No. 633,648. Patented Sept. 26, 1899.

C. W. KAUFFMAN.

ATTACHMENT FOR WHEELBARROWS.

(Application filed May 18, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

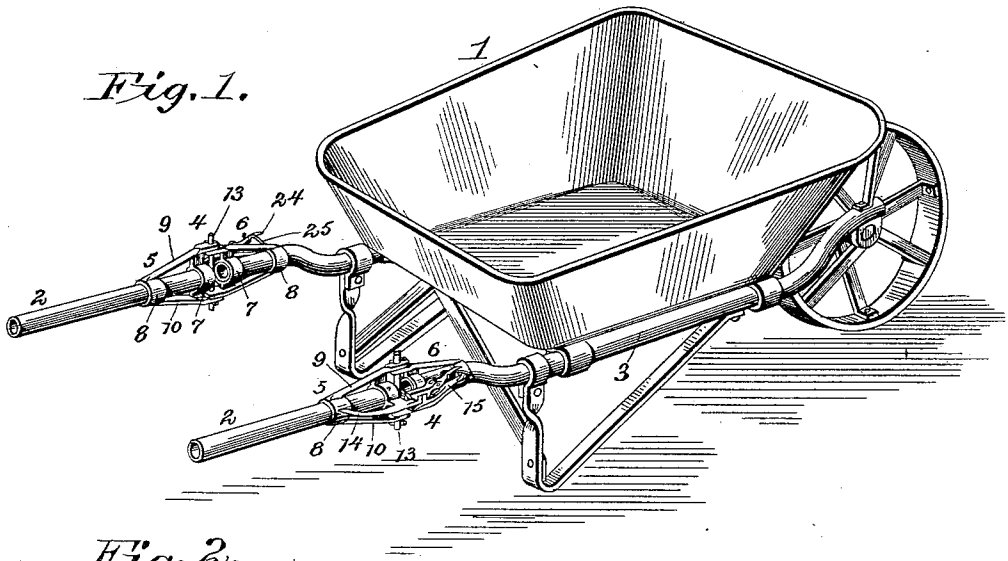


Fig. 2.

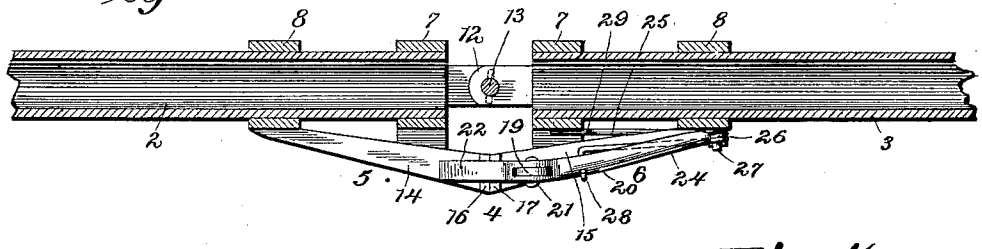


Fig. 3.

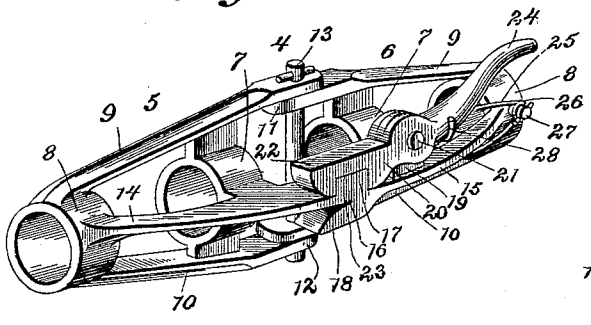
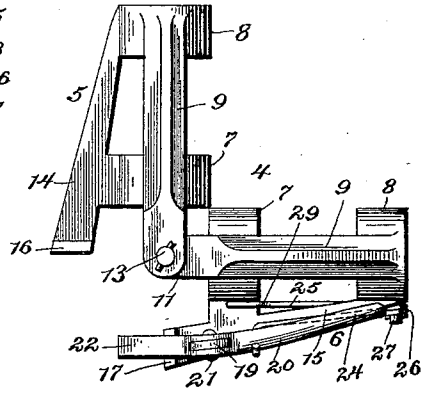


Fig. 4.



