

(No Model.)

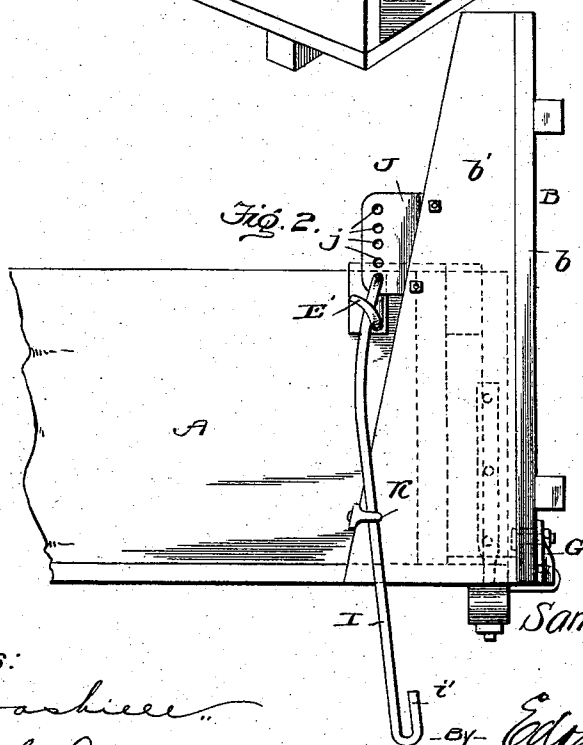
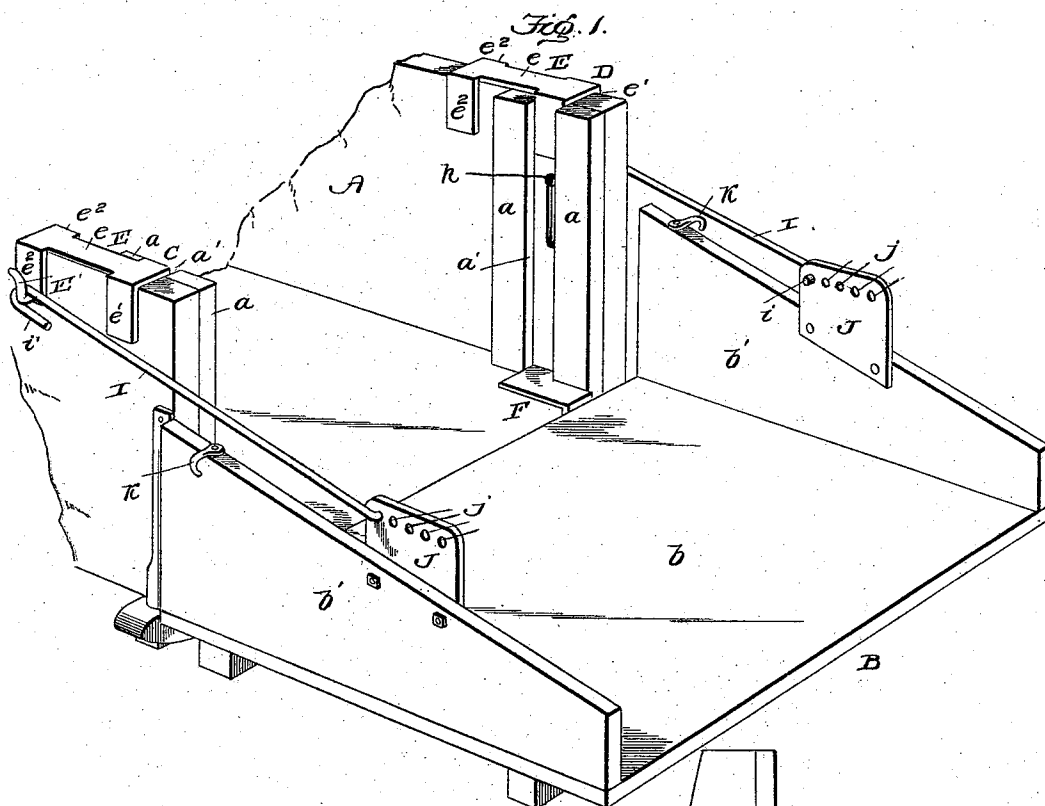
2 Sheets—Sheet 1.

S. FACKLER.

COMBINED END GATE AND SHOVELING BOARD.

No. 537,280.

Patented Apr. 9, 1895.



