S. BOLIN & A. JANSON.

SHOVEL.

APPLICATION FILED JAN. 24, 1912.

1,029,967. Patented June 18, 1912.

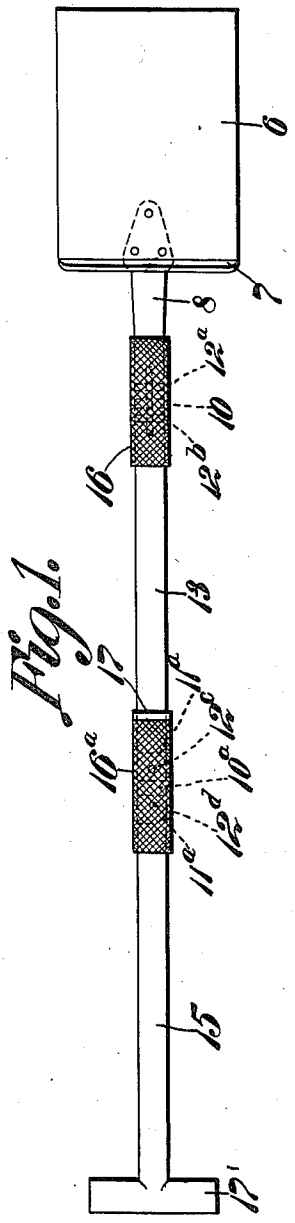

Fig. 1.

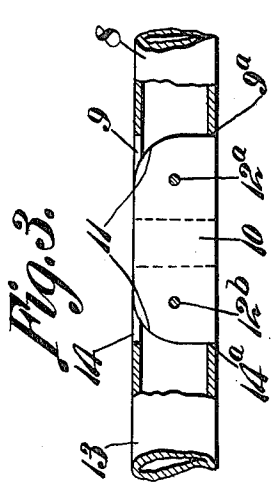

Fig. 3.

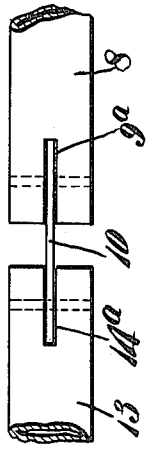

Fig. 4.

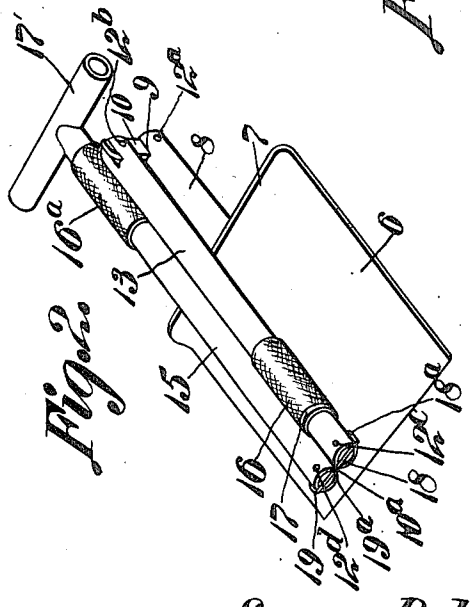

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE

SIMON BOLIN AND AXEL JANSON, OF MENOMINEE, MICHIGAN.

SHOVEL.

1,029,967. Specification of Letters Patent. Patented June 18, 1912.

Application filed January 24, 1912. Serial No. 673,203.

To all whom it may concern:

Be it known that we, SIMON BOLIN and AXEL JANSON, citizens of the United States, residing at Menominee, in the county of Menominee, State of Michigan, have invented a new and useful Shovel, of which the following is a specification.

This invention relates to shovels, and it is the object of this invention to provide a collapsible or knockdown shovel, which may be compactly folded to be carried in the tool boxes of automobiles or the like.

It is a further object of the present invention to provide a collapsible or knockdown shovel of this character which shall be simple, durable, inexpensive, and substantial in construction, and which shall be efficient in use.

To the above and other ends, this invention is embodied in the novel construction and combination of parts elicited in the following description and pointed out in the appended claim, reference being had to the accompanying drawings wherein the invention is delineated in its preferred embodiment, and wherein:

Figure 1 is a plan view of the shovel. Fig. 2 is a perspective view thereof in collapsed or folded position. Fig. 3 is a fragmental detail in elevation of one of the joints between the handle sections, parts being shown in section, and Fig. 4 is a plan view thereof.

