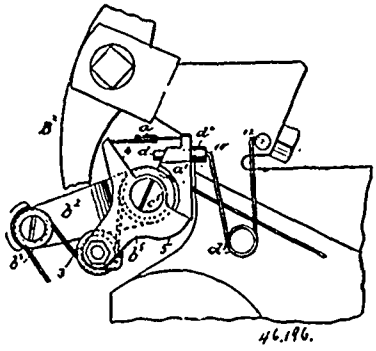
thereon, of the oscillatory shaft on the share provided with fingers extending between those on the share and having the loose trailing rods, substantially as described. 10th. In a potato digger, the combination with the share, having the stationary rearwardly projecting fingers provided with loose trailing rods, of the oscillatory shafts on the share having fingers projecting between those on the bare and each provided with the trailing rods connected thereto, ubstantially as described.

No. 46,196. Take-Up for Shoe-Sewing Machines.

(*Accroche-fil pour machines à coudre.*)



46,196.

he Goodyear Shoe Machinery Company, Portland, Maine, assignee of Henry Briggs, Hasbrouck Heights, New Jersey, all in the U.S.A., 1st June, 1894; 6 years.

Claim.—1st. In a shoe-sewing machine, the combination with a main take-up, an auxiliary take-up, and a stop to arrest or limit the movement of the said take-up, of a cushioning device normally extended beyond the stop into the path of movement of the auxiliary take-up and resisting the movement of the auxiliary take-up before the engagement of the latter with its stop, substantially as described. 2nd. In a shoe-sewing machine, the combination with a main take-up, an auxiliary take-up, and a stop to arrest or limit the movement of the said take-up, of a cushioning device consisting of a spring actuated plunger or rod normally extended beyond the said stop, but moved backward by the auxiliary take-up to permit the latter to be gradually arrested in its movement, substantially as described. 3rd. In a shoe-sewing machine, the combination with the main take-up b^2, and the auxiliary take-up b^5, of the stop a^1, for the said auxiliary take-up provided with a hole or cylinder, the rod or plunger d, normally extended through said hole or cylinder into the path of movement of the auxiliary take-up, and means to act on the said rod or plunger to resist the movement of the piston by the auxiliary take-up, substantially as described.

No. 46,197. Steam Engine. (*Machine à vapeur.*)

Fredric Candee Weir, assignee of Edward Wilson, Harden, both of Cincinnati, Ohio, U.S.A. 1st June, 1894; 6 years.

Claim.—1st. The skeleton main valve provided with a through steam passage between the cut-off sections, substantially as specified. 2nd. The skeleton main valve provided with a through steam passage upon each side of the central cut-off sections, substantially as described. 3rd. In combination with an exhaust chest located between the live steam chest and cylinder, the skeleton main valve with a through passage admitting live steam to the cylinder ports and exhausting from the same ports outside the ends of the valve, substantially as specified. 4th. In combination with an auxiliary valve located in a live steam chest, the skeleton main valve A, provided with a through passage between the cut-off section, substantially as specified. 5th. In combination with an auxiliary valve located in a live steam chest, the skeleton main valve provided with a through passage each side of the central cut-off section located in the exhaust chamber, substantially as specified. 6th. The combination of the live steam chamber and an auxiliary valve with the exhaust chamber, and a main valve with ports and passages leading from the auxiliary valve and its seat through the openings of the duplex main valve located in the exhaust chest, substantially as specified. 7th. In combination with the piston P, P^1, the valves L, L, with passages connecting through the valve chamber each side of the partition K, and mechanism for operating said valves to convert the engine from a simple to a compound and vice versa, substantially as specified. 8th. In combination with the valve L, L, the ports and passages connecting said valves chambers with the divided cylinder, the cam levers N, provided with a slot n, and incline n^1, at either end whereby the valves are operated each near the end of the stroke of said valve, substantially as specified. 9th. The ballenced shell auxiliary valve C, located in the live steam chest D, provided with entrance ports, a series of cut-offs on the bottom face of said valve, a discharge port E, in combination with the valve

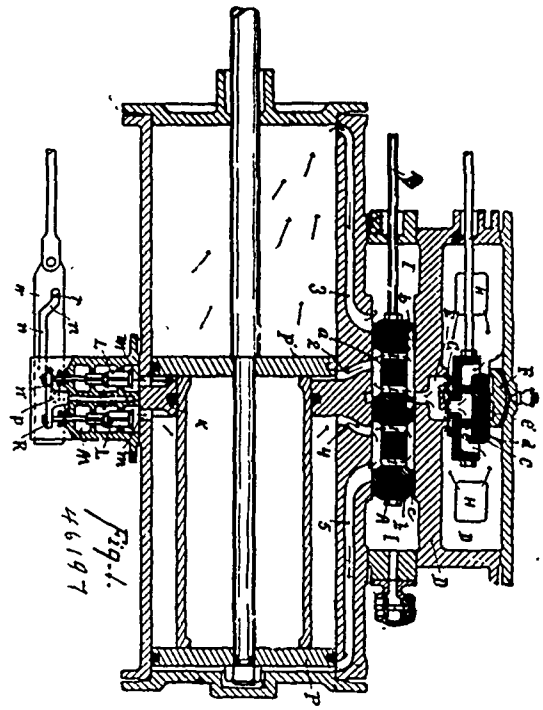


Fig. 1.
46197

seat having a series of ports coincident with the cut-offs of said valve, substantially as specified.

No. 46,198. Track-Sanding Apparatus.

(*Appareil à sabler les rails.*)

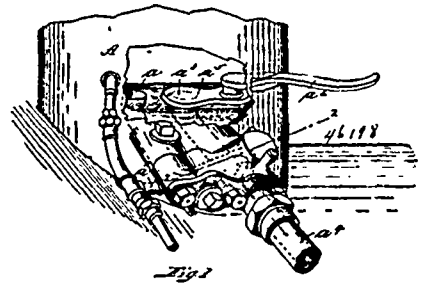


Fig 1

46,198

Henry L. Leach, Cambridge, Mass., U.S.A., 1st June, 1894; 6 years.

Claim.—1st. In track-sanding apparatus, the combination of a sand-passage having a blast-nozzle, with an emergency sand-passage auxiliary to that passage which is provided with a blast-nozzle, all substantially as and for the purpose set forth. 2nd. In track-sanding apparatus, the combination of a blast-passage with an auxiliary emergency sand passage, the two passages communicating one with the other, all substantially as and for the purpose set forth. 3rd. In track-sanding apparatus, the combination of a sand-box and a sand delivery pipe with a sand-blast passage from the sand-box, a blast-nozzle therefor, an auxiliary emergency sand-passage from the sand-box, and a cover for said auxiliary passage, all substantially as and for the purpose set forth. 4th. In track-sanding apparatus, the herein described combination of a sand-box, a sand-blast passage, an air-nozzle therefor, an auxiliary sand passage from the sand-box a cover for said passage, and a delivery pipe common to the sand-blast and auxiliary passages, all substantially as and for the purpose set forth.

No. 46,199. Friction Clutch Pulley.

(*Poulie à embrayage à friction.*)

William W. Wallace, Willoughby, Ohio, U.S.A., 1st June, 1894; 6 years.

Claim.—1st. In combination with a loose pulley having pins projecting laterally from the arms of said pulley, friction-rings mounted