



<b>Elevating and Amusement Devices Safety Program</b>	Ref. No.: 281 / 19
<b>ADVISORY</b>	Date: September 5, 2019

**Subject:** Turnbull Spring Hitch  
**Distribution:** TSSA website

This advisory is intended to bring awareness to a method of connecting hoist ropes to the crosshead of an elevator, in the form of a "Turnbull Elevator Spring Hitch" arrangement.

An area of fatigue is identified in the drawing below, and its integrity should be routinely assessed.

This failure was recently observed during a period inspection, and contractors and mechanics should be aware of this issue.

3B00247

REPLACE 4 BOLTS WHETHER  $\frac{5}{8}$  DIA. OR  $\frac{3}{4}$  DIA. WITH NEW  $\frac{3}{4}$  BOLTS. SPECIAL PLOT-DRILL PROVIDED FOR REAMING OUT BOLT HOLES WHERE NECESSARY. TIGHTEN BOLTS JUST ENOUGH TO GRIP BEAM.

NOT MORE THAN  $\frac{1}{8}$  CLEARANCE

Area of Fatigue  
See attached photos of this area

THIS DWG. NO. <span style="float: right;">G <input type="checkbox"/> REQ'D. <input type="checkbox"/></span>				
QUAN.	PER UNIT	ITEM NO.	DESCRIPTION OR NAME OF PART	IDENTIFICATION NO.
6 03	6 02	6 01	WOOD BLOCKING (PLYWOOD STACK OR HARDWOOD BLOCK) WITH GRAIN CROSSWISE TO BEAMS. SECURE WOOD WITH $\frac{1}{4}$ BOLT.	

SECTION OF  $\phi$

GROUP IDENTIFICATION	
DO NOT SCALE THIS DRAWING UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.	NAME OF JOB <b>TURNBULL ELEVATOR</b>
TOOLS TOLERANCES ON DECIMALS: FRACTIONS: ANGLES:	MACHINED SURFACE FINISH REQ. <input checked="" type="checkbox"/> PROTECTIVE FINISH DRAWN BY J.H.N. DATE Oct. 22/65 CHECKED BY E.J.H. DATE 28 OCT 65 SCALE: 1/4 CLASS. # REVISION NO. TITLE: CHANGES TO REINFORCE SPRING HITCH.
MAT'L LIST NO. 26A3    DWG. NO. 3B00247	

In a 1965 Turnbull letter to the then Department of Labour, Turnbull advised about replacing bolts and adding wood blocking as shown in drawing 3B00247 above.

Photo 1  
Showing  
intact spring hitch [A] and  
wood blocking [B]

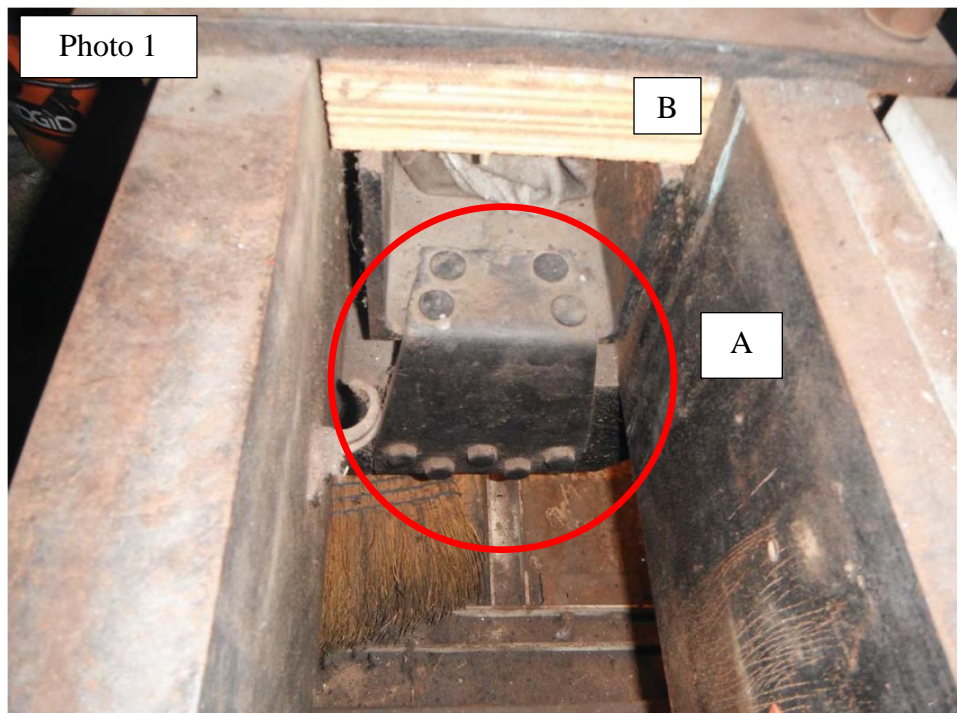


Photo 2  
Overview of spring hitch arrangement



[C] Area where spring hitch is located - between crosshead members (not visible in photo)

Photo 3

[D] Showing failed spring hitch

[E] Inverted 'C' Channel has embedded itself in the wood blocking (added per Turnbull drawing 3B00247)