Referring in detail to the drawings, the present shovel embodies a sheet metal shovel blade 6 having the inner end thereof curved upward as designated by the numeral 7, and a tubular outer handle section 8 is secured to the inner end of the shovel blade 6 by any suitable means. The handle of the shovel comprises the said outer handle section 8 secured to the shovel blade and an intermediate and an inner handle section designated by the respective reference numerals 13 and 15. The handle sections 8, 13, and 15 are constructed of suitable steel tubing or the like. The outer and intermediate handle sections have the complementary slots 9 and 9^a and 14 and 14^a at their adjoining ends, which slots lie in a longitudinal plane at right angles to the plane of the shovel blade, and the intermediate and inner handle sections have the complementary slots 18 and 18^a and 19 and 19^a in their adjoining ends, which slots lie in a longitudinal plane at right angles to the plane of the former slots. The respective links 10 and 10^a are pivoted in the slots of the adjoining ends of the handle sections to connect the respective sections together. One end of the link 10 is pivoted between the slots 9 and 9^a of the handle section 8 by means of a rivet or the like 12^a and the other end of the said link 10 is pivoted between the slots 14 and 14^a of the handle section 13 by means of a similar pivotal member 12^b, the upper corners of the link 10 being rounded to permit the handle section 13 to fold over the handle section 8 and the shovel blade 6. The lower corners of the link 10 are adapted to seat or abut against the inner ends of the slots 9^a and 14^a when the handle sections 8 and 13 are swung in alinement. The link 10^a, both of the links being formed of plates of sheet metal, has one end thereof pivoted within the slots 18 and 18^a of the handle section 13 by means of the rivet or the like 12^c and the other end of the said link 10^a is pivoted within the slots 19 and 19^a of the handle section 15 by means of a similar member 12^d. The details of the joint between the intermediate handle section 13 and the inner handle section 15 are identical or similar with the joint between the handle section 13 and the outer handle section 8, and need not be again described in detail. The respective knurled tubes or sleeves 16 and 16^a are slidable on the handle sections 13 and 15 and when the handle sections are swung into alinement, the said sleeves are adapted to slide over the respective joints between the outer and intermediate and the intermediate and inner handle sections and thereby brace the handle to adapt the shovel for use.

A collar 17 is secured adjacent the inner end of the intermediate handle section 13 and forms a stop against which the sleeve 16^a is adapted to strike when the said sleeve is slid over the joint between the intermediate and the inner handle sections, and the outer handle section 8 is tapered inwardly whereby when the sleeve 16 is slid over the joint between the outer and intermediate handle sections, the said sleeve binds on the said tapered handle section 8 to retain the sleeve 16 normally over the joint between the outer and intermediate handle sections when the shovel is in use.

A hand-hold or hand grip 17′ is secured to the inner end of the inner handle sec-

tion 15, the said hand-hold or hand grip being tubular.

In use, as stated above, when the handle sections are swung into alinement, the sleeves 16 and 16ª may be slid over the joints between the respective handle sections to brace the handle, whereby the shovel may be used in the customary manner, the handle sections being spaced apart at their adjoining ends when in alinement. The handle is also braced or made substantial by means of the flat links 10 pivoted within the slots in the adjoining ends of the handle sections and which links abut against the inner ends of the respective slots when the handle sections are swung into alinement. When the shovel is not in use, the same may be compactly collapsed or folded by sliding the sleeves 16 and 16ª inwardly upon the respective handle sections 13 and 15, in which event the intermediate handle section 13 may be folded over the handle section 8 and the shovel blade 6, and the handle section 15 may be folded against the side of the handle section 13 and in a plane with the said handle section 13 parallel to the plane of the shovel blade, the hand-hold or hand grip 17′ folding over the end of the intermediate handle section 13. In this manner the shovel may be compactly or conveniently folded or collapsed to be carried in the tool box of an automobile, or for other purposes, this shovel being particularly adapted for use in connection with automobiles, but it being understood that the same is susceptible of other uses, as will be apparent. Particular stress is applied to the manner in which the handle sections fold together and upon the shovel blade, and upon the simplicity of this construction of collapsible or foldable shovel. Said shovel is durable and substantial in construction and is inexpensive to manufacture, and also efficient in its use. It is also understood that this shovel is susceptible of alterations or deviations in its details within the scope of the appended claim without departing from the spirit of the invention.

Having described the invention, what is claimed as new is:

In a shovel, a shovel blade, an outer inwardly tapered tubular handle section secured thereto, an intermediate and an inner tubular handle section, the outer and intermediate handle sections having slots in their adjoining ends lying in a longitudinal plane at right angles to the plane of the shovel blade and the intermediate and inner handle sections having slots in their adjoining ends lying in a longitudinal plane at right angles to the plane of the former slots, links pivoted in the said slots to connect the sections together and whereby the intermediate and inner handle sections are foldable over the shovel blade and in a plane parallel thereto, and the said links being adapted to abut against the inner ends of the slots when the handle sections are in alinement, the handle sections being spaced apart at their adjoining ends when in alinement, a collar secured to the intermediate handle section adjacent its inner end, and sleeves slidable on the intermediate and inner handle sections to slide over the joints between the respective sections when the sections are in alinement and adapted to bind on the tapered outer handle section and strike the said collar, respectively, when slid over the joints.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

SIMON BOLIN.
AXEL JANSON.

Witnesses:
JOHN E. JONES,
ELEANOR JONES.