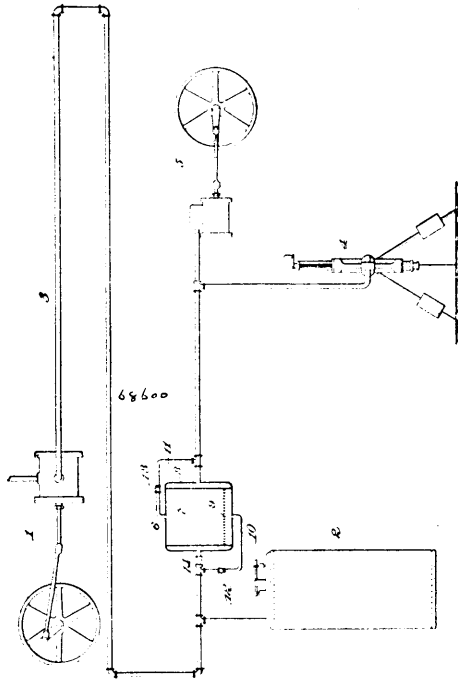
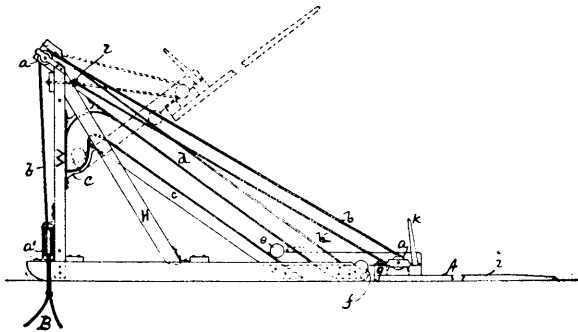
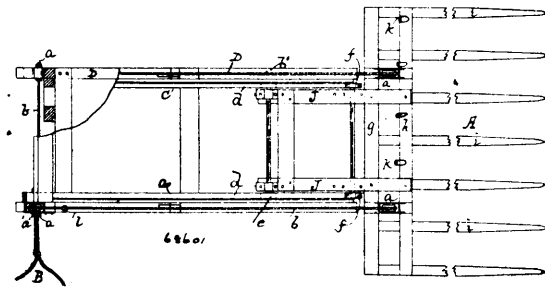


air to flow, by reason of such reduction of pressure, through the burning combustible to absorb heat directly therefrom and to sup-



port combustion thereof, and in mixing the directly heated portion of air with the indirectly heated portion of air, to use substantially as set forth.

No. 68,601. Machine for Stacking Hay and Grain.
(Machine pour mettre le foin en meule.)

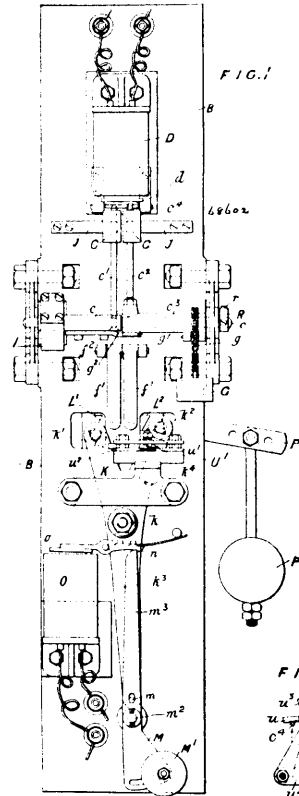


Robert Davis McKee, Olds, Alberta, North West Territory, 4th September, 1900; 6 years. (Filed 25th June, 1900.)

Claim.—1st. Fork A, comprising cross bars G H, tines I, handles J, trucks E F, and pins K, all formed and combined, substantially as and for the purpose hereinbefore set forth. 2nd. A fork frame comprising a sled D, uprights W, braces H, inclines trucks c and d,

and pulleys, all formed and combined, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of the fork, frame, trucks, pulleys and rope for operating the same, substantially as and for the purpose set forth.

No. 68,602. Explosive Signalling Apparatus for Railways.
(Appareil de signal explosif.)



The Electric Fog Signal Syndicate, assignee of William Robert Sykes, Station Road, Clapham, all of London, S.W., England, 4th September, 1900; 6 years. (Filed 28th December, 1899.)

Claim.—1st. An explosive signalling apparatus for railways, consisting of a gravity operated cartridge holder or magazine, an escapement adapted to permit of the movement of the magazine for bringing the cartridges successively into firing position, a gravity operated firing hammer which is normally held in the raised position and is adapted to be automatically reset by the force of the explosion, means for releasing the hammer on the passage of a train, consisting of an electro magnet, a circuit closer, and a treadle mechanism actuated by the train, means of centering the operation of the escapement dependent on the passage of a train, consisting of a gravity operated lever adapted to release the escapement, a latch which normally prevents such action of the lever, an electro magnet adapted to withdraw the latch from engagement with the lever, and a second treadle operated circuit closer, and a switch so constructed as to be acted on by the hammer and by the escapement to alternately switch the one electro magnet out of, and the other electro magnet into, circuit, the whole combined and arranged for operation, substantially as specified. 2nd. In an explosive signalling apparatus for railways, the combination with a gravity operated magazine having a series of separate chambers to contain cartridges and provided with racks, one having upwardly directed teeth and the other with downwardly directed teeth, and a hammer for exploding said cartridges controlled by the train, of electrically controlled train operated escapement mechanism adapted to permit of the cartridges being brought successively into position to be exploded, such mechanism consisting of an anchor escapement one of whose pallets normally engages the downward directed teeth of a rack on the magazine so as to sustain the latter, while the other pallet is adapted to be engaged by the upwardly directed teeth of a second rack when the first is withdrawn so as to effect the return of the escapement to its normal position, a gravity operated lever coupled to the anchor lever so as to tend to release the escapement, a latch which normally prevents such action, an electro magnet whose armature when actuated withdraws the latch from engagement with said lever, and a treadle operated circuit closer actuated by the train, substantially as specified. 3rd. In an explosive signalling apparatus for railways, the combination with a gravity operated cartridge magazine, and means for bringing the magazine into position to permit the cart-