Witnesses:

Wm. C. Ashbee
H. J. Ashbee

Samuel Fackler.
Inventor

By *Edmond P. ...*
Attys.

(No Model.)

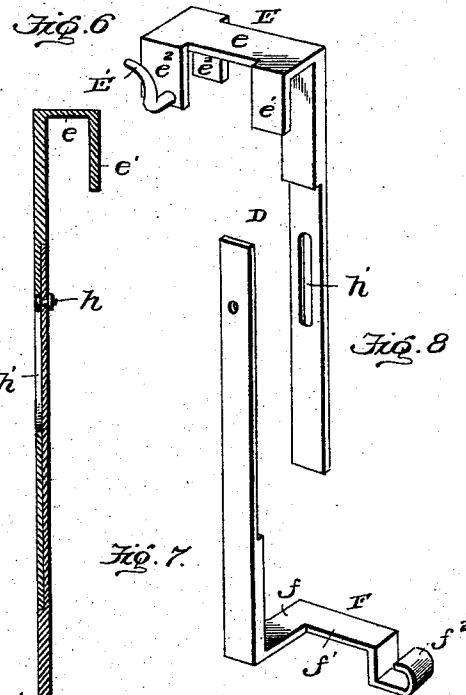
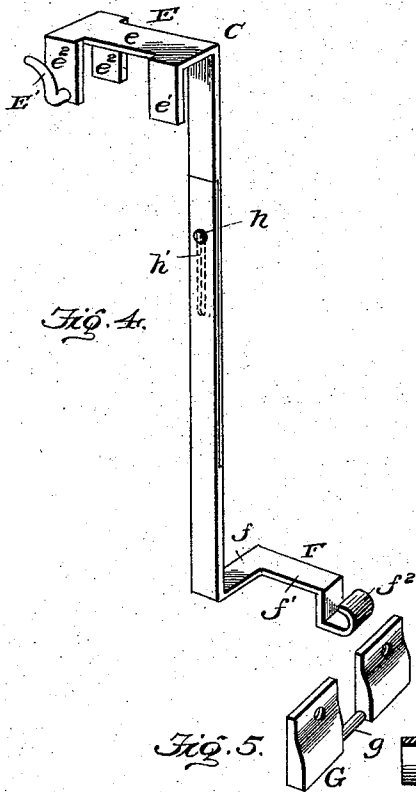
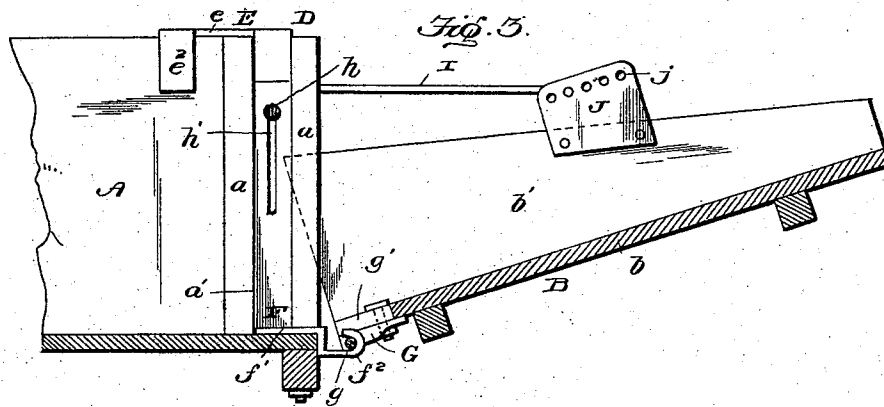
2 Sheets—Sheet 2.

S. FACKLER.

COMBINED END GATE AND SHOVELING BOARD.

No. 537,280.

Patented Apr. 9, 1895.



Witnesses
Wm. C. Ashlee
H. E. Remond

Samuel Fackler
Inventor

By *Edw. N. Pross*
Attys.

UNITED STATES PATENT OFFICE.

SAMUEL FACKLER, OF ASTORIA, ILLINOIS.

COMBINED END-GATE AND SHOVELING-BOARD.

SPECIFICATION forming part of Letters Patent No. 537,280, dated April 9, 1895.

Application filed October 4, 1894. Serial No. 524,939. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL FACKLER, a citizen of the United States, residing at Astoria, in the county of Fulton and State of Illinois, have invented certain new and useful Improvements in a Combined End-Gate and Shoveling-Board for Vehicles; and I do hereby declare the following to be a full, clear, and exact specification of the invention, such as will enable others skilled in the art to make and use the same.

