

(Model.)

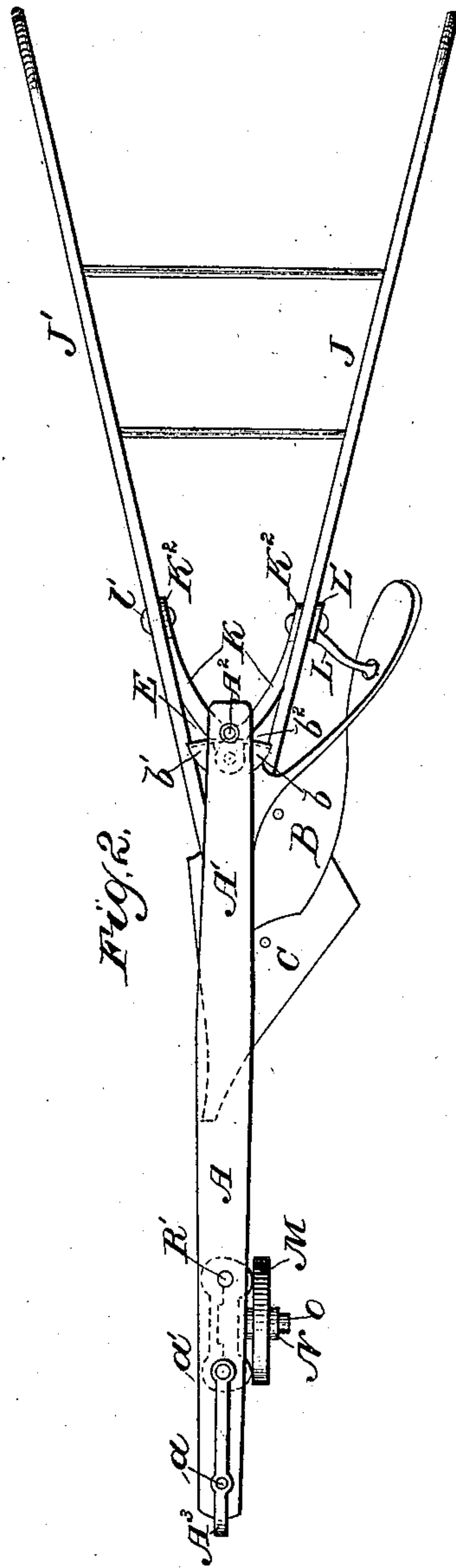
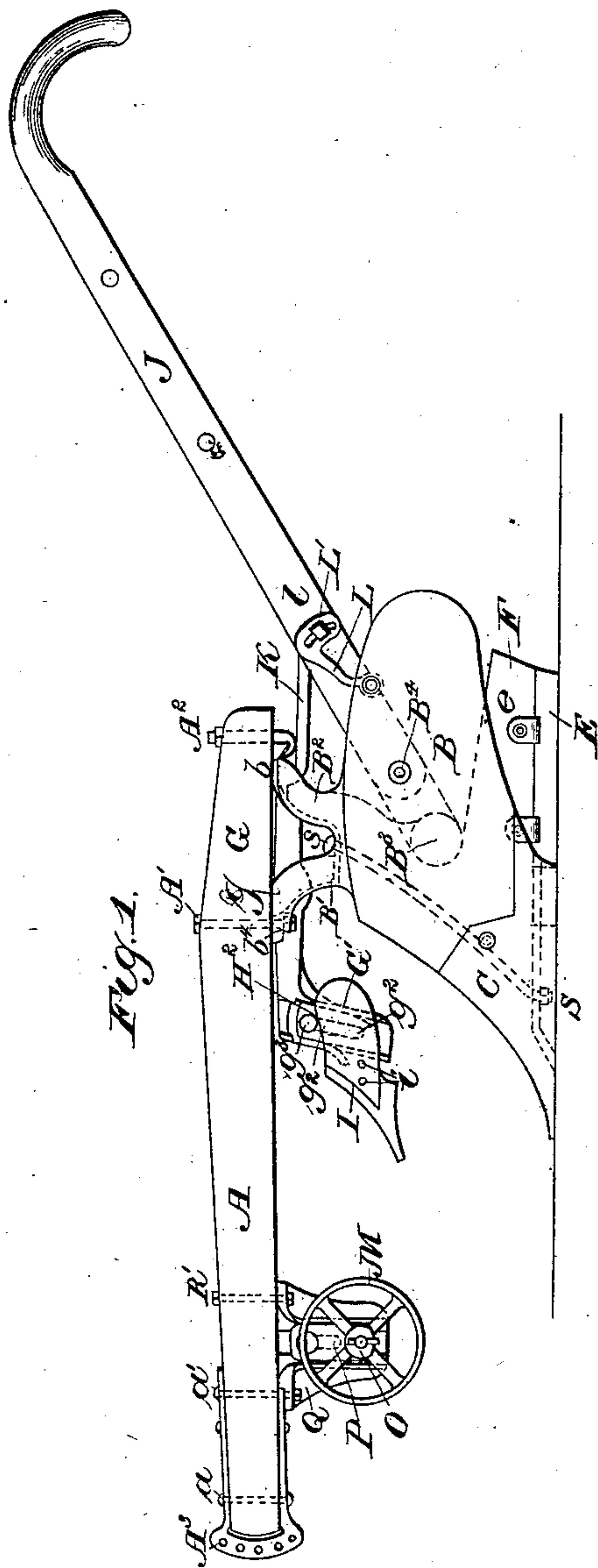
2 Sheets—Sheet 1.

