

Johnston & Matthews.

Fire Escape

N^o 24,909.

Patented Jul. 26, 1859.

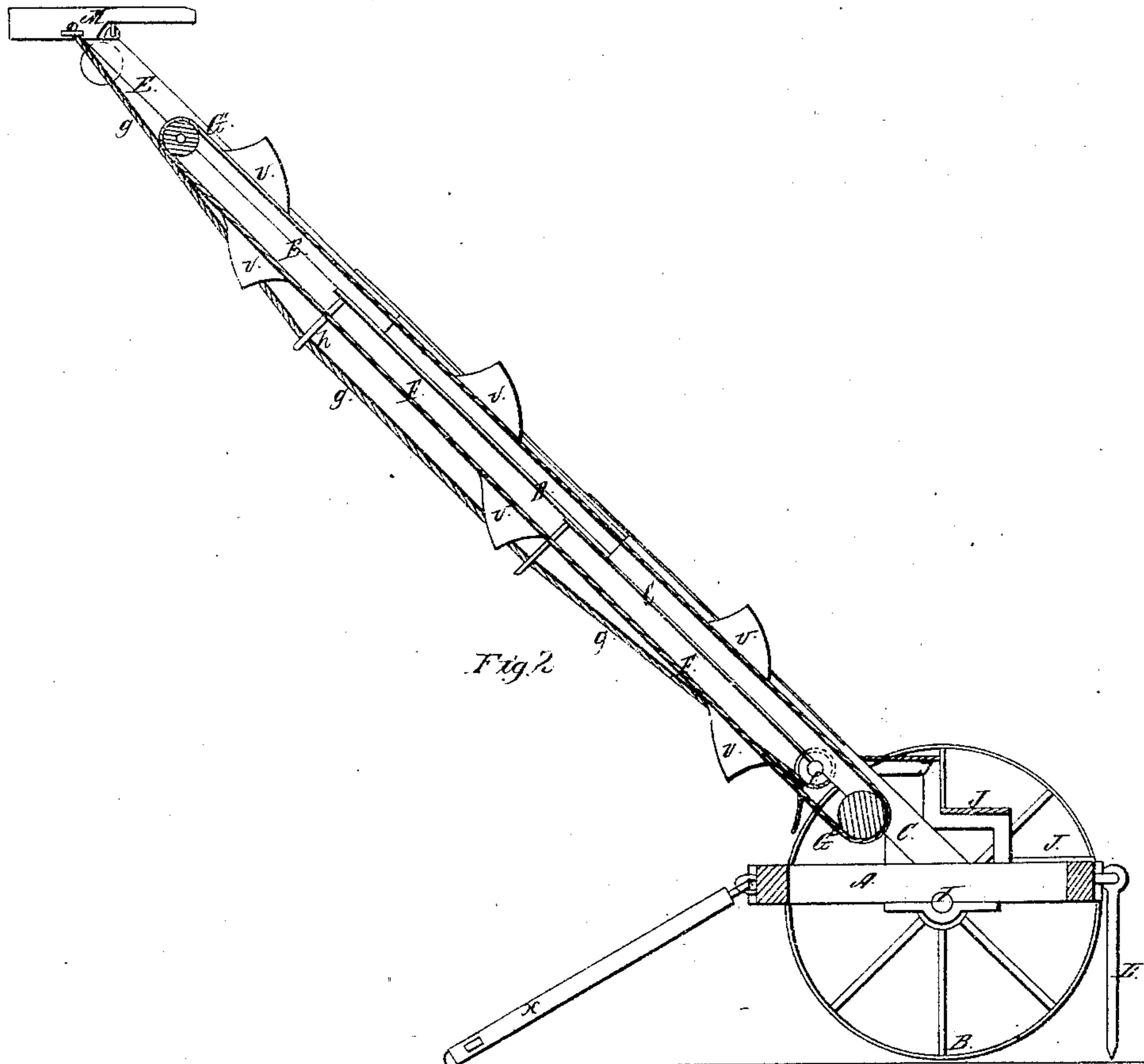


Fig 2

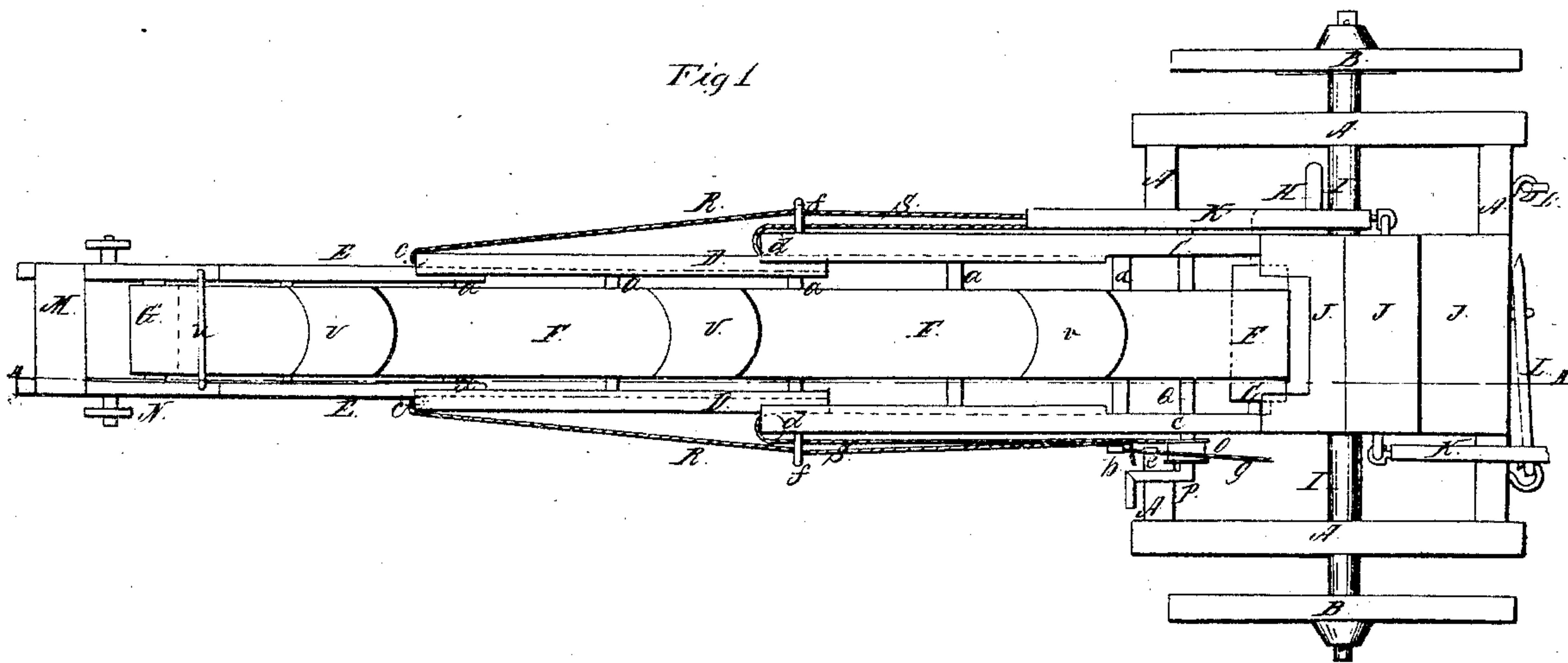


Fig 1

Witnesses:
Amos Rodding
Mich^l Scheiffe

Inventor:
H Johnston
Wm S Matthews

UNITED STATES PATENT OFFICE.

HEZEKIAH JOHNSTON AND WM. J. MATTHEWS, OF COLLINSVILLE, ILLINOIS, ASSIGNORS
TO THEMSELVES AND JONATHAN BERKEY, OF SAME PLACE, ASSIGNORS TO HEZE-
KIAH JOHNSTON.

FIRE-ESCAPE LADDER.

Specification of Letters Patent No. 24,909, dated July 26, 1859.

To all whom it may concern:

Be it known that we, HEZEKIAH JOHN-
STON and WILLIAM J. MATTHEWS, of Collins-
ville, in Madison county and State of Illi-
5 nois, have invented a new and useful Im-
provement in Fire-Escape Ladders; and we
do hereby declare that the following is a
full, clear, and exact description of the same,
reference being had to the annexed drawing,
10 making part of this specification, in which—

Figure 1 is a top view and Fig. 2 a ver-
tical section through A A.

