

Vol. XX.--No. 11.

NOVEMBER, 1892.

Price free by post in Canada and the United States, \$2.00.

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## INVENTIONS PATENTED.

NOTE.—Patents are granted for 18 years. The term of years for which the fee has been paid, is given after the date of the patent.

## No. 40,809. Machine for Weaving Wire Mattresses.

(Machine pour tisser les sommiers en fil de fer.)

Hard Brothers & Company, assignees of Charles H. Hard, Orrin G. Franks and Albert Edward Loomis, all of Oneida, New York, U.S.A., 2nd November, 1892; 6 years.

Claim. 1st. In combination with the prolonged horizontal fabric supporters adapted to receive between them the wire in process of weaving, a wire coiler in range with the space between said supporters, a vertically reciprocating cutter at the ends of the supporters, a though a threader arranged to enter the coiled wire into the previously wowen woven wire and a vertically movable arm carrying the threader and connected with the reciprocating cutter to move the threader with the cutter as set forth. 2nd. In combination, with the main supporting frame, the longitudinally grooved rollers disposed horizontally and small behavior to rotate in tally and parallel side by side and connected by gears to rotate in unison, a ratchet wheel on one of said rollers, an arm hung on the iournal. journal of the latter roller, a pawl connected to said arm and engaging the aforesaid ratchet wheel, a rotary shaft journalled in the atoms of the said arm and the state of the said ratchet wheel, a rotary shaft journalled in the aforesaid supporting frame a cam on said shaft, a lever actuated by said In combination with the main supporting frame, the longitudinally movable frame and fabric supporters mounted on the latter frame and adapted to receive between them the twisted wire in process of weaving as described, a rotary shaft on the supporting frame, an oscillation of the supporting frame, and oscillations are supported to the supporting frame of the supporting fram oscillatory arm pivoted to the supporting frame, a cap on said rotary shaft actuating the oscillatory arm, and a lever fulcrumed to the supporting frame the said arm to the supporting frame and transmitting motion from the said arm to the aforesaid movable frame, substantially as set forth. 4th. In combination with the main supporting frame, longitudinally movable frame. frame, and fabric supporting frame, forgularing process of weaving, a adapted to receive between them the wire in process of weaving, a rotary shaft journalled on the main supporting frame, an arm extending frame, and the state of the arm, and the state of the arm, and the state of the state of the state. smart journalied on the main supporting frame, an early sing from said shaft, a cam projecting from the side of the arm, an oscillatory arm pivoted to the supporting frame and having its free end in the said of the oscillatory. end in the path of said cam, a latch pivoted to said end of the oscillatons. latory arm and also in the path of the cam and operated thereby, stops on the latter arm limiting the movements of the latch and in positions to support the latch so as to cause the cam to engage alternately opposite sides of the latch during the rotation of the aforemental property of the latch during the rotation of the aforemental property and and the same of the latch during the rotation of the aforemental property and the same of the latch during the rotation of the latch during the latch dur aforesaid shaft and thereby push the oscillatory arm toward and from the shaft, and a lever fulcrumed to the supporting frame and transmitted. transmitting motion from the oscillatory arm to the aforesaid movable frame, substantially as described and shown. 5th. In combinareame, substantially as described and snown. One in communication with the main supporting frame, fabric supporters, threader and reciprocating cutter, a rotary shaft journalled in the said supporting frame, a cam on said shaft, a lever pivoted to said frame and having one end in the path of the cam, a lever connected with

the cutter, and a pitman connecting the said two levers as and for the purpose set forth. 6th. In combination with the wire feeding rolls and gear wheels connected thereto, the driving gear wheel formed with a blank segmental portion in its periphery, an arm pivoted concentric with the said driving gear wheel, and having its free end occupying a portion of the aforesaid blank portion of the driving gear wheel, and formed with cogs corresponding to those of the wheel, a spring holding the free end of said arm normally in the advance end of the aforesaid blank portion of the wheel, and an intermediate gear wheel transmitting motion from said driving gear to the gear wheel of the feeding rolls, substantially as and for the purpose set forth. 7th. In combination with the wire feeding rolls purpose set form. Ath. In combination with the wire feeding folial and gear wheels connected thereto, the driving gear wheel formed with a blank portion in its periphery, a cogged section detachably connected to one end of the aforesaid blank portion, an arm pivoted concentric with said driving gear wheel and having its free end occupying a portion of the said blank portion of the wheel and formed with cogs corresponding to those of said wheel, a spring holding the free end of said arm normally in the advance end of the blank systims of the wheel and an intermediate grant wheel transblank portion of the wheel, and an intermediate gear wheel transmitting motion from said driving gear to the gear wheel of the feeding rolls, substantially as described and shown. 8th. In combination, with the supporting frame, wire feeding rolls and gear wheels connected to said rolls, the driving gear wheel formed with a blank portion is to assist here. a blank portion in its periphery, an arm pivoted concentric with the latter wheel and having its free end occupying a portion of the blank portion, and formed with cogs corresponding to those of the wheel, a spring holding the free end of the said arm normally in the advance end of the blank portion, a latch on the wheel adapted to engage the aforesaid arm, and cam on the frame in the path of the latch to actuate the same, substantially as described and shown. 9th. In combination, with the wire feed rolls and the vertical reels, wheels secured horizontally to the axis of the reels and having frictional side faces, a rotary shaft extending diametrically across said wheels, vertically disposed friction wheels secured to said shaft and bearing on the frictional side faces of the horizontal wheels, adjusting screws disposed parallel with the aforesaid rotary shaft, nuts on said screws, and arms extending from said nuts and engaging the hubs of the vertically disposed friction wheels, substantially as and for the purpose set forth. 10th. In combination, with the fabric supporters, reels, wire feed rolls and wire twisters and cutters, the driving pulley mounted loosely on its shaft, a clutch adapted to tie said pulley on its shaft, lever shifting said clutch, a spring operating said levers and thereby holding the clutch in engagement with the driving substantial states of the constitute to the constitute to the constitute of the constitute to the constitute of the constitute to the constitute of the constitute to the constitute to the constitute of the constitute to the consti ing pulley, a latch operating the levers in opposition to the spring, an armature having a catch adapted to hold the latch in its operative position, electro magnets opposite said armature, an electric battery energizing said magnets, the supporting frame in circuit with said battery, and electrodes extending lengthwise of and in proximity to the weaving space between the aforesaid fabric supports and in the aforesaid circuit, substantially as and for the purpose set forth.

## No. 40,810. Process of and Apparatus for the Manufacture of Gas. (Procédé et appareil pour la fabrication du gaz.)

The Acme Liquid Fuel Company, of the City of New York, assignees of James S. Rogers and James H. Baker, both of Saratoga Springs, all in New York State, U.S.A., 2nd November, 1892; 6 years.

Claim. 1st. The method of producing by a fixed gas from hydrocarbons, which consists in heating the hydrocarbons, conveying the heated hydrocarbons in small jets or quantities from the heater and converting it into vapour, and then superheating the vapour, substantially as shown and described. 2nd. The method of producing