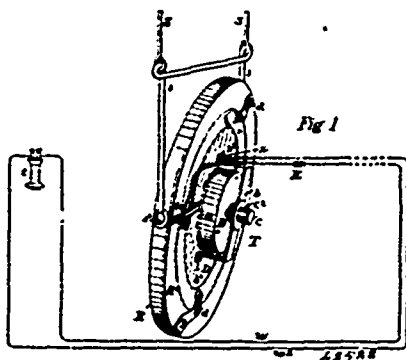


rear wall or floor, a vibratory electrode mounted and adapted to vibrate within the front opening of said chamber, a finely divided conducting material placed within said chamber and between said electrodes, and a disc of fine wire gauze supporting the said vibratory electrode secured to the front of the casing and closing the said containing chamber, substantially as specified. 3rd. The combination,



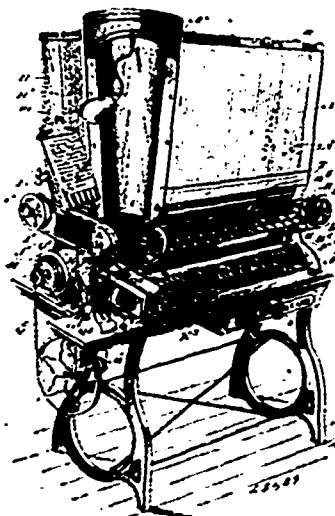
in a telephone transmitter of a diaphragm, a variable resistance button mounted wholly upon the said diaphragm, and a light back support also mounted on said diaphragm and delicately holding said button in place, substantially as described. 4th. The combination, in a telephone transmitter, of a wooden diaphragm, a chambered button having front and back disc electrodes, a slate casing and side wall, and finely divided conducting material contained therein mounted as a whole on said diaphragm and having its front electrode attached to the centre thereof, and a support also mounted wholly on said diaphragm, and engaging delicately with the rear of the said button and adapted to hold it in place, substantially as specified. 5th. In a telephone transmitter a diaphragm of wood held in place by spring pressure only, combined with a hollow button mounted thereon, the said button comprising a block of slate forming the casing and side wall of a containing chamber, a carbon disc secured therein and serving as the fixed electrode, a vibratory electrode secured to a flexible disc of wire gauze clamped to the front of said containing chamber, the said electrode being attached also to the centre of the said wooden diaphragm and adapted to participate in the vibrations thereof, granular conducting material enclosed in said chamber, and a rear support for said button, substantially as described. 6th. The combination in a telephone transmitter with the diaphragm, of a compound variable resistance button comprising a mass of finely divided conducting material in a loose or free state and a containing chamber therefor, having a fixed back electrode, a slate side wall and a vibratory electrode or front plate mounted on a flexible disc or fine wire gauze, and attached to the diaphragm centre so as to vibrate therewith, and a support holding the said compound button in place, and itself mounted on the diaphragm, substantially as described. 7th. The combination in a telephone transmitter with a diaphragm of wood held in place by spring pressure only, of a compound variable resistance button comprising a mass of finely divided conducting material in a loose or free state, and a containing chamber therefor, having a fixed back electrode, a slate side wall, and a vibratory electrode or front plate mounted on a flexible disc of fine wire gauze, and attached to the diaphragm centre so as to vibrate therewith, and a support holding the said compound button in place, and itself mounted on the diaphragm, substantially as described. 8th. A granular carbon transmitting telephone comprising a frame or ring seat, a diaphragm, a chambered button containing granulated carbon mounted on said diaphragm and having a casing and side wall of slate for the said chamber, a rear wall of carbon constituting the fixed electrode and a front wall of carbon secured to a flexible disc of fine wire gauze forming the vibrating front electrode, the said gauze being clamped to the slate side wall, and the said front electrode being secured to the diaphragm centre to vibrate therewith, and a light bridge also mounted on the diaphragm and delicately supporting the same, substantially as described. 9th. A granular carbon transmitting telephone comprising a frame or ring seat of wood, a diaphragm of wood held in the said seat by spring pressure, a chambered button containing granular carbon mounted on said diaphragm and having a casing and side wall of slate for the said chamber, a rear wall of carbon constituting the fixed back electrode and a front wall of carbon secured to a flexible disc of fine wire gauze forming the vibratory front electrode, the said gauze being clamped to the slate side wall, and the said front electrode being secured to the diaphragm centre to vibrate therewith, and a light bridge also mounted on the diaphragm and spanning the said button and delicately supporting the same, substantially as described.