The objects that I have in view in this invention are, first, to provide an improved end gate and shoveling board with means which can be universally applied or adapted to wagon bodies of different depths and widths without change in the construction of the hanging devices; secondly, to so construct the joint or connection between the hangers and gate that the latter will be drawn closely or fit tightly to the bottom of the wagon-body; third, to provide improved means whereby the board or gate may be sustained at the desired inclination or pitch and which devices are also capable of adjustment to lock or confine the board or gate, when raised to an upright position, securely in place, and, finally, to simplify and cheapen the construction so as to make it strong and durable and easy of adjustment and application.

With these and such other ends in view as pertain to my invention, it consists in the combination with a wagon body, of hangers applied to the sides of the wagon body so as to be retained thereon against movement and each hanger constructed at its upper end with a clamp to take over the upper edge of the side of the wagon body, to sustain the hanger under vertical stress of the end gate or board, and each hanger further provided with a foot which bears upon, and fits over the edge of, the bottom of the wagon body, said pendent foot provided with a hinge hook or eye, and hinge-plates fastened to the edge of an end gate or board and provided with pintles which are fitted in the hooks or eyes on the pendent feet of the hangers.

To enable the hangers to be applied to wagon bodies which vary in depth, and so that the clamps and feet of said hangers may properly bear upon the floor and top edges of the sides of such different sizes of wagon

bodies, I make the hangers extensible, that is to say, each hanger is made in two sections, one of which members is formed with the foot and hinge-eye and the other member is formed with the wagon-side-engaging clamp, and the meeting ends of said members are joined adj-justably together by a bolt which passes through a slot in one member and an opening in the other member, and said bolt is provided with a binding nut to hold the members of the hangers rigidly together after they have been adjusted to lengthen or shorten the hanger in order to properly fit the depth of the wagon box to which the hanger is to be applied in order to sustain the end gate or board.

My invention further consists in the combination with a wagon body, of the hangers applied thereto and each having its clamp provided with a hook-shaped projection on the outside of the wagon body, a gate hinged to and sustained by said hangers, plates fastened to the wings of the end gate, rods attached to said plates on the gate or board and arranged to fit over the projection of the hangers so that the hooks on the ends of the rods will engage with said projections when the gate is lowered so as to sustain the latter, and catches fastened to the wings of the end gate and arranged, when the gate is raised to an upright position, to receive the rods which are sprung around the hook-shaped projections whereby when the gate is raised the rods engage with the hanger projections and with the catches so as to lock the gate in such raised position; and the invention further consists in the novel combination of devices, and in the construction and arrangement of parts which will be hereinafter more fully described and defined by the claims.

To enable others to understand my invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view showing the end gate lowered substantially in line with the bottom of the wagon body. Fig. 2 is a side elevation showing the gate raised to its upright position and also illustrating the adjustment of the hooked rods to lock the gate in such raised position. Fig. 3 is a vertical

sectional view through the body and the end gate, showing the latter in an inclined pitched position relative to the bottom of the wagon body, and also showing the manner of applying the hanger to the inside of the wagon body. Fig. 4 is a detail perspective view of one hanger. Fig. 5 is a detail view of one hinge plate. Fig. 6 is a sectional view taken through the vertical shank of the hanger. Figs. 7 and 8 are detail views of the two members of the hanger, showing them separated.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates an ordinary wagon body or box, which may be of any suitable size and constructed in any suitable way, this wagon body being herein shown, not as a part of my invention, but to enable others skilled in the art to understand the method of applying and using my improvements.

B is the end gate and shoveling board, which consists of the bottom *b* and the tapered wings *b'*, *b'*, all united substantially together to produce a strong and durable structure, and said wings *b'* extending substantially at right angles to the bottom *b* so as to project from one side thereof. This gate or board is made somewhat wider than the wagon body to which it is to be applied in order that the wings *b'* may fit or embrace the outside of the body, and said gate B serves as a shoveling board when it is lowered to an inclined or substantially horizontal position, see Figs. 1 and 3, and as a gate to close the end of the wagon body when raised to the upright position shown by Fig. 2.