Witnesses
Howard D. Orr.
H. C. Riley

Charles W. Kauffman Inventor,
By his Attorney,
E. G. Siggers

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 633,648. Patented Sept. 26, 1899.

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(No Model.) 2 Sheets—Sheet 2.

Fig. 5.

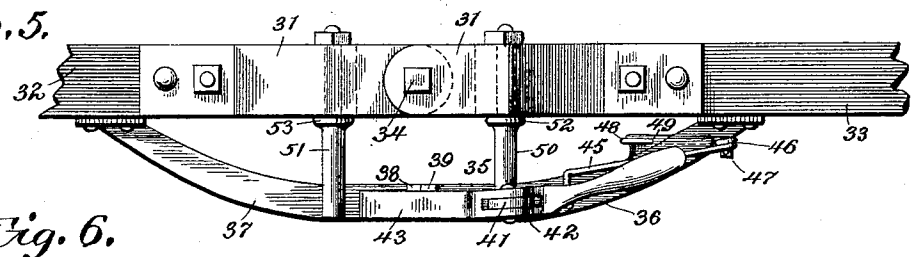


Fig. 6.

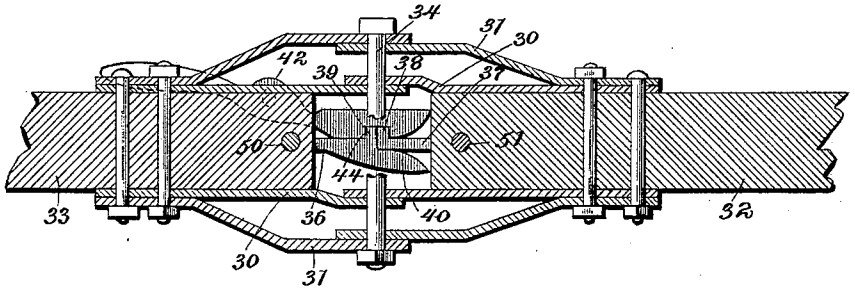


Fig. 7.

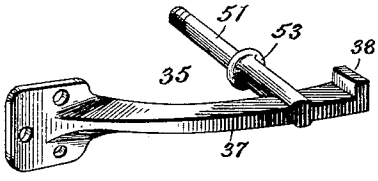


Fig. 8.

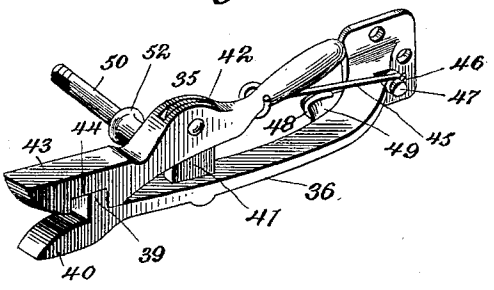


Fig. 9.

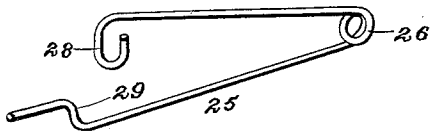
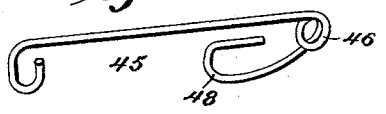


Fig. 10.



Witnesses
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T. J. Riley

Charles W. Kauffman, Inventor,
By his Attorneys,
E. G. Siggers

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES W. KAUFFMAN, OF DEADWOOD, SOUTH DAKOTA.

ATTACHMENT FOR WHEELBARROWS.

SPECIFICATION forming part of Letters Patent No. 633,648, dated September 26, 1899.

Application filed May 18, 1899. Serial No. 717,326. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. KAUFFMAN, a citizen of the United States, residing at Deadwood, in the county of Lawrence and State of South Dakota, have invented a new and useful Attachment for Wheelbarrows, of which the following is a specification.

The invention relates to improvements in attachments for wheelbarrows.

