

No. 679,025.

Patented July 23, 1901.

C. S. KEMPER.
FURROW OPENER ATTACHMENT.

(Application filed May 11, 1901.)

(No Model.)

FIG. 1

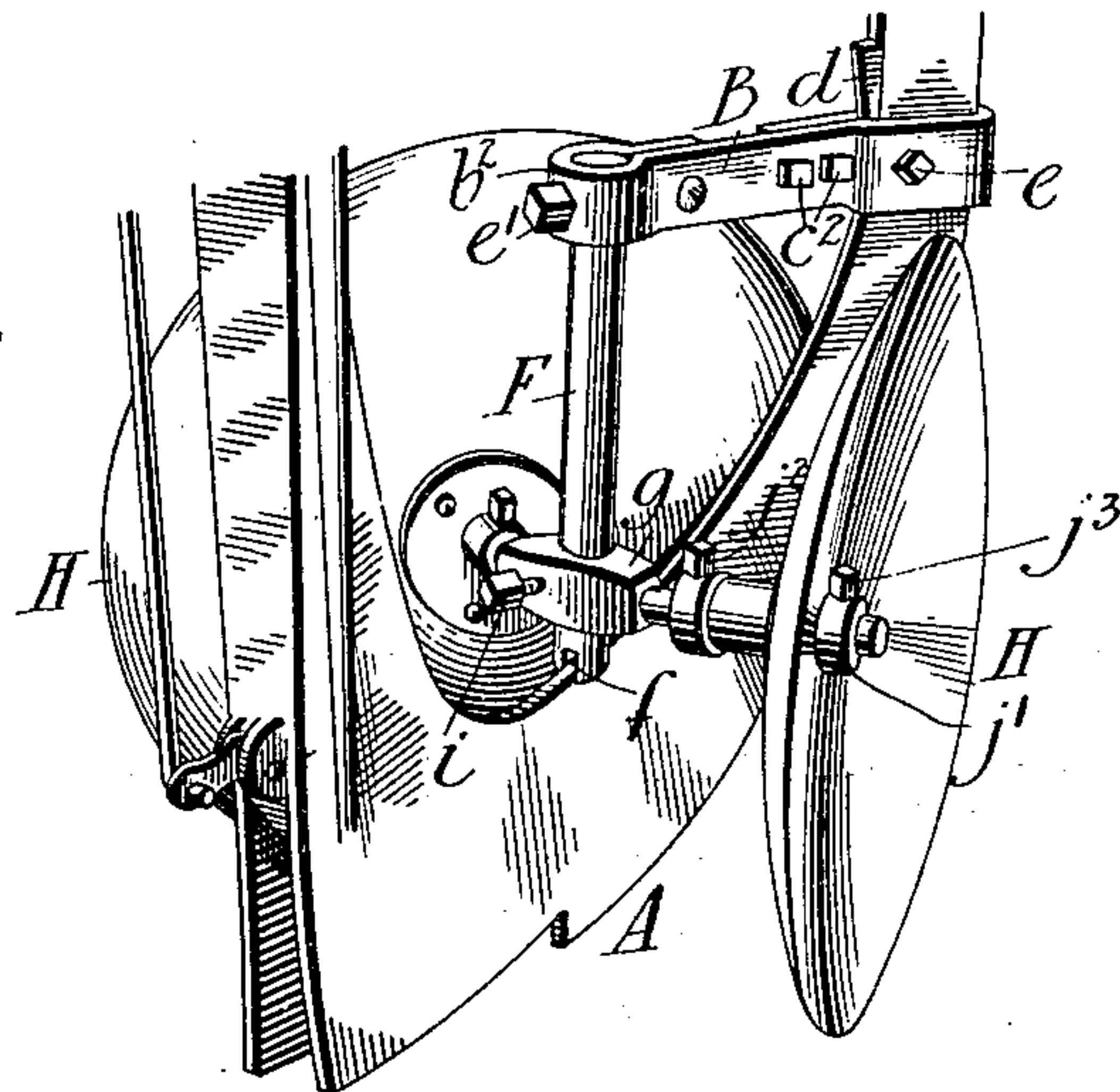


