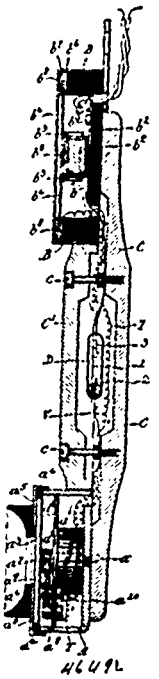
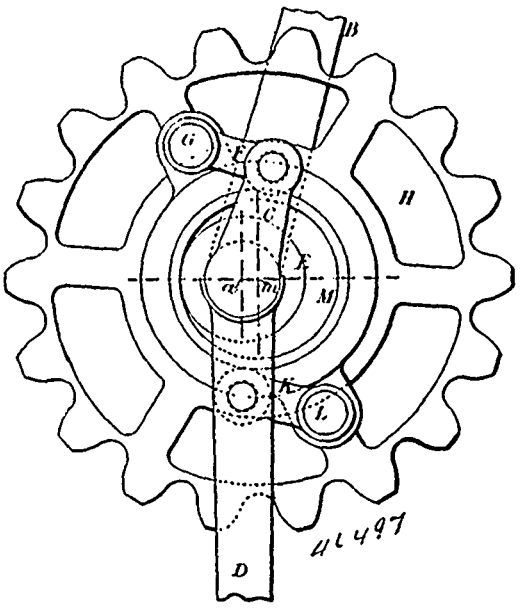
receiver in which the diaphgram is vibrated by an interrupted or intermittent current of electricity, whereby emitting a sound which



serves as an alarm or call, in combination in one and the same instrument, with a transmitter and a switch, all having a common carrying handle as herein set forth. 3rd. The combined electrical alarm or call and receiver for telephones comprising a case or box, a bobbin with extended core and insulated plate, a metal diaphragm, suitable retaining cap carrying ear piece, a spring armature contact breaker situate between the bobbin plate and the diaphragm, a gravity switch and suitable terminals and connections for line and battery, as set forth. 4th. The combination of microphone or transmitter for telephones consisting of an outer casing or box having a base or back plate, an inner open faced metal box secured to such back plate and containing a carbon block, an india rubber ring encircling such inner box and projecting forward beyond the open face of same, a diaphragm suitably secured in close proximity to said ring, and the space between said carbon block and diaphragm containing loose grains of carbon, with suitable terminals and connections for line and battery, as set forth. 5th. In telephonic apparatus, the combination, in one and the same instrument having a suitable carrying handle of a combined alarm or call, and receiver, with a gravity switch all mounted within or upon such handle, as and for the purpose shown and described. 6th. In telephonic apparatus, the combination of a portable transmitter with a gravity switch, as set forth. 7th. An electric alarm or call constructed and arranged as shown and described.

No. 46,497. Driving Mechanism for Velocipedes.

(*Mécanisme conducteur pour vélocipedes, etc.*)



John Birrell Robertson, Belfast, Ireland, 5th July, 1894; 6 years.

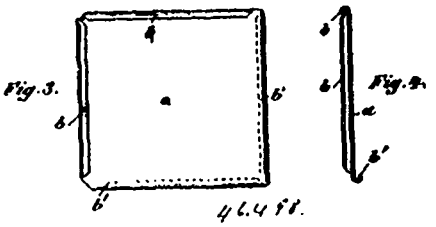
Claim.—In a velocipede or other foot driving machine, mounting the two pedal levers on an axle on which they are free to rotate independently, and connecting them to cranks on a driving wheel the axis of which is eccentric to that of the pedal axle, substantially as and for the purpose set forth.

No. 46,498. Metal Folding Plate.

(*Feuille métallique pliante.*)

Theodor Hildebrand, Gartow, Kingdom of Prussia, 5th July, 1894; 6 years.

