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RAIL-ROAD NEWS.

Whitney's Railroad.

This project is being agitated in Washington again, and has engaged no small amount of time and expense to the nation by the consideration which has been given to it, from time to time, by Congress. "If this scheme is carried out," says "Observer," the able correspondent of the Philadelphia Ledger, "it will create the largest monopoly yet attempted in this country." The report of Congress on the subject states that he (Whitney), would acquire by the grant 78,000,000 acres of land, which, at 50 cents an acre, would amount to $39,000,000.

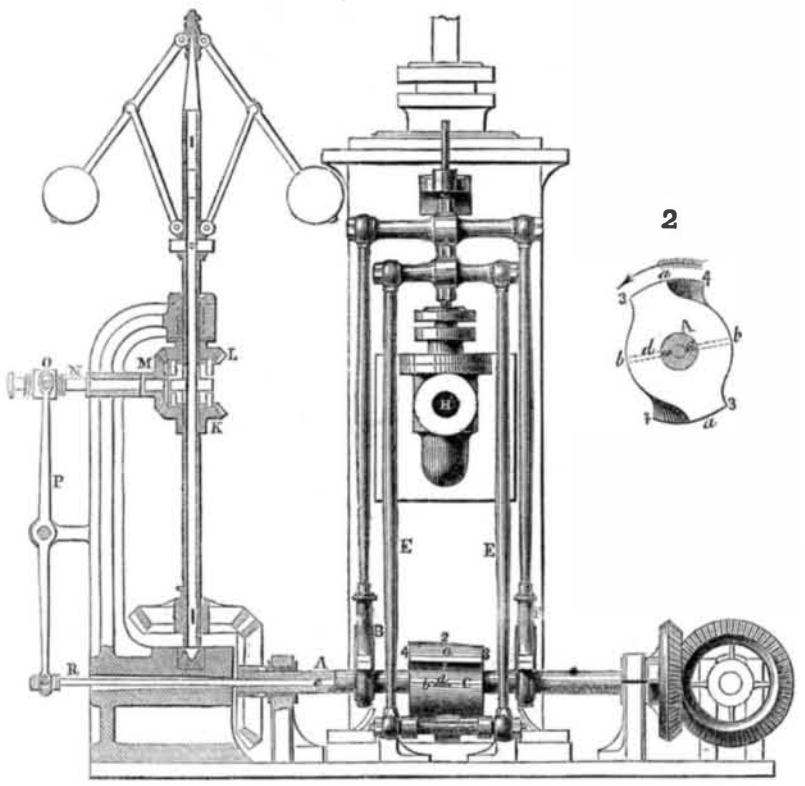
We like to encourage improvements, but we do not like a hot-bed system of stimulating the construction of a railroad to the Pacific. The grant of land demanded to construct 800 miles of railroad is very nearly equal in extent to all England, and more than the whole State of Pennsylvania or New York. Is there any citizen prepared for such a monopoly? If such a road is to be constructed, let it be done by the government, or let it be put up and let out by contract to the lowest bidder. It is not long since the British Government granted the whole of Vancouver's Island to the Hudson Bay Co., for some services *to be performed*, these grants are remnants of the Feudal Ages.

If it can be demonstrated that such a railroad will pay for the money invested, there are capitalists enough in the country, we believe, to take stock in it to the amount of $100,000,000, and this, without allowing any man the grant of a territory equal in extent to a State like New York. If it will not pay for itself after being constructed, then it will be a continual tax on the country, therefore, before any bill should pass Congress for this road, it should be thoroughly surveyed by U. S. Engineers, and reported on by them, so as to give us all the necessary information respecting its best route, probable expense, &c. We should like to see a railroad constructed as soon as possible to the Pacific, but then we are very much in the dark about the route. We hope Congress will not act upon this subject blindfolded. All the engineering survey which has yet been made for a Pacific railroad is that by James Kirkwood, C. E., for the section of Missouri. His Report is satisfactory to those who wish to take facts and figures for their guide, it is not so with the unsurveyed route of Whitney.