FIG. 2

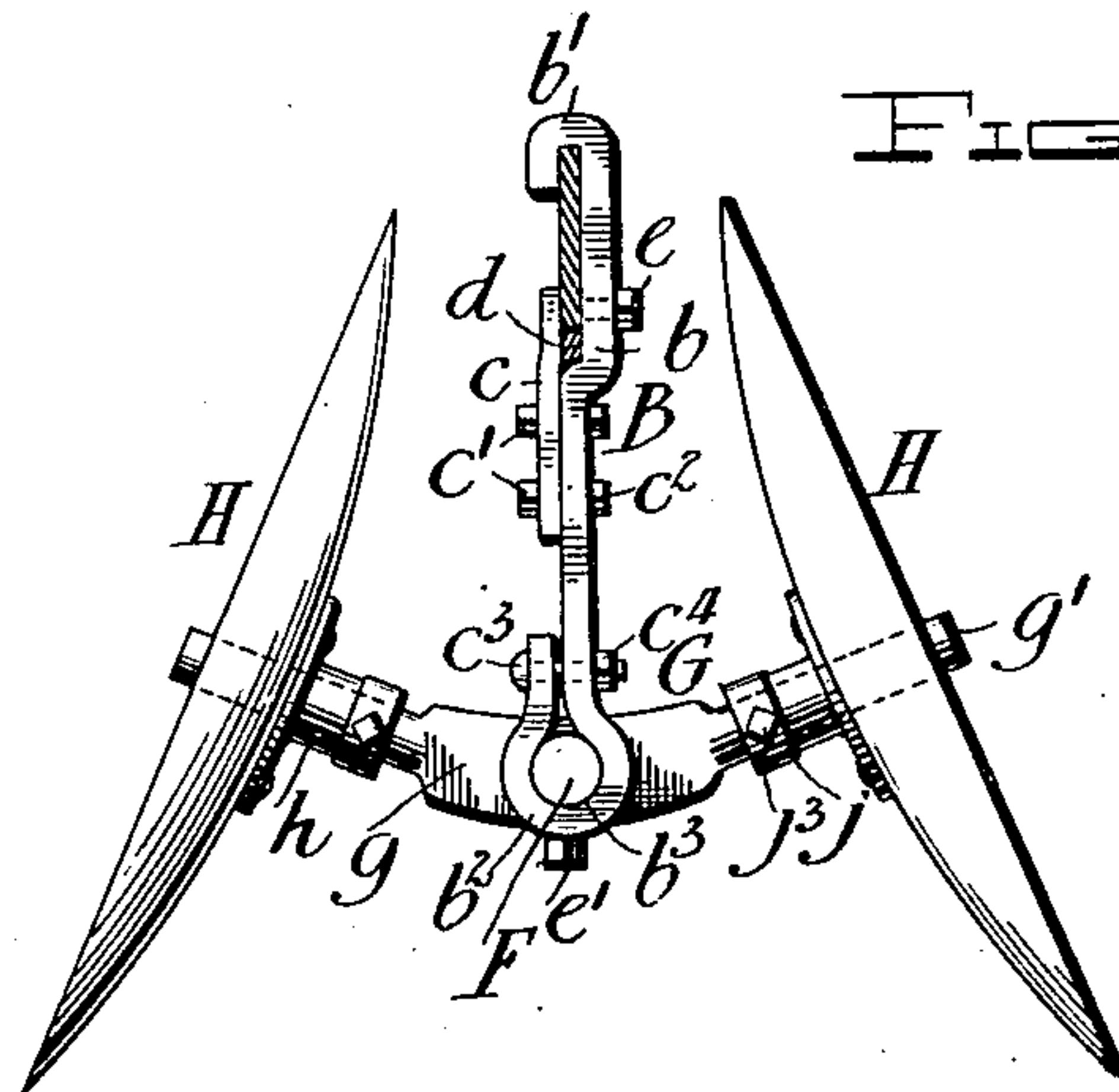
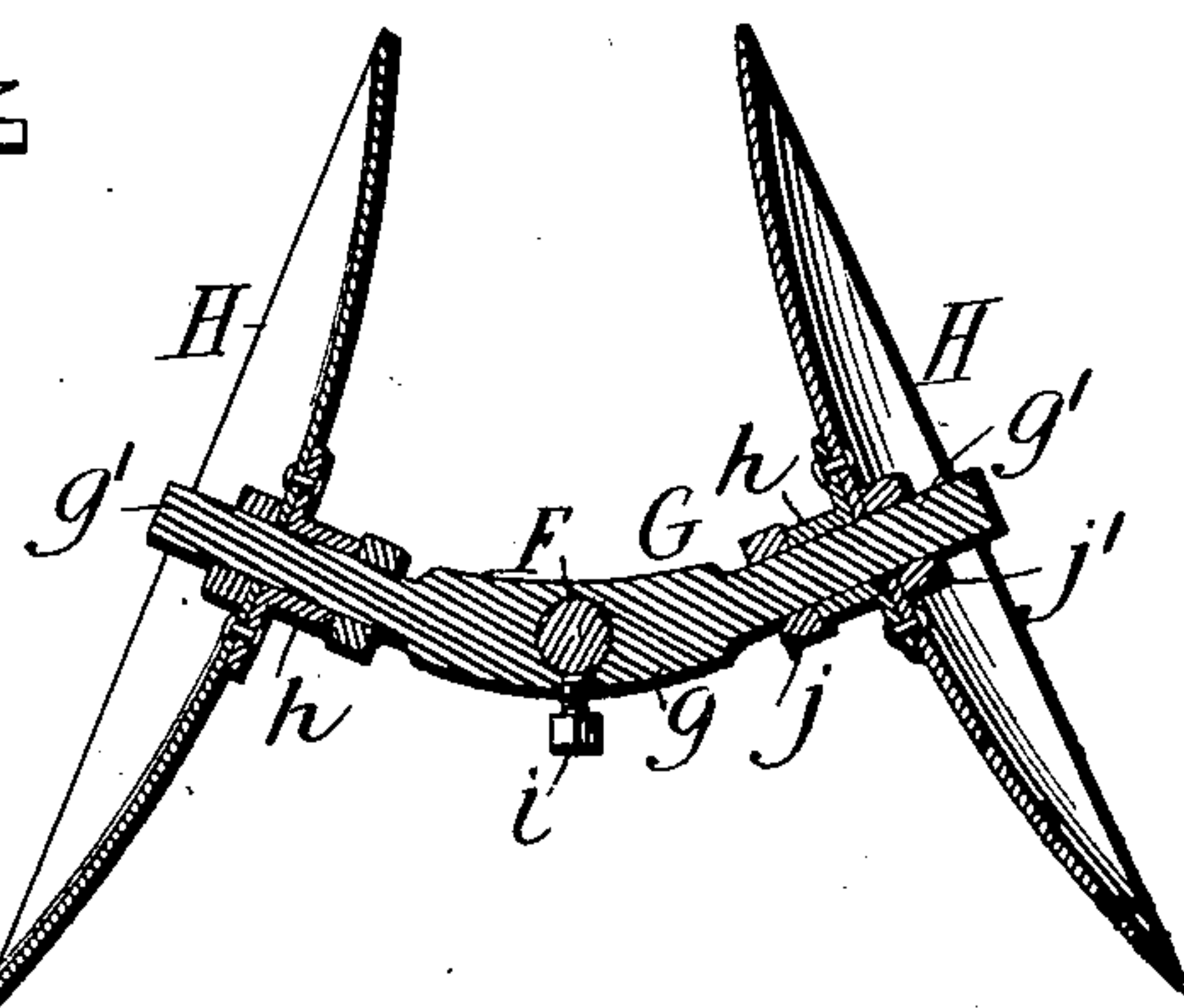


