

(1882 - 1943) Welscheid

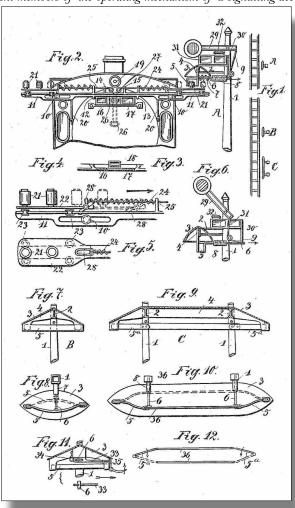
# Patents (details)

# 1 - Improvements in railway signalling apparatus

GB patent 11445 Application date 8 May 1914

This invention relates to improvements in railway signalling apparatus of that type in which a sliding member is carried by the train and co-operates with a movable rail or cam bar on the track to effect the operation of signals on the train, and its object is to provide an improved form of automatic signalling apparatus of this type which may he used separately or in conjunction with the ordinary signals.

The invention consists in the provision of a flexible track member which is adapted to be deflected into different positions to actuate different members of the operating mechanism of a signalling device or devices on the train



Corresponding patents

LU, AT, CH, FR, US





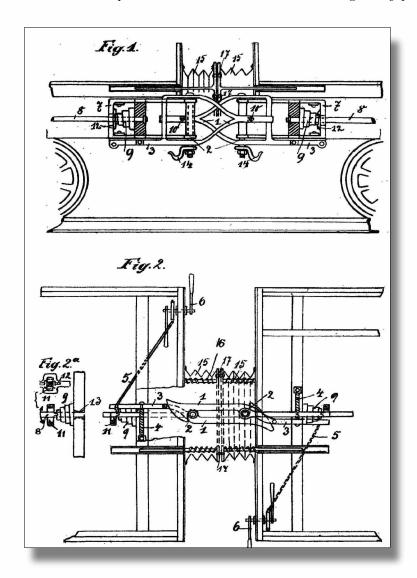
## 2 - Improvements in automatic couplings for railway vehicles

GB patent 11446 Application date 8 May 1914

This invention relates to automatic coupling apparatus for railway carriages, of the kind in which the coupling hooks are mounted on pivot pins carried by draw frames capable of slidable movement against the action of springs, the outermost faces of the hooks being so formed as to act as cam surfaces to bring them into engagement with the opposite pivot pins when adjacent carriages are moved together to effect the coupling operation.

The object of the invention is to provide an improved form of automatic coupling which will accommodate itself to irregularities in the permanent way and curves.

The present invention consists in the particular construction, combination and arrangement of parts.



Corresponding patents

LU, CH, FR





# 3 - Improvements in or relating to the actuation of pumps or compressors by the motion of railway or like vehicles

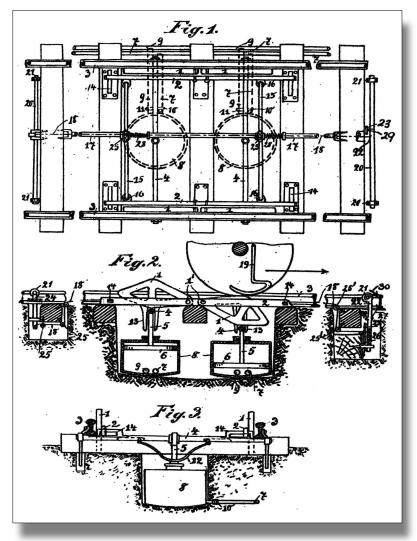
GB patent 9664

Application date 8 April 1914

This invention relates to improvements in that kind of apparatus which is located in a railroad track and adapted to be operated by vehicles travelling thereon so as to pump or compress fluid into a suitable storage vessel for power purposes, thereby storing the superfluous energy of and retarding the vehicles, means being provided on the vehicle, and track, whereby the apparatus may be rendered operative or inoperative.

The present invention consists in the combination of: a number of pumps or compressors situated between the rails of the track; a number of pivoted contact levers arranged alongside each track rail and adapted to be depressed by the wheels of the train or the like; cross rods operatively connected intermediate of their ends to the pumps or compressors; and adapted at their ends to co-operate with the contact levers; and a reservoir common to all the pumps or compressors.

The superfluous kinetic energy of the train when running down inclines or on sections of the track along which the brakes are usually applied is, with the apparatus in position, converted into pressure energy, and the train is retarded.



Corresponding patents

LU, FR, CH, CA

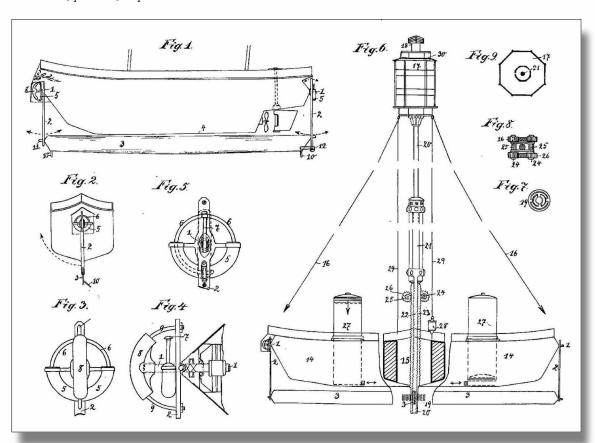




FR patent 471223 Application date 22 April 1914

L'invention n'a point seulement pour but d'amortir le roulis et le tangage des navires à l'aide d'un pendule suspendu en dessous de la coque du navire, mais elle permet de plus d'utiliser les forces vives produites par le flux et le reflux de la mer et par lée clapotement des vagues pour le navire lui-même d'une part et pour alimenter des stations de force motrice comme, par exemple, pour la production de la lumière électrique des phares et autres buts similaires d'autre part.

La disposition du pendule et sa liaison avec la coque du navire, ainsi que la transmission du mouvement du pendule sont toutes particulières. Toutes les parties mobiles du dispositif sont placées en dehors de la coque du navire et, par suite, ne peuvent nullement entraver ses mouvements.



Corresponding patents

GB, ES

### Inventions n°5 to n° 20

(copies to be obtained from Archives nationales)