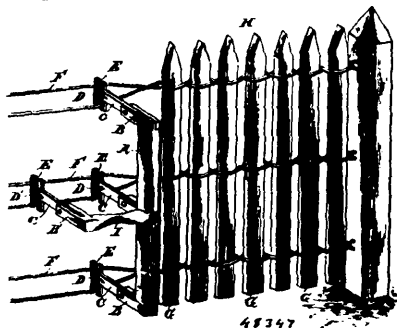
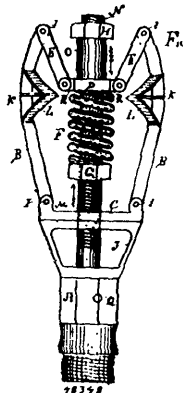


handle and side brace extended laterally from said bar, and adapted to be connected with the fence wire, substantially as set forth. 2nd. In a hand fence machine, the combination of an upright frame bar having a series of short shuttle arms, a series of swinging shuttle



bars pivoted at their inner ends to said shuttle arms, and having at their outer ends right-angularly disposed wire heads provided with wire notched in their opposite ends, a combined handle and side brace extended laterally from the frame bar at an intermediate point and provided with an angled outer end, and a supplemental shuttle bar pivoted to said angled end and having a notched right angularly disposed wire head, said supplemental shuttle bar, and its head being arranged in a line with an intermediate one of the other shuttle bars, substantially as set forth.

**No. 48,344. Flue Scraper. (Grattoir de carneaux.)**



Edward D. Weston, Robert Gage and Benjamin Dyre Legg, all of Jackson, Michigan, U.S.A., 5th March, 1885; 6 years.

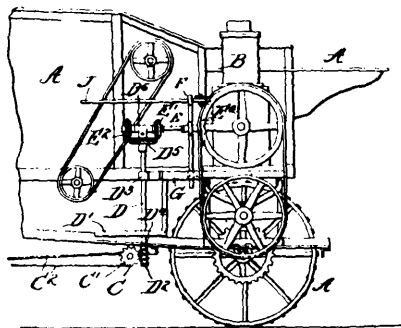
**Claim.**—1st. The flue scraper described, comprising the stock A', having the threaded stem N secured to said stock, the conical base J slipped on said stem, the cap C firmly secured to the stem N, and resting on the conical base J, and having the brackets M, M hinged in said brackets, the arms E, B, having the blades L, L and K, K, substantially as shown and for the purpose hereinbefore set forth. 2nd. In a flue scraper, having a threaded stem N, secured on said stem the tension nut G, spiral spring F, interposed between the tension nut G and the slidable collar D, the slidable furl O, and adjusting nut, all substantially as shown and for the purpose hereinbefore set forth. 3rd. The combination, in a flue cleaner of the arms B, B, having the links E, E attached to said arms at the upper or outer ends, said links E, E attached at the lower ends to the brackets R, R, on the slidable collar D, substantially as shown and for the purpose described.

**No. 48,345. Steering Mechanism for Threshing Machines. (Mécanisme pour gouverner les machines à battre.)**

Charles Franklin (Goddard, Chicago, Illinois, U.S.A., 5th March, 1885; 6 years.

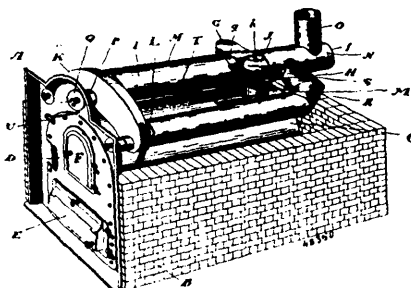
**Claim.**—1st. The combination of a shaft having a gear-wheel on its end thereof, with a transverse shaft mounted upon a cap on the

end of the first mentioned shaft so as to swing thereon, and gear-wheels on such transverse shaft adapted to intermittently engage the gear-wheel on the first mentioned shaft. 2nd. In a threshing machine, the combination of a steering gear with a controlling shaft therefor, a gear on such shaft, a tilting shaft with gears thereon



adapted one at a time to engage the controlling shaft, and means for driving said gears. 3rd. The combination of a controlling shaft with a gear thereon, a transverse shaft with gears thereon adapted alternately to engage the first mentioned gear, and means whereby the transverse shaft may be raised or lowered at one end to bring the gears thereon alternately in engagement with the gear on the controlling shaft. 4th. In a threshing machine, the combination of a rotating driving wheel with a shaft having a friction wheel on one end thereof opposed to the driving wheel and gears on the other end, means for moving the end of the shaft carrying the friction wheel either vertically or laterally, and a shaft and gear adapted alternately to engage the gears on the transverse shaft. 5th. The combination of a shaft adapted to be alternately rotated in opposite directions, with a gear-wheel on the upper end thereof, a tilting bearing on the top of said shaft, a transverse shaft in such bearing, gears thereon on opposite sides of the bearing, and adapted alternately to engage the gear on the reversing shaft. 6th. The combination of a shaft adapted to be alternately rotated in opposite directions, with a gear-wheel on the upper end thereof, a tilting bearing on the top of said shaft, a transverse shaft in such bearing, gears thereon on opposite sides of the bearing and adapted alternately to engage the gear on the reversing shaft, and a friction-wheel on the other end of the transverse shaft, and means for moving that end of the shaft to bring one and then the other of its gear into engagement with the gear on the vertical shaft. 7th. The combination of a shaft adapted to be alternately rotated in opposite directions, with a gear-wheel on the upper end thereof, a tilting bearing on the top of said shaft, a transverse shaft in such bearing, gears thereon on opposite sides of the bearing and adapted alternately to engage the gear on the reversing shaft, and a friction-wheel on the other end of the transverse shaft, and means for moving that end of the shaft to bring one and then the other of its gears into engagement with the gear on the vertical shaft, and to bring the friction gear against an opposed driving gear, whereby the transverse shaft is rotated.

**No. 48,350. Hot Air Furnace. (Fournaise à air chaud.)**



Charles Leander Lightfoot, Toronto, Ontario, Canada, 5th March, 1885; 6 years.

**Claim.**—1st. A furnace provided with an opening in its front of sufficient size to permit of changing the grates, and provided with a detachable front carrying the fire door, substantially as for the pur-