FIG. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

CLAUDE S. KEMPER, OF CAMERON, MISSOURI.

FURROW-OPENER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 679,025, dated July 23, 1901.

Application filed May 11, 1901. Serial No. 59,740. (No model.)

To all whom it may concern:

Be it known that I, CLAUDE S. KEMPER, a citizen of the United States, residing at Cameron, in the county of Clinton and State of Missouri, have invented certain new and useful Improvements in Furrow-Opener Attachments; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improved furrow-opener designed more especially for attachment to corn-planters.

The object of the invention is the production of a furrow-opener which is adapted to be readily attached to existing planters and which possesses a number of advantages, among which may be mentioned simplicity and durability of construction and efficiency and reliability in operation.

The nature of the invention will be readily comprehended, reference being had to the following detailed description and to the accompanying drawings, in which—

Figure 1 is a perspective view of a furrow-opener embodying my invention attached to the shoe of a corn-planter. Fig. 2 is a plan view of the furrow-opener. Fig. 3 is a horizontal sectional view taken through the center of the axle.

Referring to the drawings by letter, A denotes the shoe of a corn-planter, to which my improved furrow-opener is shown as attached. It will be understood that my invention is adapted for attachment to any form or construction of planter-shoe without material modification.

B denotes a bracket, which near its forward end is provided with an offset b and at said forward end with a return bend or hook b' .

c is a plate secured to the bracket by bolts and nuts c' c^2 to extend beyond the offset, whereby is provided with the hook b' a slot which in practice receives the upper portion of the shoe. Sufficient space is provided between the ends of the plate and hook to admit the narrowest portion of the shoe side-

wise into the slot, whereupon the bracket is moved until the shoe occupies the slot, the space due to the tapering form of the shoe being filled by a wedge d . A binding-screw e , which is driven through the bracket and against the shoe, serves with the wedge to firmly fasten the bracket to the shoe. The bracket has at its rear end a return-bend b^2 , providing a circular opening b^3 , which receives the upper end of a rod F. A bolt and nut c^3 c^4 are employed to adjust the opening b^3 to clamp the rod F, and e' is a binding-screw driven through the return-bend against the rod to assist the clamp in firmly holding the rod. The rod is provided at its lower end with a notch f , which engages the upper edge of the shoe to prevent sidewise movement.

G denotes the axle, having a central enlargement g apertured to receive the rod F. The axle and furrow-opening disks H H are vertically adjustable on the rod, the adjustment being maintained by a binding-screw i , driven through the axle against the rod. To the inner or convex side of each of the disks H is riveted or otherwise secured a sleeve h . The disks are longitudinally adjustable on the axle ends g' g' , each with its sleeve being confined when in proper position between an inner set-collar j and an outer set-collar j' . Binding-screws j^2 j^3 are employed to maintain the adjusted positions of the collars. The axle ends are inclined forwardly to give an inward inclination to the forward end of the disks, whereby the opening of the furrow is effected. The vertical and horizontal adjustments of the disks enable any desired width and depth of furrow being obtained.

My improved furrow-opener is very simple in construction, and hence may be inexpensively made. The parts are few in number and are constructed and assembled with a view to durability and non-liability to disorder, and the appliance may be attached to existing planter-shoes with the exercise of ordinary skill. In practice the opener is very efficient, and its employment in no way interferes with the operation of the planter.

I claim as my invention—

1. A furrow-opening attachment for planters and the like, comprising disks mounted to have a horizontal adjustment on a sup-

porting-axle, and an attaching-bracket on which the axle is mounted to be vertically adjustable.

2. A furrow-opening attachment for planters and the like, comprising an attaching-bracket, a rod depending from the bracket, an axle adjustably mounted on the rod, and disks horizontally adjustable on the axle.

3. A furrow-opening attachment for planters and the like comprising an attaching-bracket having at one end a slot for the shoe said slot being open at one side to admit the shoe, means for firmly securing the bracket, a rod depending from the other end of the bracket, and disks supported on the lower end of the rod.

4. In combination, a vertical rod, an axle adjustable thereon, disks carrying sleeves adjustable on the axle, and set-collars at each side of a disk.

5. In combination, a bracket secured to the upper end of a furrow-shoe, a rod depending from the bracket and having a lower notched end engaging the upper edge of the shoe, and disks supported on the lower end of the rod.

In testimony whereof I affix my signature in presence of two witnesses.

CLAUDE S. KEMPER.

Witnesses:

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J. A. KENDALL.