Claim.—A tile or plate for roofing of all kinds, made of a quadrangular shape and formed with grooves or channels along each of its sides, the grooves or channels along two adjacent sides being turned to the front of the tile or plate, and the other pair turned to the rear of the tile or plate so that two or more tiles or plates can be joined together in a firm and tenacious manner by simply interlock-



ing their oppositely disposed grooves or channels, substantially as described and illustrated.

No. 46,499. Dyeing Process. (*Procédé pour teindre*)

Ernest Heaffely, Barmen, Rhenish, Prussia, Empire of Germany, 5th July, 1894; 6 years.

Claim.—1st. The process for producing turkey red and rose colour on vegetable yarns in cops, hanks, carded strips and the like which consists in oiling and mordanting them in the usual manner, then dyeing them in a cold solution of alizarine, freeing them from the residual free alzarine and its solvent by a suitable menstrum such as acidulated water, and again oiling them, steaming them and finally clearing them in a bath of hot soap, substantially as described. 2nd. The improvement in the process of turkey red dyeing which consists in immersing the previously mordanted material in a cold solution of alizarine containing an excess of alizarine beyond that capable of being taken up by the mordant. 3rd. In the process of dyeing turkey red, previously mordanting the material, treating it with a cold solution of alizarine, the said alizarine being in great excess, removing mechanically a large part of the excess of uncombined alizarine and its solvent, and then washing the hanks in acidulated water (or other solvent of alizarine from which the alizarine can be again precipitated) whereby there is no waste in alizarine. 4th. In the process of turkey red dyeing, the method of regulating the amount of alizarine which consists in supplying only a given amount of mordant and using an excess of alizarine beyond what the mordant can take up, and afterwards removing that excess. 5th. The improvement in the process of turkey red dyeing, the method of preventing an excess of colour in the outer portion of the hanks beyond what there is in the inner portion, which consists in thoroughly saturating the mordanted hanks with a solution of alazarine much stronger than that required to combine with the mordant, whereby the solution, by the time it has penetrated to the centre of the hank, is still strong enough to saturate all the mordant in that central portion, substantially as described.

No. 46,500. Method of Converting Iron and Steel.

(*Méthode de convertir le fer en acier.*)

John Alexander Hunter, Philadelphia, Pennsylvania, U.S.A., 5th July, 1894; 6 years.

Claim.—1st. The mode herein described of converting cast iron into steel, said mode consisting in subjecting the iron while highly heated or in a molten state to a bath of oxygen, generated by the action of hydrochloric acid upon chloride of lime, with or without the addition of salt, substantially as specified. 2nd. The mode herein described of increasing the percentage of carbon in wrought iron or low steel, said mode consisting in subjecting the iron or steel, while heated or in a molten state, to the action of oxygen, which has previously been brought into contact with carbon, substantially as specified.

No. 46,501. Twisting Machine. (*Machine à tortiller.*)

George H. Sellers, Wilmington, Delaware, U.S.A., 5th July, 1894; 6 years.

Claim.—1st. As a device for twisting flanged bars, a sectional twist die E made up of parts *c*, *c*, *c*, *c*, equal to the number of flanges in the bar, and each adapted to lie between adjacent flanges. 2nd. As a device for twisting flanged rods, a sectional twist die E made up of parts *c*, *c*, *c*, *c*, equal to the number of flanges on the bar, and each adapted to lie between adjacent flanges, in combination with a box C adapted to hold the die sections together while permitting their ready removal with a twisted bar. 3rd. As a device for twisting flanged rods, a series of sectional twist dies E, E¹, etc., made up of parts *c*, *c*, *c*, *c*, equal in number to the flanges on the bar to be twisted, and each section adapted to lie between adjacent flanges, in combination with a holder as box C, adapted to hold the dies in position while permitting their removal with a twisted bar. 4th. As a device for twisting flanged rods, a pair of grooved rolls A, A¹, in combination with a die holder C situated in front thereof, and a twist die or dies E made up of sections *c*, *c*, *c*, *c*, equal to the number of flanges on the bar to be twisted, and each adapted to lie between adjoining flanges, said sectional die or dies being held in the holder