A. G. CHRISTMAN.

PLOW.

No. 254,533.

Patented Mar. 7, 1882.



Witnesses.
Frank P. Kinney
Daniel C. Heller

Inventor.
Augustus G. Christman
per Thomas P. Kinney
Atty

(Model.)

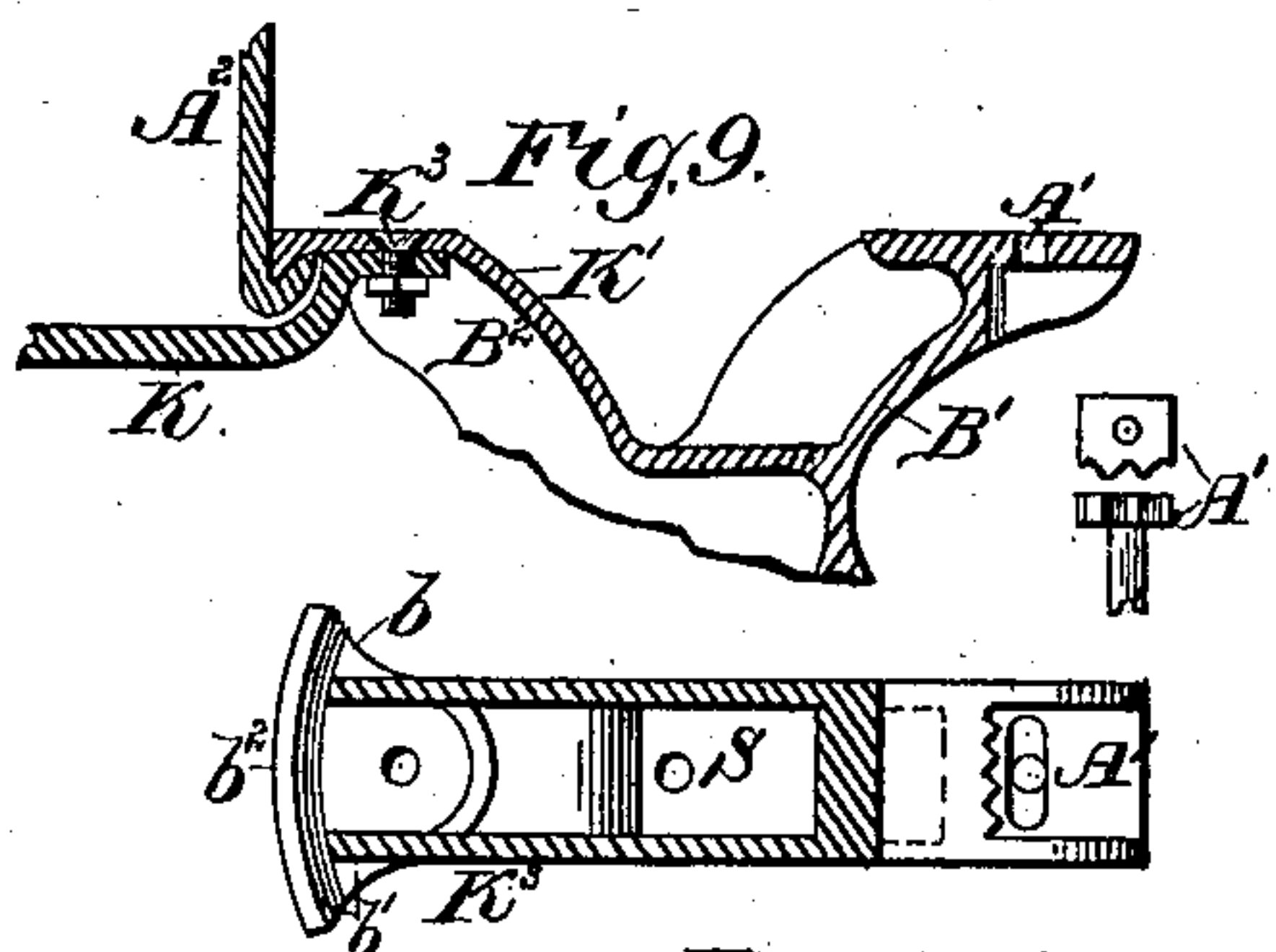
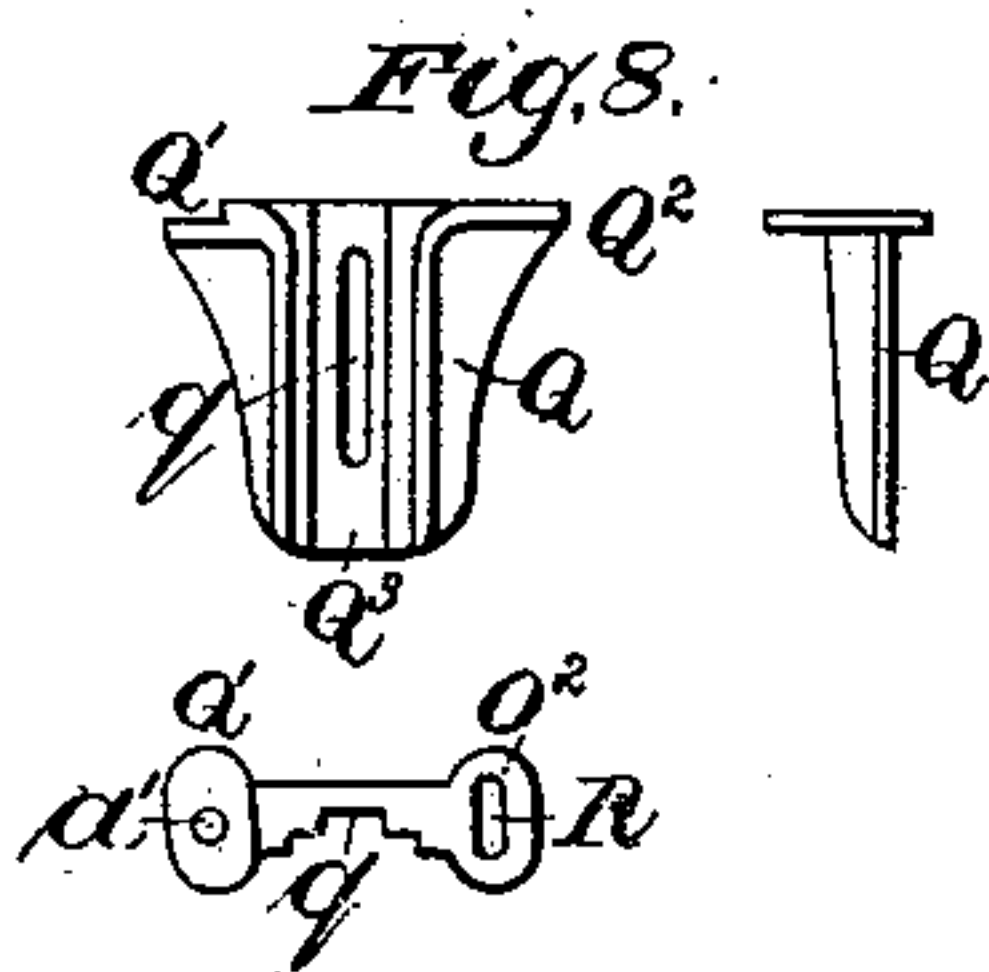
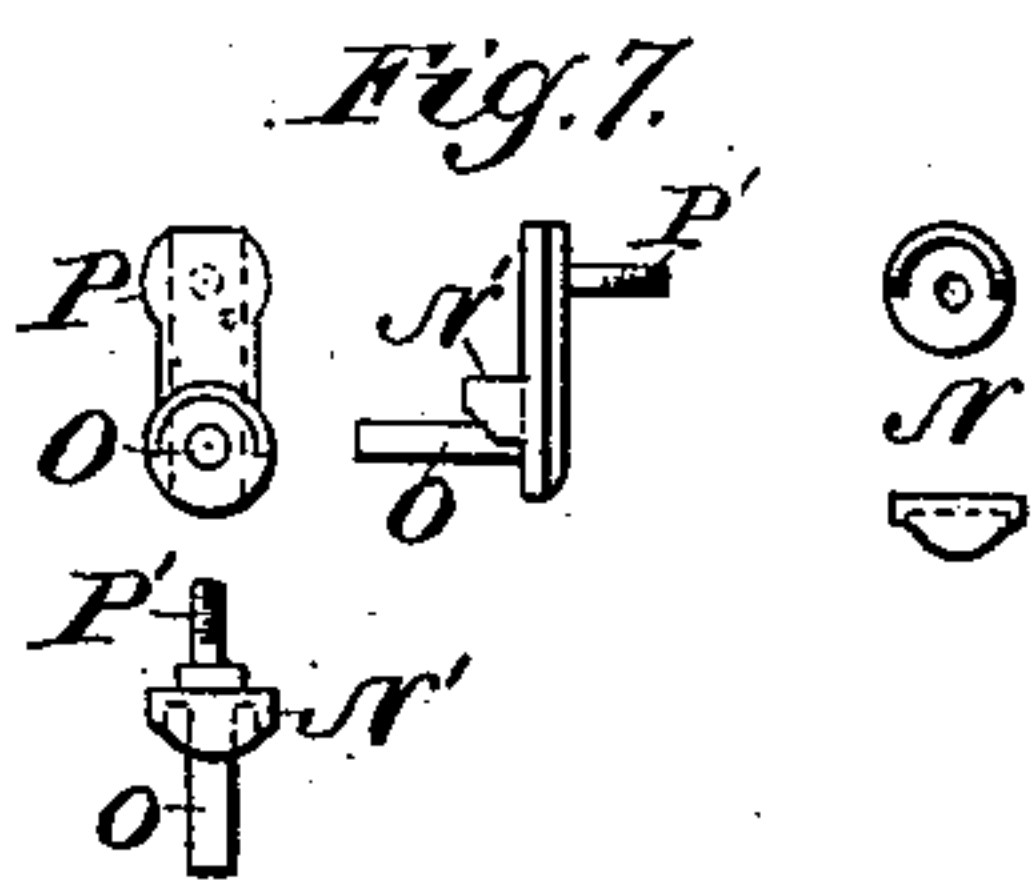
