DESCRIPTION OF PLATE IX.

Figs. 6 and 7 show the same Brake with an instantaneous release valve for cases where the trains are long and vehicles many in number. A is the automatic valve; B the instantaneous release valve.

Figs. 8, 9, and 10 are enlarged views of valve B for instantaneous release:—a is the connection to train pipe, b the connection to reservoir or brake of brake piston, c opening to the atmosphere, d a retention valve to admit to chamber only, e passage to same from a, f is a passage connecting to the back of a small valve piston h, working in cylinder g, j is a spring to keep up h and valve k, which closes opening to c. It will be seen at once that as long as pressure is maintained in a it will be equalised on each side of piston h, but as soon as the train pipe pressure is reduced it will be reduced only on g side of h through the interposition of the retention valve, and thus h will move and open valve k, letting pressure out from b through c into the atmosphere until equilibrium is restored between the train pipe and back of brake piston.

Fig. 11 is similar to 8, 9, and 10, with a few additions:—l is an armature attracted by electro magnets mm when excited by a current from the foot-plate or guard's van; n is a valve attached to l. In its normal position, n keeps open passage f to the back of valve piston h and closes g from the atmosphere. The attraction of l overcomes the pressure of a spring, attracts l and moves n; this opens g to the atmosphere through passage o and closes passage f, bringing about an instantaneous movement of h and k and application of the brakes.
RAILWAY BRAKES BY Mr. SELFE.

HANSCOM Brake with Instantaneous Release Valve by Mr. SELFE

Fig. 6

Fig. 7

INSTANTANEOUS RELEASE VALVE BY Mr. SELFE

Fig. 8

Fig. 9

Fig. 10

ELECTRO RELEASE VALVE BY Mr. SELFE

Fig. 11

PROCEEDINGS OF THE ENGINEERING ASSOCIATION, N.S.W., SESSION 1886-87.