Our invention consists in combining an
endless apron, belt or chain, with a set of
15 folding ladders, when the said ladders are
constructed and operated substantially as
herein after set forth, and also in combining
with the said ladders a movable platform,
arranged and operated as hereinafter de-
20 scribed.

To enable others skilled in the arts to make
and use our invention, we will proceed to de-
scribe the construction and operation, there-
of.

25 Similar letters of reference represent cor-
responding parts of the different figures, of
the accompanying drawing.

A A is the main frame, which is mounted
upon the axle I, the said axle being sup-
30 ported by the wheels B B, upon which the
machine is transported, or conveyed from
place to place. Upon this frame and wheels,
(which is in the nature of a truck) the fold-
ing ladder is fixed. The said ladder con-
35 sists of a series of ladders which fold or
slide into each other. Thus C is the first or
base ladder, which is fixed to the frame A,
at an angle as shown, or it may form a con-
tinuation of that frame, and be upon the
40 same plain with it. The inside of this first
ladder is grooved out, so as to receive the
ladder D, which slides up and down into it.
And the inside of the ladder D is grooved
out to receive the ladder E which bears the
45 same relation to D that D does to C. These
ladders are unfolded by means of ropes S S,
and R R. The ropes S S, pass over a loose
pulley in the top of each ladder, as shown at
d d, and c c. The ladder C being wider than
50 the ladder D, the rope R is made to pass
through the guides f f to keep it clear of the
rope s. These ropes, after having performed
the functions aforesaid are secured around

the pins b e fixed in each side of the lad-
der C C.

55

M is a platform secured to the upper end
of the ladder E, by means of a working
joint, whereby it may be thrown up on a
line with the ladder or be made to set on a
line with the horizon, as shown on the draw- 60
ing. The rope g is secured to this platform
as shown at M; this rope passes through
the guides N N, and from thence around
the drum O, by which it is hauled taut,
so as to operate as a brace, to support the 65
ladder and at the same time hold the plat-
form in position.

G' G are two rollers, the one of which is
fixed to the lower end of the ladder C and
the other to the upper end of the ladder, E, 70
and around these rollers an endless belt is
placed, which may be made of canvas, rope
or chain as the case may require, and which
is made to travel over the said rollers, by
the application of power to the crank H 75
which has hold of the axis of the roller G.

V V are receptacles in the nature of bags
fixed upon the outside of the endless apron
or belt. The object of these receptacles, is to
receive a person from off of the platform M, 80
and to convey the said person to the ground
which is done by "lowering, away" upon
the crank H. The rollers G' G should be
made with projections on their surfaces so
as to lay hold of the belt to prevent it from 85
slipping.

J J J are steps whereby a person may de-
scend from the belt to the frame A, from
whence it is but a short distance to the
ground. 90

L L' are braces fixed to the back end of
the main frame, to keep it from receding,
after the ladder has been placed in position
against a wall. These braces may be folded
up against the back end of the frame, as 95
shown at L, there being a hook fixed in the
frame to receive them.

K' K, are levers fixed to the main frame
for the purpose of depressing the back end
of it, and thereby raising the ladders, 100
against the side of a wall.

N N are small wheels fixed to the upper
end of the ladder to facilitate its advance
up the side of a wall, and H is the tongue
to which the power is applied for the pur- 105
pose of transporting the machine.

a a a Fig. 1 are braces to brace the sides of the ladder and to them is fixed, pieces of thin metal, (not shown on the drawing) to support the upper side of the belt E.

5 Let the ladder be in the position shown upon the drawing and let the platform be in the upper window of a building. A person coming upon the platform may lay hold of the brace *u* and from thence step into the
10 receptacle *v* and from thence be lowered to the ground.

Having thus described the construction

and operation of our invention, what we claim as new and desire to secure by Letters Patent, is—

The combination of the endless belt E, with the folding ladders, and the platform M in the manner described. 15

H. JOHNSTON.
WM. J. MATTHEWS.

Witnesses:

AMOS BROADNAX,
MICHL. O'KIEFFE.