In this invention the gate or board B is not hinged directly to the wagon body, but it is supported thereon by hangers which permit the gate to be readily detached and which are themselves removable at will from the body of the wagon. These hangers are shown at C, D, in Fig. 1 of the drawings, and they are applied to the inner face of the respective sides of said wagon body A. To retain these hangers in place on the sides of the body A, and against displacement thereon along the inner faces of the sides, I apply, if they have not been previously fastened to the wagon body, to each side of the body A a pair of cleats or strips *a*, *a*, which are secured in any desirable way, in parallel positions so as to leave a groove or recess *a'* between the cleats or strips *a*, the cleats being made fast to the body at or near the rear open end thereof. Between the pair of cleats on each side of the body is fitted the vertical shank of one of the hangers, which shank lies within the exposed faces of the cleats and by which the hanger is held from lateral displacement; and to provide for the proper support of the hanger in a vertical direction against the stress or weight of the gate B and the load thereon, each hanger is formed at its upper end with a clamp E and at its lower end with a foot F, which parts are fitted to rest, respectively, on

the top edge of the wagon side and the rear edge of the wagon bottom.

The clamp E consists of the plate *e*, the pendent lug *e'*, the pair of lugs *e²*, *e²*, and the hook shaped projection *E'*. This plate *e* lies at one side of the vertical shank of the hanger, and extends a suitable distance in a direction at right angles to the shank. The lug *e'* depends from one edge of the plate *e*, opposite to the vertical hanger shank, and the pair of lugs *e²*, *e²*, are arranged to depend from the side edges of the plate at the free end thereof opposite to the lug *e'* and the hanger shank, all of these parts being preferably made or struck up from a flat piece of metal.

The projection *E'* is integral with or rigidly secured to one of the ears *e²* on the clamp E, and it has a horizontal limb which is joined to the ear *e²* and an upright limb which is outwardly inclined toward its free extremity. This clamp is designed to fit over and embrace the upper edge of the side of the wagon body, the plate *e* bearing upon the top edge of the side, and the ears *e'*, *e²*, to fit against the vertical faces of the side of said body A, whereby lateral displacement of the clamp is prevented on the side of the body, and the projection *E'* is caused to extend beyond the outside of the side of the body.

The foot F at the lower extremity of the shank of each hanger extends at right angles to the shank as at *f* and thence parallel to the plane of the shank as at *f'* to form a bearing surface which rests upon the bottom of the body A and extends to the rear edge of said body; and the rear extremity of said part *f'* terminates in a pendent hook or eye *f²*, the vertical rear side of which hook or eye is adapted to bear against the vertical face at the rear edge of the body A.

The hooks or eyes *f²* on the hangers C, D, form parts of the hinges or joints by which the gate B is connected to the wagon body, and in said hooks are fitted the pintles *g*, *g*, on the hinge plates G, G, which are fastened to the inner or bottom edge of the gate. In order to bring the inner hinged edge of the gate close to the bottom of the wagon body and to form a close joint between said bottom of the body and the gate both when the gate is lowered and raised, I have provided the notches *g'*, on the lower or inner edge of the board or gate, and the plates G are fastened to the gate so that the pintles *g* span these notches or recesses, whereby the hooks or eyes *f²* of the hanger feet are caused to fit in the notches or recesses and the lower inner edge of the gate is brought close up to the rear edge of the body bottom.

It will be evident that the hangers B, C, can be applied to wagon bodies of any width by simply fastening cleats *a*, *a*, to the inner sides thereof, if said cleats have not been previously supplied to the wagon body; then fitting the shanks of the hangers between the cleats and so that the clamps E of the hangers will be over the top edges of the body sides, and the

feet F will rest upon and project over the rear edges of the body bottom; and the gate or board B is made of such width that its wings will embrace the sides of the body, and its hinge plates are so fastened thereto that the pintles will fit in the hooks or eyes of the hangers; but to adapt the hangers to be properly fitted to wagon bodies which vary in depth or height from the bottom to the top edges of the sides, I make these hangers extensible in the direction of their length so that the distance between the clamp E and the foot F of each hanger can be made to correspond to the depth or height of the side of the body A. To the accomplishment of this end, I make the hanger in sections, one section consisting of a bar or part of the shank and the foot F and the other section consisting of the shank bar and the clamp E. These bars are designed to lap one another to produce the vertical shank of the hanger, and the overlapping bars of the shank are adjustably fastened together by a bolt or bolts, *h*. This bolt passes through a slot *h'* formed in the bar of the upper member; and through an aperture in the bar of the other member; said bolt provided with a binding nut to draw the bolt and shank bars tightly together after the shank has been adjusted—lengthened or shortened—to accommodate the clamp and foot of the hanger to the wagon body.

