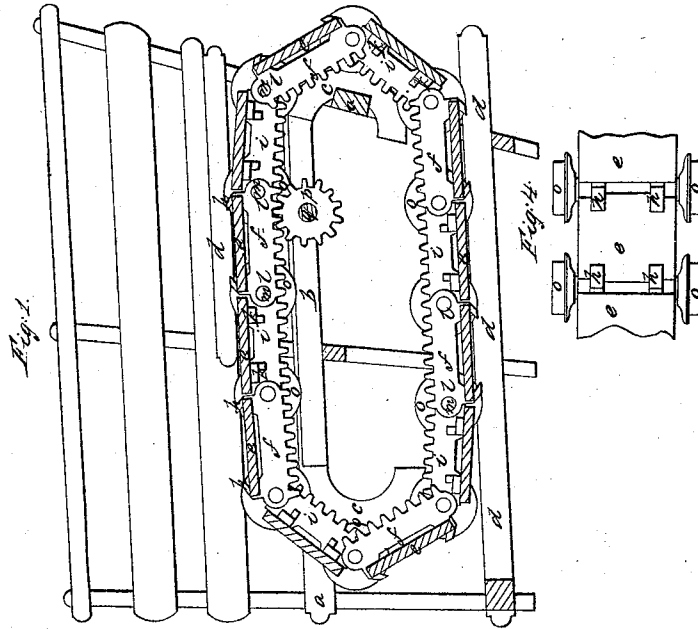
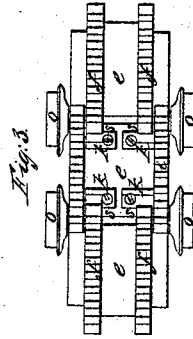
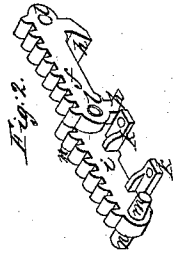


J. Urmey,

Horse Power.

No. 5,001.

Patented Mar. 6, 1847.



UNITED STATES PATENT OFFICE.

JESSE URMY, OF WILMINGTON, DELAWARE.

HORSE-POWER.

Specification of Letters Patent No. 5,001, dated March 6, 1847.

To all whom it may concern:

Be it known that I, JESSE URMY, of Wilmington, in the county of Newcastle and State of Delaware, have invented new and useful Improvements in the Mode of Constructing Horse-Powers, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before
10 know and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical longitudinal section; Fig. 2, parts detached; Fig. 3, a view of the under side of platform and Fig. 4 a top view of a part of the platform.

The same letters indicate like parts in all the figures.

20 The various modes of constructing horse powers heretofore adopted are generally of an expensive character or are deficient in stability, those most common having a rod running from side to side at each joint and complicated carrying drums at each end. The mode of gearing is also either by a rack independent of the connecting links, or by
25 gearing up from one of the end drums, a practice that requires considerable additional gearing to get up the proper speed. By my improvements I only employ one shaft that runs through the machine by which the power is taken off from the endless platform.

35 The construction is as follows: viz, in a suitable frame (*a*) made like that of ordinary endless chain horse powers I form a railway on each side of a suitable inclination for the horse to walk on; it consists of
40 an upper straight rail (*b*) terminated at each end by a semicircular curve downward, lettered (*c*); below these curved pieces there is another rail (*d*) placed parallel with that marked (*b*) but at a sufficient distance below them to permit the friction rollers, attached to the endless platform, to pass between them, as is clearly shown in Fig. 1.

45 The platform consists of a series of lags (*e*) connected together by a series of links on each side which form the endless chains. The links are more clearly shown in Fig. 2; they are made of cast iron and are of two

kinds; one is a straight flat piece (*f*) rounded at the ends and having a toothed rack along its lower edge and two incurved
55 hooks (*h*) above, between which are inserted the lags (*e*); a hole (*l*) is made in each end of the link for the joint pin. The other is a similar straight piece (*i*), with a rack below and two lugs (*k*) projecting from the
60 inside face and flush with the upper side by which it is firmly fixed to the lags (*e*) by the screws (*s s*).

A pin (*m*) projects from the side and near each end of the link (*i*), and made
65 slightly tapering to fit into the hole (*l*) in the first named link (*f*) by which the joint is formed. The pins and holes are formed in casting and do not require a pin to be put through both; on the side opposite the pins
70 (*m*) there are studs (*n*) standing out which serve as axles for the friction wheels (*o*) made like rail road wheels with flanges; there being one of these wheels at each joint so that the platform is sustained by them
75 and moves without a great amount of friction. The lugs hold the links to which said wheels are attached so securely that it precludes the necessity of carrying the axles through from side to side and the links
80 when joined together as shown in Fig. 3 form a continuous rack below; this rack gears into a pinion (*p*) on a horizontal shaft (*q*) from which the power is taken, and is the only shaft required in the machine.

What I claim as my invention and desire to secure by Letters Patent is—

Constructing the links of the endless chain of a horse power in the manner described, so
90 that they form firm connections and a permanent axle for the friction rollers, while at the same time they constitute the rack by which the power is transmitted, substantially as set forth, by which means the use
95 of axles extending through from side to side is dispensed with while the advantage of the rollers attached to the platform is retained, forming a cheap and efficient horse power.

JESSE URMY.

Witnesses:

A. P. BROWNE,
CHS. M. KELLER.