

Wisconsin Johnson and *The Snake Cave of Iron Mountain*

Scenario

The Covid Pandemic has gripped the globe, to be sure. This has curtailed famed adventurer Wisconsin Johnson's travel abroad. However, an adventure awaits close to his hometown of Ashland, WI. There are reports of mysterious depressions forming in the hills of the nearby ski area in Iron Mountain, MI., suggesting some sort of underground features.

Johnson finds himself in a hidden cave he has discovered and sees an alcove with a mysterious snake-like sculpture inside. Thinking this could be an early example of the "TD as artist" type of installation, he becomes excited and rushes to the feature only to trigger a trap!

The Plan

We plan to use stock TV style flats to create a back wall and a front wall with an opening to form the alcove.
See Drawing

1. The basic set up is to be two layers of 18" sono tube with the outer layer rigged with pulleys and weights up to the upstage behind wall. The tube is decorated to form a rudimentary snake-like feature. *See Drawing*
2. A pressure plate acts as a momentary switch wired into the switching control of a 3 device multi-relay. This switch acts as the trigger for all three relays.

The relays are active when the pressure switch is engaged.

3. The first of the relays activates a push/pull solenoid that drops a weight. This raises the outer layer of the 18" sonotube, revealing the hole "mouth" of the snake. These are weights at the back ceiling.

The second relay is on an asynchronous time delay circuit, activating a pneumatic solenoid. This fires the dart from the "mouth."

4. The final relay is on a second asynchronous time delay circuit, activating a second push/pull solenoid which sends a second set of weights back up lowering the outer layer covering the "mouth."

PARTS LIST

Ideal Security SK 630 SOLO Pressure Matt
Zooz Z-Wave Plus S2 Multi Relay
3-Gayaele GRT8-S Asymmetric Cycle Timer Relay
4 Flush Mount Pulleys
Dayton Electric General-Purpose Air Solenoid Valve
2-Dormeyer Push/Pull Solenoids
2 Sash Weights
Capmbell Hausfeld 5 Gallon Portable Air Tank