No. 684,426. Patented Oct. 15, 1901.

A. HARVEY & A. MITCHELL.

FLOOR RAISING TOOL.

(Application filed June 5, 1901.)

(No Model.)

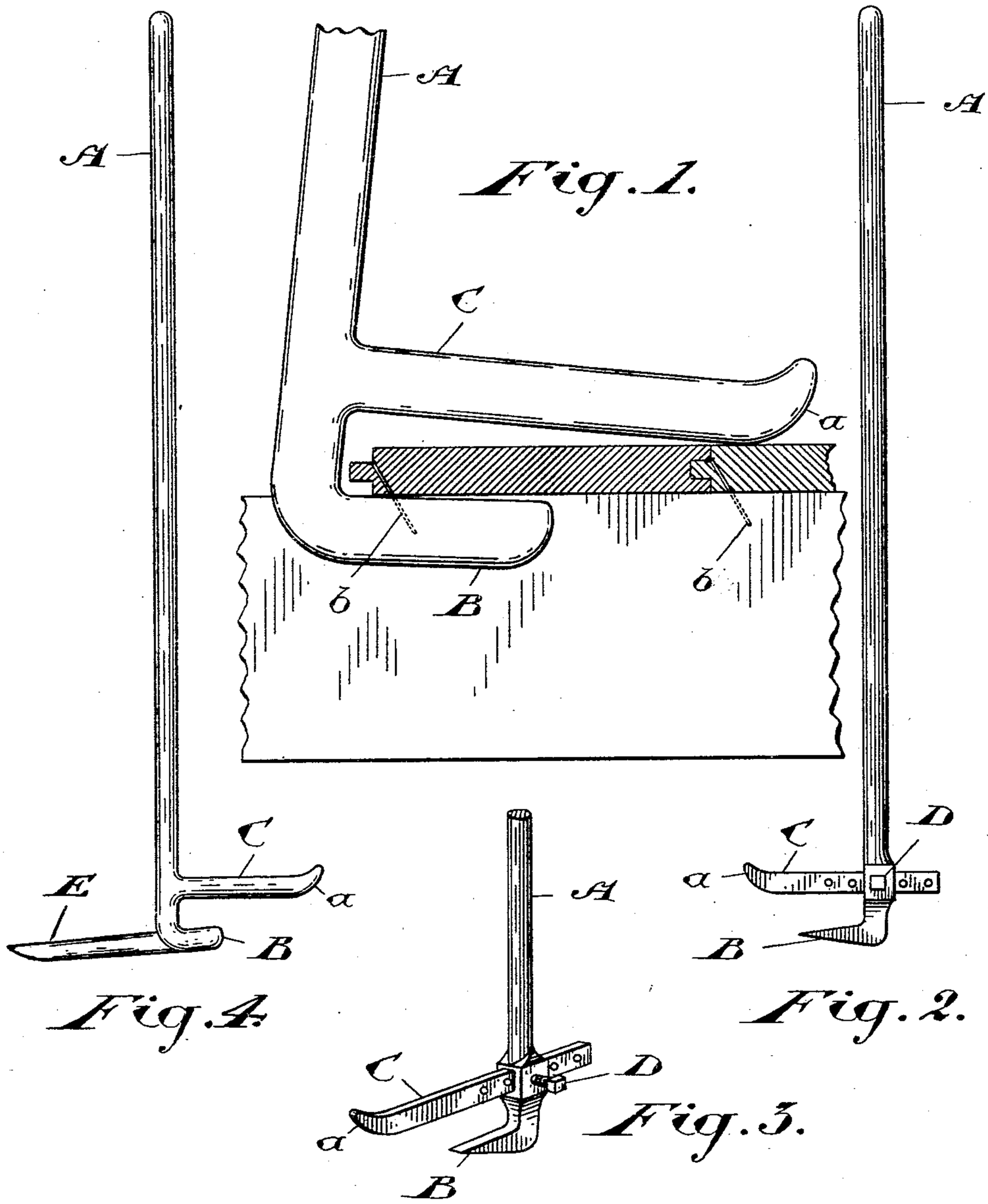

Fig. 1.

Fig. 4.

Fig. 3.

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

ARTHUR HARVEY AND ALEXANDER MITCHELL, OF TORONTO, CANADA.

FLOOR-RAISING TOOL.

SPECIFICATION forming part of Letters Patent No. 684,426, dated October 15, 1901.

Application filed June 5, 1901. Serial No. 63,249. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR HARVEY, actuary, and ALEXANDER MITCHELL, builder, of the city of Toronto, in the county of York, Province of Ontario, Canada, have invented certain new and useful Improvements in Floor-Raising Tools, of which the following is a specification.

The object of our invention is to devise means for lifting tongue-and-grooved flooring or roofing without injury to the tongues and grooves; and it consists, essentially, of a bar provided with a projection adapted to engage the under side of a board at or near its outer edge, and a fulcrum-arm adapted to engage the upper side of the next board close to the junction of the two boards, substantially as hereinafter more specifically described and then definitely claimed.

