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1902, probably in Oct.

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NEXT MEETING, at Detroit, Mich., probably in Feb.,  
1903.

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NEXT ANNUAL MEETING of the Grand Council in  
Toronto, Jan. 1902.

### Niagara Frontier Summer Rate Com- mittee.

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NEXT MEETING, at New York, probably in Jan., 1903.

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frequently happened that the signalman inad-  
vertently pulled over the wrong lever and ac-  
cidents resulted. In order to obviate these  
dangers Mr. Saxby in 1856 devised his first  
system of interlocking of points and signals.  
Although since that date numerous inventors  
have brought out various modes of interlock-  
ing points and signal levers, the fundamen-

al principle established by Saxby in 1856 re-  
mains the same, namely that it shall be im-  
possible for a signalman accidentally or  
otherwise to give any signals which shall con-  
flict one with another, or to work signals  
contradictory to the position of points. The  
point and signal levers all being brought to-  
gether and concentrated in a signal cabin,  
were readily manipulated by the signalman,  
and there was such a mechanical connection  
established between the point and signal lev-  
ers and between the signal levers themselves  
that it was impossible to manipulate them in  
a contradictory manner.

Although the general principle introduced  
in 1856 is as already stated the fundamental  
principle which pervades all subsequent ar-  
rangements of interlocking, the mechanical  
details were of such a character that they  
were not applicable to very complicated junc-  
tions or stations, although they were admir-  
ably suited to ordinary and simple junctions,  
say of an up and down main line with a junc-  
tion to an up and down branch line. It was  
found that as the number of trains increased  
and the consequent number of movements of  
point and signal levers increased also, that  
there was a considerable amount of wear  
and tear upon the interlocking mechanism,  
and the parts became liable to work loose  
and in course of time the locking did not  
hold the levers so firmly in position as was  
desirable, and consequently after the parts  
became worn a lever supposed to be locked  
could be moved partially. This led to fur-  
ther and greater improvement in the mechan-  
ism.

From the first when point and signal levers  
were concentrated and brought into a signal  
cabin, each lever was provided with a spring  
catch handle attached to it, working a catch  
in and out of a notch for the purpose of hold-  
ing the lever in its vertical or backward posi-  
tion, very similar to the reversing lever of a  
locomotive with which every one is familiar.  
It occurred to Saxby & Farmer, in 1867, that  
a great improvement could be made by utiliz-  
ing the upward and downward movement of  
this spring catch rod for setting in motion the  
locking gear, so that before a lever is moved  
the interlocking may be accomplished and the  
releasing, which has to take place when a  
lever has been fully moved over, shall only be  
possible after that lever has been moved and  
the spring catch rod lowered into its notch.  
This system became universally adopted, and  
with modifications of detail is in use at the  
present time. It was found to afford very  
great additional security, and in this new and  
improved apparatus the wear and tear was  
reduced to a minimum, and moreover, by  
means of this improvement of 1867 the inter-  
locking mechanism, being much smaller, could  
be condensed into a much smaller space than  
hitherto was possible, and this was specially  
convenient as it became necessary to increase  
the number of levers in the signal cabins. The  
signal cabin containing the largest number of  
levers in the world was erected at London  
Bridge; it contains 280 levers, and is operated  
by 12 signalmen, in 3 sets of 4, on duty for 8  
hours.

About 1870, it was found that in many  
cases where facing points of junctions were  
worked from signal cabins accidents were  
liable to arise in consequence of the signal-  
man moving the points whilst trains were  
passing over them. It is obvious that it is  
essential to safety that points over which a  
train is passing shall be held quite close and  
firm until the whole of the train has passed.  
Previously there had been no means of pre-  
venting signalmen from moving the point lev-  
ers while a train was passing the points and  
before the whole of the train had passed.  
Accidents arose from the signalman, what is  
technically called, "splitting the train," that  
is, by shifting the points and throwing some  
of the rear cars on one line, while the engine