The object of the present invention is to improve the construction of wheelbarrows and to provide a simple, inexpensive, and efficient device designed to be applied to wheelbarrows for use in mines and other places and capable of enabling the handles of a wheelbarrow to be compactly folded against the body portion thereof, so that the wheelbarrow may be loaded in a comparatively small space without the handles being in the way of the workmen.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a wheelbarrow provided with devices constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of one of the handle-bars. Fig. 3 is an enlarged detail perspective view of one of the devices. Fig. 4 is a plan view of the same, the sections or members being arranged at an angle to each other and illustrating the arrangement of the parts when the handles are folded. Fig. 5 is an enlarged plan view illustrating a modification of the invention. Fig. 6 is a longitudinal sectional view of the same. Figs. 7 and 8 are detail perspective views of the members of the locking device of the modification. Figs. 9 and 10 are detail perspective views of the springs for holding the locking-levers in their engaging positions.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a wheelbarrow having the handle portions 2 of its side bars 3 connected with the rear portion thereof by a hinge 4, whereby the handles of the wheelbarrow are adapted to be folded across the front of the body portion thereof in order to arrange them so that they will not be in the way when it is necessary to fill the wheelbarrow in a place where there is little space. The hinge 4, which is designed for wheelbarrows having handle or side bars constructed of tubular metal, is composed of sections or members 5 and 6, having sockets for the reception of the adjacent ends of the front and rear portions of the side and handle bars and secured to the same by suitable fastening devices. The sections or members, which are of skeleton form, are composed of inner and outer rings or bands 7 and 8 and upper and lower longitudinal connecting-bars 9 and 10, having their inner ends extended and perforated to form eyes 11 and 12 for the reception of a pintle 13. The pintle 13, which may consist of a bolt, pin, or any other suitable pivot, permits the sections to be turned to a position at right angles to each other, as illustrated in Fig. 4 of the accompanying drawings, to fold the handles. The skeleton sections or members of the hinge are slightly tapering, as shown, the inner rings or bands being provided with upper and lower webs or flanges, which offset the top and bottom side bars from them.

The leaves or sections of the hinge are retained in alinement to hold the handles of the wheelbarrow in operative position by locking devices each consisting of longitudinal side bars 14 and 15, connected with the rings or bands and provided at their adjacent ends with lugs 16 and 17, and the bar 15 is provided with a supporting lip or flange 18, having a beveled upper face and extending beneath the adjacent end of the bar 14. The bar 15 is provided with a perforated ear 19, on which is fulcrumed a spring-actuated locking-lever 20, provided between its ends with a slot for the reception of the perforated ear and secured to the same by a pivot 21. The engaging end 22 of the locking-lever is beveled to enable it to interlock with the lug 16 automatically when the sections or leaves of the hinge are closed, and it is provided with a recess 23, having square shoulders at its ends and receiving the lugs 16 and 17, whereby the bars are securely held together. The other end 24 of the locking-lever is shaped into a handle and is engaged by one arm of a substantially V-shaped spring 25, which holds the lever in engagement with the lugs

of the bars 14 and 15. The spring 25, which is substantially V-shaped, is provided at the apex or bend with a spring-coil 26, forming an eye and receiving a stud 27 of the outer end of the adjacent leaf or section of the hinge. One arm of the spring is provided with a substantially U-shaped bend 28, which engages beneath the inner portion of the handle-arm of the lever, and the outer arm of the spring extends beneath the bar 15 and is angularly bent at 29 and engaged with the web or flange which connects the bar 15 with the inner ring or band of the adjacent leaf or section of the hinge. By depressing the handle end of the locking-lever the leaves or sections of the hinge may be arranged at right angles to each other to fold the handles of the wheelbarrow, and as the beveled engaging end of the locking-lever and the beveled lip or flange 18 form a flaring mouth the locking device is rendered automatic and the locking-lever will engage the lug 16 of the bar 14 when the handles are unfolded and brought in alinement with the rear portions of the side or handle bars.

The device is adapted to be applied to wheelbarrows having wooden handles, and the latter may be cut off close to the body portion of the wheelbarrow and be connected with the rear portions by the hinge hereinafter described. This hinge comprises inner and outer leaves 30 and 31, arranged in pairs and bolted or otherwise secured to the front and rear portions 32 and 33 of the handle or side bars, and their adjacent ends are perforated to form eyes for the reception of vertical pintles 34, which may consist of bolts or other suitable pivots similar to the pintles of the skeleton hinges heretofore described. The outer leaves 30 are angularly bent to offset their eyes from the inner ends of the front and rear portions 32 and 33, which are held in alinement by a locking device 35, constructed substantially the same as that heretofore described.