Cleveland and Wellsville Railroad.

The ceremony of opening the Cleveland and Wellsville Railroad, took place on the 4th inst., when a party of several hundred made the trip from Cleveland, Ohio, to Wheeling, Va. Since then the citizens of Wheeling were to hold a town-meeting, to adopt measures to build a railroad from the proposed terminus of the Baltimore and Ohio road, at that city, to Wellsville. This will give the city of Baltimore direct communication with the lakes.

ORTLIEB'S CUT-OFF FOR STEAM ENGINES.---Fig. 1.



The accompanying engravings illustrate an improved cut-off, for operating the valves of steam engines, which has been invented by Mr. Frederick Ortlieb, of Wappinger's Falls, Duchess Co., N. Y., who has taken measures to secure a patent for the same. The nature of the invention consists in the employment of a peculiar cam, which is placed on the shaft that operates the slide valve, or its equivalent, or by placing the said cam upon an independent shaft to operate the valve as will be described. The cut-off valve is also connected by its variations of speed, through the peculiar cam, which is moved on a spindle longitudinally, so as to operate the valve and cut off the steam sooner or later, according to the velocity of the governor, thus regulating the expansion of the steam, and making the engine work at a uniform speed.

FIG. 3.

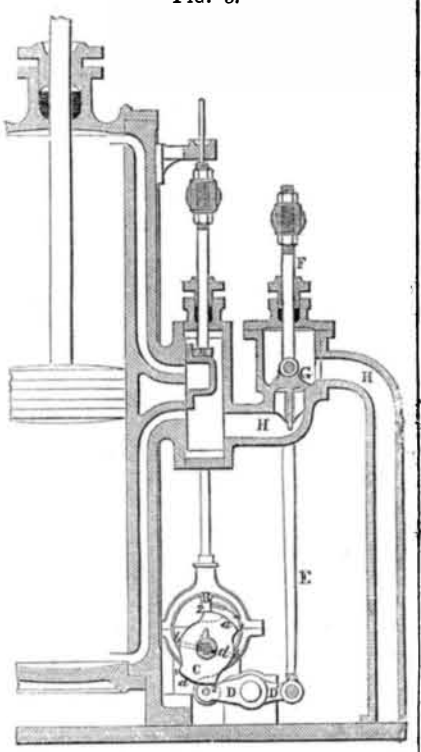


Figure 1 is a front elevation; figure 2 exhibits the opposite end of the cut-off cam to that shown in figure 3, which is a sectional elevation. The same letters refer to like parts on all the figures.

