braces but which were properly main-
tained and caused no failures and gave
good service and adjustment from an
interlocking standpoint. In other
cases I have known of a standard of
excellence in track work which did
not keep the switch “up to snuff”
with the result that the adjustable rail
braces came in handy to take up wear
before it ruined the plating which
held the stock rails and plates and
points to the proper precision adjust-
ment required for an interlocking
switch.

Adjustable Improves
Operation and Maintenance

R. A. SHEETS
Signal Engineer, Chicago & North Western,
Chicago

The operation and maintenance of
any interlocking switch is greatly
improved where adjustable rail braces
are used. There may be exceptions
where switches are used infrequently
or where traffic is light, but where
switches are used frequently or where
traffic is heavy, and particularly where
turnouts are sharp, adjustable rail
braces will not only save greatly in
the maintenance expense but will pre-
vent many needless delays because of
improperly adjusted switches. With
the present weight of equipment, no
matter how well a switch is plated
and braced, there is bound to be a
small additional amount of give or
spring in the stock rails of any turnout,
and after repeated movements it will be
found that, with non-adjustable
braces, a certain amount of this results
in a permanent set which is constantly
increasing. With the small limits set
for proper switch locking, the limit
is soon exceeded and it is continually
essential that non-adjustable rail
braces be tightened to prevent failure
and to insure tight fitting switches.

Switch locking failures as a rule
occur because of two elements: (1)
Either the lock rod was improperly
drilled to correspond to the throw
or movement of the switch point; or
(2) the stock rail has moved to a
position between 1/16 in. and 3/4 in.
beyond its original location.

Adjustable lock rods are very im-
portant to insure that the switch, as
installed, may have the lock rod ex-
actly set to correspond to the throw
or movement of the switch points, which
will eliminate failures due to
mistakes in (1). It is equally impor-
tant that adjustable rail braces be in-
stalled on stock rails to insure against
constant maintenance expense or fail-
ures from cause (2). Our experience
in busy terminal interlockings where
there are many No. 10 and No. 7
turnouts, over which our heaviest
equipment moves, indicates that the
adjustable rail brace is well worth the
small additional cost, both because of
the decrease in maintenance expense
and because of a lack of switch fail-
ures. Customarily, each stock rail is
equipped with two, and occasionally
with three, adjustable rail braces lo-
cated on the headlocks where the point
adjustment is most sensitive. We find
that the signal maintainer can quickly
and easily compensate for the move-
ment of a stock rail due to slip, wear
or strain. It is our recommendation
that adjustable rail braces, where
used, be of the type in which the ad-
justment can be made quickly by
means of driving a pin or wedge and
securing the adjustment with a nut
in just the degree it is desired, rather
than to make these adjustments at in-
frequent intervals, where it is neces-
sary to take up 1/16 in. or 3/4 in. to
correspond to some fixed amount pro-
vided in the adjustable brace.

Inspection of Signal Facilities

“What kind of a schedule for daily or weekly inspections of
equipment have you found to be most effective in maintaining (1)
power interlocking, (2) automatic block signaling?”

Places Definite
Responsibility

E. T. GARRISON
Supervisor of Signals, C. & O.
Clifton Forge, Va.

Schedules were prepared for the
Clifton Forge division early in the
year 1929, and with the addition of
C.T.C. at Ronceverte, W. Va., in
on each man involved on a given ter-
ritory. Following is the schedule we
use for both interlocking and auto-
matic territory maintainers. When
two or three tricks are worked on a
given territory, the responsibility is
subdivided between each trick:

**Daily Inspections**: Switches, de-
rails, S&L movements, switch boxes
and bonding, fouling through cross-
overs and turnouts, compressors and
batteries, machine spring combination
and signal lights.

(Continued on page 418)
Flexible Air Hose

K. Rhinehart
Signal Maintainer, St. L.-S. F., Lamar, Mo.

An arrangement that is practicable and proved to be a success, for mounting on track motor cars ahead of the wheels for the purpose of knocking stones and other obstructions off the rail, is a common piece of air hose used for air coupling on cars in trains. This is flexible and does not interfere when taking the car off and on the track. It is strong enough to keep the rail clear of any ordinary obstruction such as stones, nuts, bolts, spikes and torpedoes. When mounted on the motor car the hose should clear the rail 3/16 in. On some makes of motor cars a clamp or extension has to be made. A cross arm brace serves the purpose. It can be easily bent in a vise to any angle, to extend from the car frame over the rail in front of the wheels.

Knocking Stones off the Rail

"What kind of an arrangement is most practicable to mount on a track motor car ahead of the wheels for the purpose of knocking stones and other obstructions off the rail?"

Flexible Air Hose

K. Rhinehart
Signal Maintainer, St. L.-S. F., Lamar, Mo.

An arrangement that is practicable and proved to be a success, for mounting on track motor cars ahead of the wheels for the purpose of knocking stones and other obstructions off the rail, is a common piece of air hose used for air coupling on cars in trains. This is flexible and does not interfere when taking the car off and on the track. It is strong enough to keep the rail clear of any ordinary obstruction such as stones, nuts, bolts, spikes and torpedoes. When mounted on the motor car the hose should clear the rail 3/16 in. On some makes of motor cars a clamp or extension has to be made. A cross arm brace serves the purpose. It can be easily bent in a vise to any angle, to extend from the car frame over the rail in front of the wheels.

Winter and Summer Sweepers

B. O. Brown
Signal Maintainer, Canadian Pacific, Berthierville, Que.

The accompanying illustrations show two types of sweepers mounted on a motor car for knocking stones, etc., off the rail. The design using sections of rubber hose is for summer use, while the steel design is for winter use. The winter sweeper will permit the operation of a car in 3 in. to 4 in. of light snow.

Uses Rubber Hose

E. E. Spensley
Signal Maintainer, Chicago Great Western, Dubuque, Iowa

Of the different appliances tried on the Chicago Great Western, we find that the most practical is a piece of a discarded air hose, of the desired length, from the train line of a railroad car. Insert in one end a wood crossarm pin with the wood threads sawed off to make the hose solid on the upper end. This can be fastened to the frame or sill of the motor car by a clamp made from a metal strap the dimensions of a crossarm brace; if this hose is to be secured to the car in one place, bend the brace in an L shape. If it is to be secured in two places, bend the brace in a U shape and use a short piece of the same material bent in a semi-circle with a flange on each end, and bolt it to the first shape made, to make a clamp around the hose. The lower end of the hose should be above the rail far enough to clear torpedoes, as stones of this dimension would not deraile a track motor car.

(Continued on page 420)