Figure 1 is an elevation of our tool in its simplest form. Fig. 2 is a similar view showing an elaborated form of the same. Fig. 3 is a perspective view of the lower end of the tool shown in Fig. 2. Fig. 4 is an elevation of a modification.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is a long bar, preferably of metal. Its lower end has the lateral projection B formed on or secured thereto. Above this lateral projection and in the same plane is a laterally-extending fulcrum-arm C, formed on or secured to the bar. The outer end of this fulcrum-arm is preferably curved upwardly, as indicated at *a*, so that it will rock on a board without injuring it.

Tongue-and-grooved flooring, as shown in Fig. 1, is usually nailed diagonally through the edge of the board, the nail *b* being driven through the angle where the tongue joins the edge of the board, the other edge of the board being held down by the engagement of the grooves therein with the tongue of the adjoining board. When an attempt is made to raise such a floor with a pickax or crowbar in the ordinary manner, the tongues are frequently split off and also the portion of the board at the under side of the groove in its opposite edge. To raise tongue-and-grooved flooring, it is necessary to lift at the free edge only of the board, while the edge of the adjoining board is firmly held down in place, so as to form an axis on which the board being lifted may swing. When our tool is being used, the lateral projection B is slipped beneath the free edge of the board and the end of the fulcrum-arm rested on the upper side of the adjacent board close to the junction of the two boards. By pulling on the bar the outer edge of the plank may be lifted, swinging on the edge of the adjacent plank, which is firmly held down by the end of the fulcrum-arm. The nails are thus drawn very nearly in the direction in which they have been driven and pulled out without splitting off the tongue of the board. As the lift has been altogether at the outer edge of the plank the wood on each side of the groove engaging the tongue of the next plank is left entirely uninjured.

As floor-boards vary in width, it is therefore necessary either to provide tools with fulcrum-arms of different lengths or to make the fulcrum-arm adjustable. A tool with an adjustable fulcrum-arm is shown in Figs. 2 and 3. A hole is formed in the bar adjacent to the projection B, and through this the fulcrum-arm is made to slide longitudinally. It is held in any desired position by means of a set-screw D, which is screwed through the side of the bar and preferably engages in one of several shallow holes formed in the side of the fulcrum-arm. By the adjustment thus provided the tool may be adapted to work on any width of flooring.

When the tool is formed with a blunt-ended projection B, as shown in Figs. 1 and 4, the tool is not adapted to raise double flooring, in which the boards are put on in two layers. To raise such flooring, we make the projection B wedge-shaped, as shown in Figs. 2 and 3, so that with the blows of a hammer the projection may be driven in between the two thicknesses of the boards and the tool then used in the ordinary way.

From the description above given it will be seen that we have devised a tool which will raise tongue-and-grooved flooring without injury to the tongues and grooves, so that when dismantling or wrecking a house the flooring is obtained in such condition that it may be used again, thus adding largely to its value.

In Fig. 4 is shown an arm E, extending outwardly and downwardly. By the addition of this arm the tool may be adapted to a great variety of uses. The fulcrum-arm C being above the arm E, the latter lifts very satisfactorily.

What we claim as our invention is—

1. As a floor-raising tool, a bar provided at one end with a projection adapted to engage the under side of a board at or near its outer edge, and a fulcrum-arm adapted to engage the upper side of the next board close to the junction of the two boards, substantially as described.

2. As a floor-raising tool, a bar provided at one end with a laterally-extending wedge-shaped projection adapted to engage the under side of a board, and adjacent to the said projection with a fulcrum-arm extending laterally in the same vertical plane as the aforesaid projection, the latter extending sufficiently far over the flooring to form a lever or fulcrum, substantially as described.

3. As a floor-raising tool, a bar provided at one end with a laterally-extending wedge-shaped projection and adjacent to the said projection with a fulcrum-arm extending laterally in the same plane as the aforesaid projection, and longitudinally adjustable in a hole formed in the bar, substantially as described.

4. As a floor-raising tool, a bar provided at one end with a laterally-extending projection and adjacent to the said projection with a fulcrum-arm extending laterally in the same plane as the aforesaid projection, and longitudinally adjustable in a hole formed in the bar, substantially as described.

5. As a floor-raising tool, a bar provided at one end with a projection adapted to engage the under side of a board at or near its outer edge, and a fulcrum-arm with an upwardly-curved end adapted to engage the upper side of the next board close to the junction of the two boards, substantially as described.

6. As a lifting-tool a bar provided at one end with a projection adapted to engage the under side of an object to be lifted and a fulcrum-arm extending laterally from the opposite side of the bar above the aforesaid projection, substantially as described.

7. As a floor-raising tool, a bar provided at one end with a projection adapted to engage the under side of a board at or near its outer edge; a fulcrum-arm adapted to engage the upper side of the next board close to the junction of the two boards; and a projection extending laterally from the bar below and from the side opposite to the fulcrum-arm, substantially as described.

Toronto, May 22, 1901.

ARTHUR HARVEY.
ALEXANDER MITCHELL.

In presence of—
J. EDW. MAYBEE,
A. J. COLBOURNE.