DESCRIPTION OF PLATE IX.

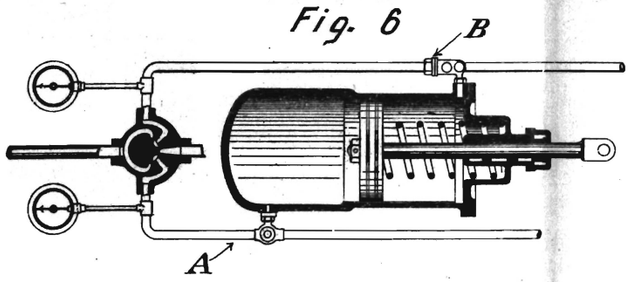
Figs. 6 and 7 show the same Brake with an instantaneous release valve for cases where the trains are long and vehicles many in number. A is the automatic valve; B the instantaneous release valve.

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 *m m* 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.

HANSCOMS BRAKE WITH INSTANTANEOUS RELEASE VALVE BY Mr SELFE

Fig. 6



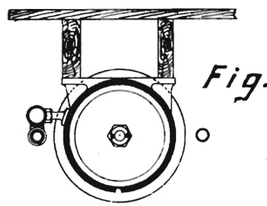


Fig. 7

INSTANTANEOUS RELEASE VALVE BY Mr SELFE

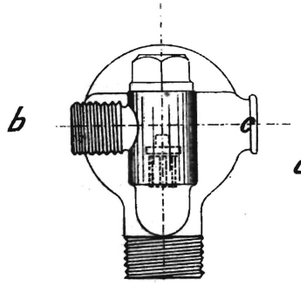


Fig. 8

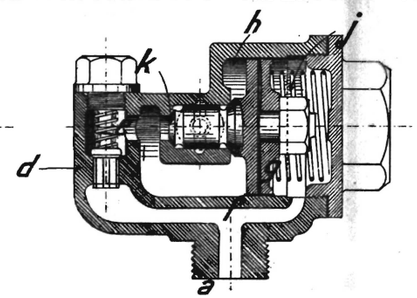


Fig. 9

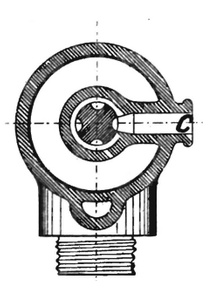


Fig. 10

ELETRO RELEASE VALVE BY Mr SELFE

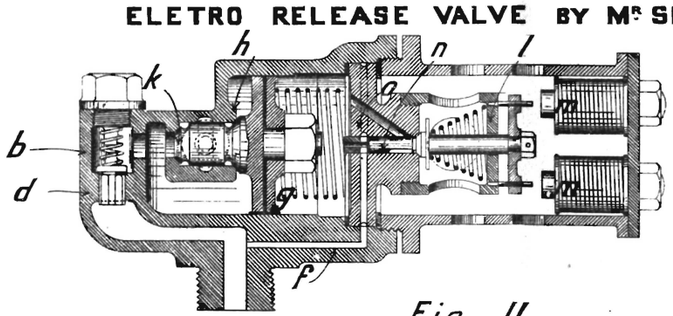


Fig. 11