The locking device 35 is composed of bars 36 and 37, slightly curved to offset them from the handle-bars and having their outer ends enlarged and perforated for the reception of suitable fastening devices for securing them to the front and rear portions 32 and 33 of the side bars. The bar 37 is provided at its inner end with a lug 38, and the other bar 36 has a corresponding lug 39 and is provided with a lip or flange 40, extending beneath the bar 37, similar to the lip or flange of the locking device heretofore described. The said bar 36 is provided with a perforated ear 41, on which is fulcrumed a locking-lever 42, having a beveled engaging end 43, provided with a recess 44 to engage the lugs 38 and 39. The other arm of the locking-lever constitutes a handle and is engaged by a spring 45, which is substantially V-shaped, being provided at its apex or bend with an eye 46 to receive a stud 47 of the bar 36. One arm or side of the spring 45 is provided at its outer end with a substantially V-shaped bend which engages beneath the handle portion of the locking-lever, and the other arm or side is provided with a substantially U-shaped bend 48 and engages a grooved enlargement 49, formed on the bar 36, near the outer end thereof. The bars 36 and 37 are supported near their inner ends by transverse pins 50 and 51, preferably formed integral with the said bars 36 and 37, and provided between their ends with annular flanges or shoulders 52 and 53 for engaging the outer faces of the handle-bars. The terminals of the pins 50 and 51 are threaded for the reception of nuts, but any other suitable means may be employed for securing the pins in perforations of the front and rear portions 32 and 33 of the side or handle bars of the wheelbarrow.

The invention has the following advantages: The device, which is simple and comparatively inexpensive in construction, is adapted to be readily applied to the side or handle bars of a wheelbarrow and is capable of enabling the handles to be folded compactly against the front of the body portion of a wheelbarrow to enable the latter to be readily filled at places where there is comparatively little space. The handles are adapted to be readily unfolded and arranged in operative position, and the locking devices are automatic in their operation. The invention is applicable to both wooden and metal handle-bars and may be applied to wheelbarrows now in use by simply cutting off the handles and connecting the same with the body of the wheelbarrow by the hinges before described.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention, such as varying the form of the springs and the hinges for connecting the folding handle-bars with the body of a wheelbarrow.

What is claimed is—

1. A device of the class described, comprising a hinge designed to connect a folding handle with the body portion of a wheelbarrow, and a locking device composed of two bars rigid with the leaves or sections of the hinge, and a locking-lever mounted on one of the bars and engaging the other, whereby the leaves or sections of the hinge are held in alinement, substantially as described.

2. A device of the class described comprising a hinge designed to connect a folding handle-bar with the body portion of a wheelbarrow, and a locking device composed of two bars extending longitudinally of the leaves or sections of the hinge and provided at their adjacent ends with lugs, and a locking-lever mounted on one of the bars and engaging the lugs, substantially as described.

3. A device of the class described comprising a hinge, and a locking device composed of two bars provided at their adjacent ends with

lugs, one of the bars having a lip to receive the other bar, and a locking-lever mounted on the bar having the lip, and provided with a recess receiving the lugs, whereby the hinge is held with its sections in alinement, substantially as described.

4. A device of the class described comprising a hinge designed to connect a folding handle with the body portion of a wheelbarrow, and a locking device composed of longitudinal bars provided at their adjacent ends with lugs, one of the bars having a lip extending beneath the other bar, a lever fulcrumed on the bar having the lip and having its engaging end opposite the same, and a spring holding the lever in engagement with the lugs, said spring being subtantially V-shaped and composed of two sides detachably interlocked with the lever and with the adjacent bar, substantially as described.

5. A device of the class described comprising a hinge composed of skeleton leaves or sections having inner and outer bands or rings, and connecting side bars extended to form eyes and receiving the pintle of the hinge, and a locking device consisting of bars carried by the sections or leaves, and means for detachably connecting the bars, substantially as described.

6. A device of the class described comprising a hinge composed of two skeleton leaves or sections having inner and outer bands or rings, and connecting-bars extended to form eyes for the reception of the pintle of the hinge, and a locking device consisting of bars connecting the inner and outer rings or bands, and a locking-lever detachably securing the adjacent ends of the bars together, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES W. KAUFFMAN.

Witnesses:

EDWARD MCDONALD,

LUTE B. EOSLEY.