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POSTAL HISTORY RESEARCH - ARTIFACTS

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Hello!

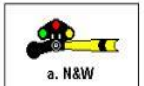
I have a question about N&W train order semaphore signals. In the picture below of a N&W train passing an unknown main line depot during the 1950s, the signal is set for "no orders" with the blade and spectacle lowered 45 degrees from horizontal. Also visible is that there are only two lenses in the spectacle, presumably green and yellow. Red would not have been used because it was not a block signal and "31" orders were not in use, so the blade and spectacle would not be raised 45 degrees above horizontal. Curiously, the spectacles seem to have a white cover over them, so I am thinking they have been retired and were removed soon after the photo was taken.



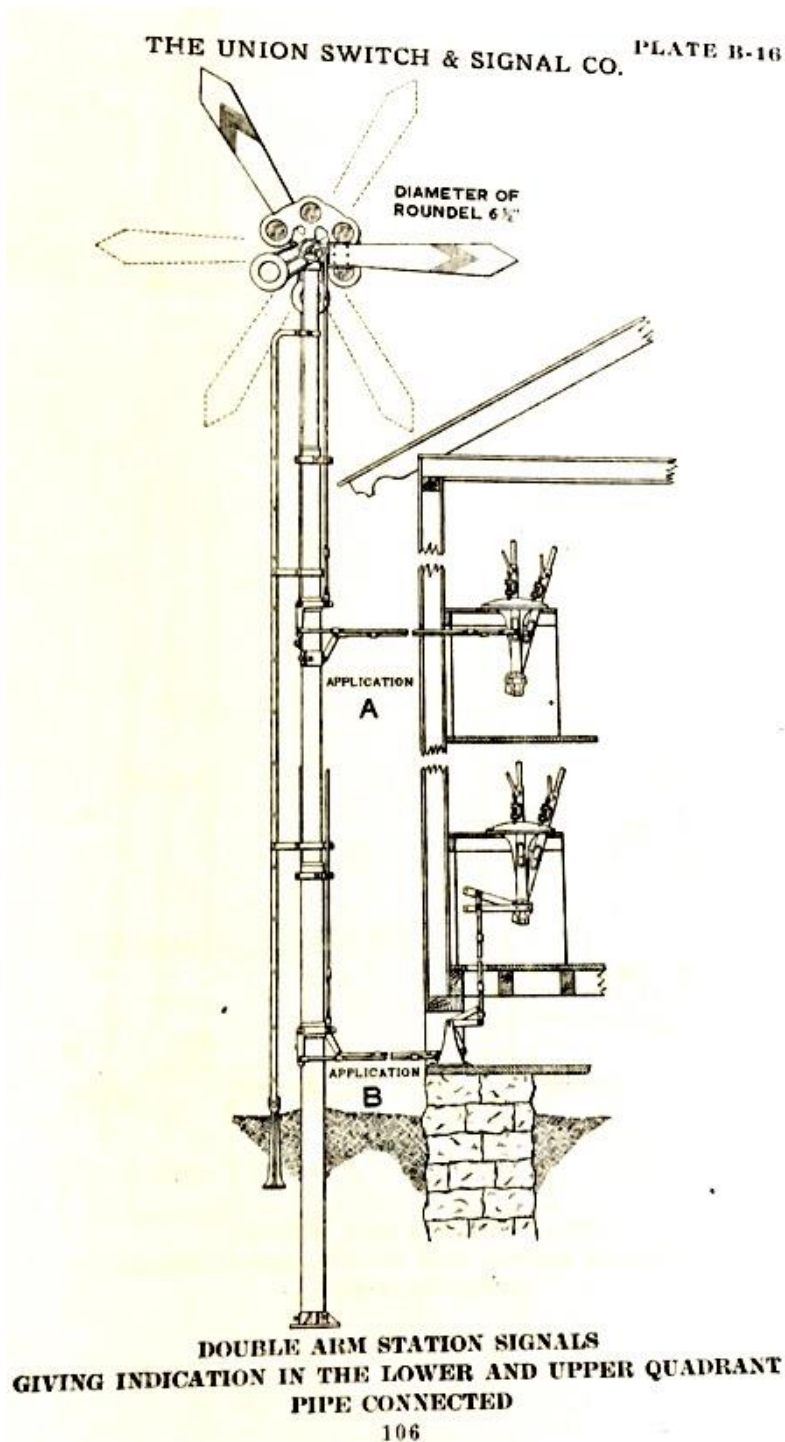
A note by a railroad historian describes N&W train order signals:

The signal collection of Brian Maiher contains many interesting examples of train-order signals. The sketches accompanying this paragraph were drawn from photographs taken by John Ingham. The Norfolk and Western and Reading signals show an unusual arm shape, with notches at the end. The N&W arm is the Mozier patent 3-position arm, intended as a manual block signal and used on the Erie. On the N&W, it may have been a 3-position train order signal, with Stop, 19-Order and Clear aspects. If used as both a manual block and train-order signal, it would be put at Stop if orders were to be delivered; the state of the block would be stated on the Clearance Card. The 45° positions indicate that there are no orders. The Mozier signal does not use the weak vertical arm aspect.