No. 48,549. Type Setter. (Machine à composer.)

The Cox Type Setting Machine Company, Chicago, Illinois, assignee of Paul Fleeming Cox, Battle Creek, Michigan, U.S.A., 3rd April, 1895; 6 years.

Claim.—1st. The combination with mechanism for composing

type and spaces in line, of mechanism for forming laterally compressible spaces and delivering them as needed to the composing devices during the setting operation whereby the line may be subsequently mechanically justified by lineal compression, substantially as set forth. 2nd. The combination in a type setting machine of



mechanism for making laterally compressible spaces as needed to space the words during the setting operation and mechanism for lineally compressing the line when completed, thereby mechanically justifying the line by the yielding of the spaces, substantially as described. 3rd. The combination in a type setting machine of mechanism for composing type characters and laterally compressible spaces, and mechanism for making such spaces, and for laterally compressing the line when completed, thereby mechanically justifying the line by the compression of the spaces, and mechanism whereby the justified line may be moved out of the way of the next succeeding line, substantially as described. 4th. In a type-setting machine, the combination of the type setting mechanism, with mechanism for making spaces and delivering them to the setting mechanism as needed during the setting up of a line, substantially as described. 5th. In a type-setting machine, the combination with type setting mechanism, of a mechanism for making yielding compressible spaces at the will of the operator, and delivering them to the setting mechanism as needed during the setting up of a line, substantially as described. 6th. The combination in a type-setting machine, of the receiving galley, the plunger and rule therein, between which the composed types are moved in line, with mechanism whereby when the line is completed the plunger and the rule can be moved lengthwise of the galley so as to set the line of type out of the way, and mechanism whereby the rule is automatically shifted from front to rear of the line of type, substantially as described. 7th. The combination of the galley, the plunger therein the rule attached to the plunger, the devices for automatically raising and lowering the rule as the plunger is reciprocated in the galley, and means for directing a line of type into the galley, between the plunger and rule, substantially as described. 8th. The combination in a type-setting machine of the galley, mechanism for setting and aligning type and directing the same into the galley, a plunger and rule between which the incoming line of type is received, and mechanism for moving the line when completed forward in the galley, and simultaneously shifting the rule from front to rear thereof, substantially as described. 9th. In a type-setting machine, the combination with type setting mechanism, of a mechanism for making yielding spaces at the will of the operator, and delivering them to the setting mechanism, and means for lineally compressing the line of type when completed whereby the line is automatically justified by the yielding of the spaces, substantially as specified. 10th. The combination of the feed rolls, the driving gear thereof, mounted on a rock-shaft and carrying a ratchet, the pawl mounted on said rock-shaft engaging said ratchet, and the key lever and connections for rocking said shaft, with the shear plate, the spring-controlled latch thereon, and the finger on the rock-shaft engaging said latch, substantially as described. 11th. The combination in a type-setting machine, of the type setting devices, with a space strip feeder, and mechanism for corrugating and severing spaces from said strip and delivering them to the setting mechanism at the will of the operator, substantially as described. 12th. The combination in a type-setting machine, of mechanism for setting type, a key and mechanism for making spaces from a ribbon, whereby upon the depression of said key a space is severed and delivered to the setting mechanism, substantially as and for the purpose set forth. 13th. In a type-setting machine, the combination of mechanism for delivering type to a race-way, a galley for receiving the type from the race-way, a setter for forcing the type into the galley, and a mechanism for making and delivering yielding spaces to the setting