping it from going upward when pressure is applied. They are made of two, *W* x 3" x 7" pieces of steel. They each have a hole for another *2"* bolt and a *W* slot cut parallel to the bottom, *W* from the edge.

The power for the hydraulic pump for the ram was supplied by a seven horsepower Briggs and Stratton engine. The engine was connected to the pump by snow blower reduction gears. The engine speed was controlled by a lawn mower throttle mounted to the frame.

The hydraulic pump for the ram was salvaged from the body hoist of a ten-ton truck. A four way valve was used to control the forward and return stroke of the ram. For a fluid reservoir we used a beer keg. The fluid, gages and hoses were purchased from a dealer of heavy equipment.

The wedge was made from a piece of 11" x 2" x 5" steel. A sixty degree angle was ground a *]A"* on each side to keep the wedge from bending. Then it was welded to the back of the frame above the I beam.

When the logsplitter was completed, we tried to split the log and the frame bowed. This problem was solved by cross-bracing the frame with two *Vi"* steel rods. These were threaded at each end. A hole was drilled near the wedge on each side and on each side of the angle iron at the front of the ram for braces. When we tried to split a log again it split easily without bending the frame. The logsplitter was painted yellow to keep the machine free of rust. When we tried to split a log the second time, the machine worked. The log split easily and the frame remained rigid.