A is the way shaft, it is intended to be driven at the same speed as the main shaft of the engine; it carries the eccentrics, B B, to which are connected the rods, E E; to them is attached the cross-head of the valve rod, F. C is the peculiar cut-off cam; its form is that of a cylinder with parts of its periphery cut away on opposite sides of its axis, so as to leave two parts, *a a*, standing full. These standing parts form toes; one edge, 1, of each of these toes is straight and parallel with the axis; the other, 2, runs spirally. The faces of the toes, *a a*, are parts of the periphery of the cylinder, and are therefore perfectly parallel with each other longitudinally, and with the axis. The least prominent parts or heels, *b b*, of the cam, are all parallel with each other and with the axis, and form portions of a smaller cylinder than the outside, *a a*. The ascent and descent to and from the toes, is as sudden as is consistent with the proper action of the cam upon a roller or device, by which the said cam operates the valve rod; the form of the cam is the same throughout its whole length. It fits easily upon the shaft, A; *c* is a narrow slot cut through the shaft, A, its length is about that of the cam, and a key-way is cut diametrically through the cam to receive a key, *d*, which passes freely through the slot, *c*, but fits tightly in the cam. This key prevents the cam from turning on the shaft, but allows it to slide longitudinally. The shaft is bored cylindrically and is tubular for a great portion of its length. Into the bore of the shaft is fitted a small rod, *e*, which is connected to the cam and secured by the key, *d*, which passes through it; by moving this rod longitudinally —drawing it or pushing it horizontally—the cam is moved or made to slide backwards and forwards on the shaft. It is by this action that the cam is made to actuate the valve-rod to make it cut off the steam with a shorter or longer stroke according to the velocity of the governor. R is the rod of the cam; P is a lever connected to the rod by an eye hooked over a pin at the foot. This lever is secured on a fulcrum pin; N is a revolving spindle with a bevel pinion, M, on its inner end; O is a screw or thread cut in this spindle. On the lever, P, at its top, is a pin, the inner end of which fits into the threads of the screw. It will therefore be easily perceived that according to the direction in which the spindle, N, is made to revolve, so will the screw draw in or work outwards the upper end of the lever, P, which will so actuate the rod, R, as to draw the cam to the left, or to the right, so as to make a smaller or greater surface of the toes, *a a*, act on the roller. (as seen in fig. 3) of the valve-rod, to cut off quicker or not, as the case may be. The governor directs this action. On the common sliding collar of the governor there is a bevel pinion, K, at the foot and one, L, further up. There are two pins standing up on the inside of the pinion, K, and two projecting down from the one, L. In fig. 1 there is a cross pin on the spindle of the governor. It is now revolving between the bevel pinions, and the fixed action of the governor and engine is now represented in the said figure. If the velocity of the governor, however, were increased, the slide collar would be drawn up, the pins of the lower pinion, K, would be caught by the cross pin on the vertical spindle, and then the bevel pinion, M, and K, would mesh, motion would be given to the spindle, N; the screw would act upon the pin of the lever, P, drawing in the upper end of said lever, thereby thrusting out its lower end, and drawing the cam rod, R, with its cam further out, so as to bring the smaller toe surface to act upon the roller of the vibrating-valve lever, D D E, and thus cut off quicker according to accelerated velocity of the governor, beyond the uniform speed, so as to bring back the engine rapidly to the standard speed. When the velocity of the governor falls below the average speed, the slide of it drops and the upper pinion, L, takes into M, and revolves N in a contrary direction, so as to draw out the pin of the lever, P, by the screw, and thus push in the rod, R, to make the larger toe surface of the cam, C, act on the roller of the valve-rod lever, D D E, to give the cylinder a greater quantity of steam to bring it up to the standard speed. It is the intention of the inventor to apply it to the puppet valve, but not limit it to this application. In figure 3, H is the steam-pipe, which enters a steam box, in which is the puppet valve, G, which is the one operated by the cam, C, and the roller-lever, D D E. This steam-box of G opens by the inside pipe, H, into a common slide-valve box, the valve of which is operated by the eccentrics on the main shaft, as shown in said fig. The cam revolves in such a direction that the parallel edges, 1, of the toes come first into operation, and these edges operate on the valve at the precise moment the engine is on the dead centre, hence the valve is always open to its fullest extent at the precise moment when the full pressure of steam is required. The valve remains open wide all the time the face of the toe is in operation on the lever-roller. As soon as the edge, 2, of the cam, passes the roller the valve is closed and so remains till the step in front of the edge, 1, of the next toe comes into operation on it, which it will do just before the conclusion of the stroke, so that the valve may be full open when the engine is on the next centre. The cam opens the valve suddenly and allows it to be closed suddenly, and keeps it wide open till the steam is cut off, and thus this cam is decidedly a very great improvement.

It will be observed by fig. 2 that the spiral line of the cam, is so set out that the narrowest ends, 3 3, of the faces of the toes shall bear just such a proportion to the half of the circumference of the cam as it is desired, that the shortest portions of the stroke of the piston under full steam, shall bear to the entire stroke, say one-eighth, the widest parts, 4 4 shall bear the same proportion as the longest part of the stroke, say one-half. The steam will thus be cut off at one-eighth at one end, and one-half at the other.

More information may be obtained by letter addressed to the inventor.