To sustain the gate in its lowered position, and to enable the same to be held in various inclined or pitched positions, I have provided the rods I, I, and the plates J J. The plates J, J, are fastened, as by bolts, to the wings *b'* of the gate at a suitable place between the ends of the wings, and so that one edge of each plate projects beyond the edge of the wing to which the plate is fastened; and in this projecting edge of the plate is formed a series of apertures *j*, in either one of which may be fitted the prong *i* formed on one end of the rod I that is designed to engage with the plate J. The rods I are fitted over the hooks or projections E' of the hanger clamps and the rods are provided with hooks *i'* at their free ends which, when the gate is lowered, engages with said projections E' so as to sustain the gate in its lowered position, which position of the gate is well adapted to serve as a shoveling board in removing the load from the vehicle. When the prongs *i* of the sustaining rods are fitted in holes of the plates J near the inner ends thereof toward the hinge joints between the gate and hangers, the gate can be lowered to a position substantially in line with the bottom of the body as indicated in Fig. 1; but in order to give the gate a pitch or incline when lowered, the rods I are adjusted so that the prongs *i* thereof engage with the perforated plates farther away from the projections E' and the hinges. See Fig. 3. By adjusting the rods to engage the plates J at different points the board can be given the desired pitch or incline suitable

for shoveling the load from the body, and at the same time the board or gate fits closely to the body bottom because hinge eyes *f*² fit in the notched edge of the board or gate.

Catches K, K, are fastened to the sloping edges of the tapered wings *b'* near the wide ends thereof, and these catches project beyond the outside faces of the wings so as to enable the sustaining rods I to be sprung over them when the gate is raised. As the gate is turned up to a vertical position against the open end of the body A, the rods I are turned on the prongs *i* and moved around the projections E' so that the rods assume a vertical position with the gate, and as the rods are made of metal, they have a certain degree of elasticity which enables them to be sprung around the catches, so that the rods engage the projections E', the catches K and the plates J, whereby the rods serve to lock or confine the gate in its raised position.

It is thought that the operation and advantages of my improved end gate and shoveling board will be readily understood and appreciated by those skilled in the art from the foregoing description taken in connection with the drawings without further explanation.

I am aware that changes in the form and proportion of parts and details of construction of the devices herein shown and described as an embodiment of my invention may be made by a skilled mechanic without departing from the spirit or sacrificing the advantages of my invention, and I therefore reserve the right to make such modifications and alterations as fairly fall within the scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a wagon body, of vertical hangers each provided at its upper end with a clamp E and at its lower end with a rearwardly extending foot F, and an end-gate hung to the feet F of said hangers, substantially as and for the purposes described.

2. The combination with a wagon body, and the cleats thereon, of the vertical hangers each having its shank fitted between a pair of cleats on said wagon-body, each hanger provided at its upper end with a laterally-projecting clamp E, and further provided, at the lower end, with the rearwardly-extending foot F, and an end gate hung to said feet of the hangers, substantially as and for the purposes described.

3. The vertical hangers provided with the rearwardly-extending feet F which are formed with the pintle-receiving loops, in combination with a wagon body over the rear edge of which the feet F are fitted, an end-gate, and hinge-plates provided with the pintles which are fitted in the loops of said hanger-feet, substantially as and for the purposes described.

4. The combination with a wagon body, and an end gate, of the perforated plate J attached

to said end gate, the fixed projection E' on the wagon body, the catch K fastened to the end gate at one side of the plate J, and the rod I adjustably and pivotally attached to the plate J and adapted, when the gate is closed, to be sprung around the catch K, substantially as described.

5. The combination with a body, of hangers provided with feet and with clamps which carry the projections E', a gate hinged to the feet and provided with the catches K, and rods attached to the gate and adapted to engage the projections E' and the catches K, substantially as described.

6. An end gate hanger comprising the vertical shank, a foot F which extends beyond the line of the shank, and a clamp E arranged

at one side of the shank, substantially as described, for the purposes set forth.

7. An extensible end-gate hanger made in sections which are adjustably held together, one section provided with a clamp, and the other section having a bearing foot, substantially as and for the purposes described.

8. The combination with a body having vertical retainers of extensible hangers fitted between said cleats and each having a clamp at its upper end and a bearing foot at the lower end, and a gate hinged to said feet of the hangers, substantially as described.

SAMUEL FACKLER.

Witnesses:

THOMAS F. McLAREN,
JAMES ROLAND.