Source: <http://mysite.du.edu/~etuttle/rail/to.htm>



The pair of train order levers that I acquired for Boyce depot were produced by Union Switch and Signal (US&S), as were most other components of N&W train order signals installed during the 1910s. An illustration from a US&S catalog from that era depicting an installation appears below.



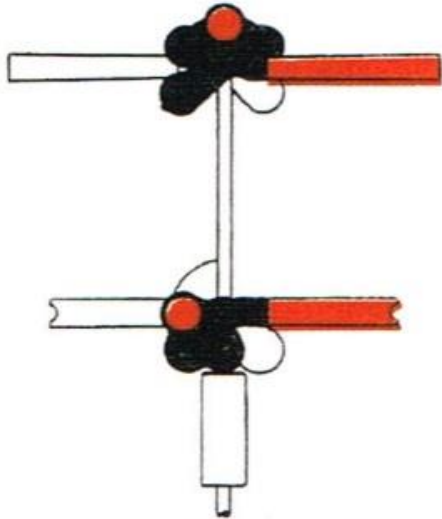
My question therefore focuses on the interior train order lever casting, appearing below.



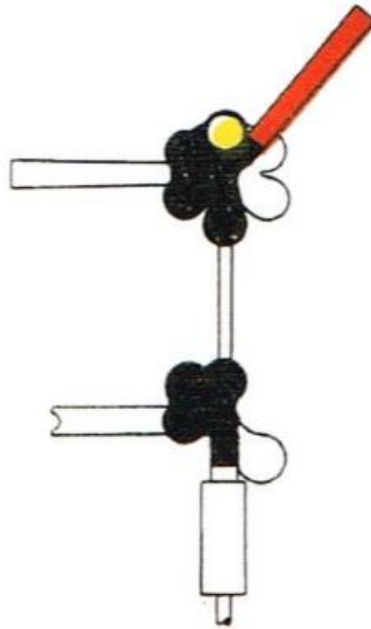
When installing a lever, it could be mounted into one of two slots. As shown, the lever is in the slot with two notches for possible aspects, presumably green and yellow. The unused slot has three notches: green, yellow, and red. A full throw of the lever in either slot --from normal to reverse-- will set the signal for its most restrictive indication. With three notches in the slot, the lever should move the signal in 45 degree increments. Using the slot with two notches, the full through would move the signal 90 degrees. When considering the US&S plan above, a full-throw of the lever in the two-notch slot would move the spectacle and blade from pointing downward 45 degrees to 45 degrees upward, into a position that N&W did not use as appearing in the first picture.

The illustration below is from a 1930s N&W Operating Rule Book. It is notable because it does include the upward-pointing arm with a yellow lens.

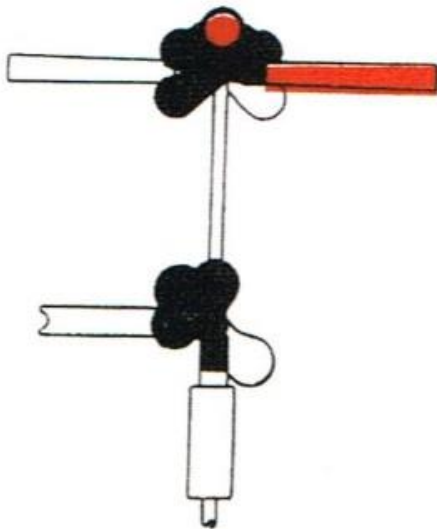
**BLOCK AND TRAIN ORDER SIGNALS,
MANUAL BLOCK TERRITORY**



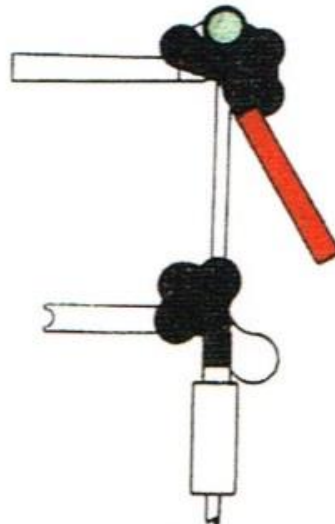
**Indication—Stop for orders
or block occupied**



**Indication—Proceed und
permissive block**



**Indication—Stop, block
occupied**



Indication—Proceed

Focusing on the upper train order blades and spectacles, the lenses are arranged in green-red-yellow order. If a lever was mounted in a slot with three notches, all three are

possible, but as a safety consideration this doesn't seem desirable. A full-throw of the lever from normal (green) to reverse would yield a less-restrictive indication --yellow-- than the red aspect associated with the middle notch. So, it will be helpful to confirm that at some time when manual blocking ceased and the N&W did not issue "31" train orders, that the green and yellow aspects were used, with the yellow lens being moved to the center position of the spectacle.

If you recall how these worked, I'll welcome insights that you may have. Perhaps the N&W Signal Department had different cranks mounted on the mast so that the full lever throw in a two-notch slot only moved the spectacle and blade 45 degrees from lowered to horizontal position.