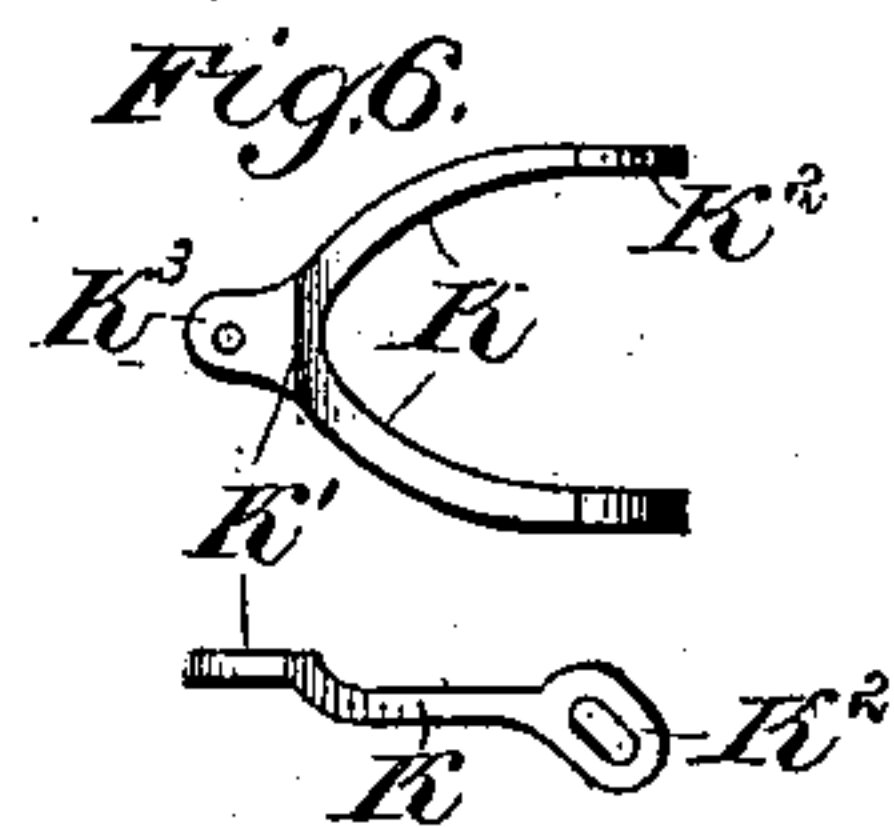
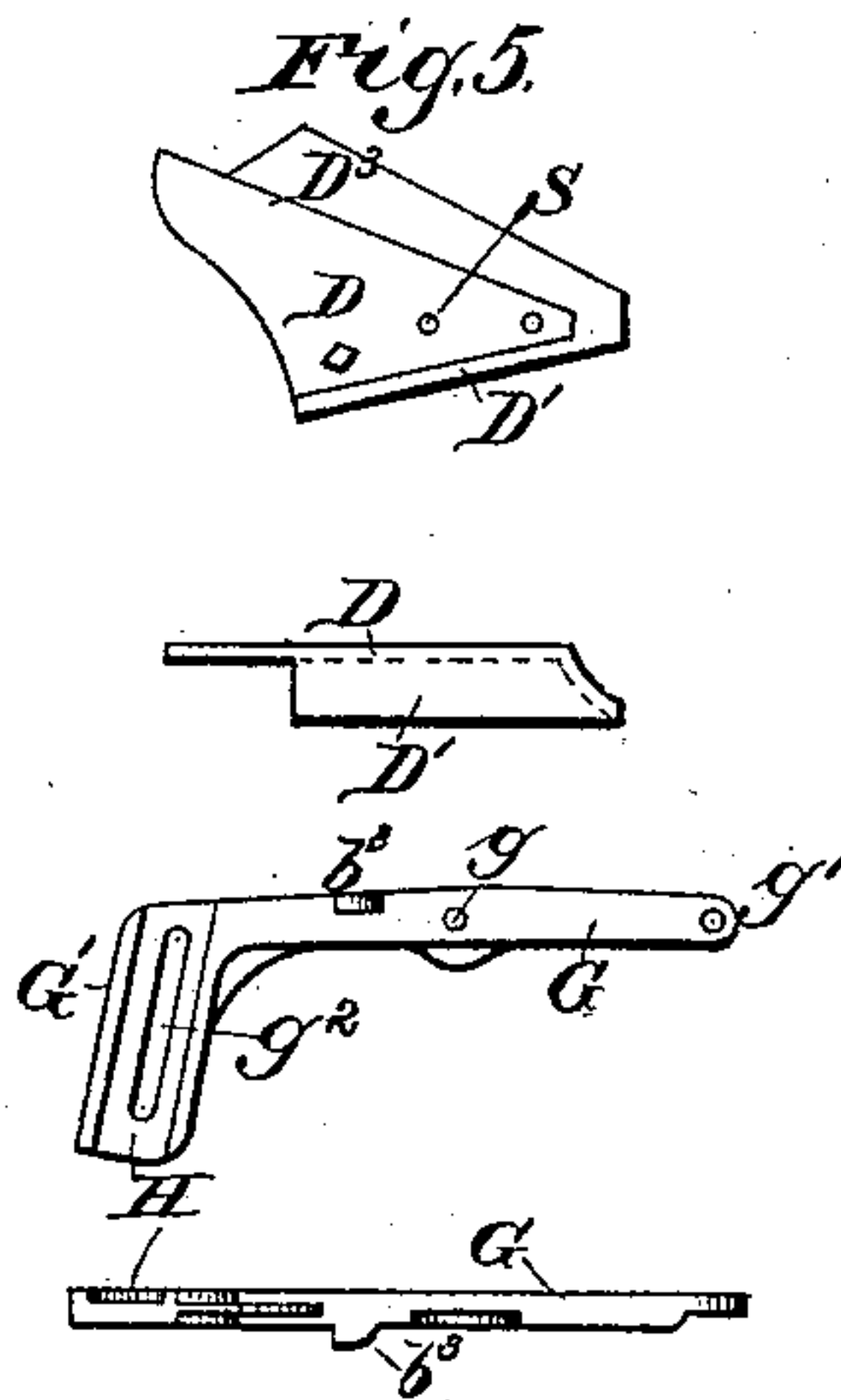
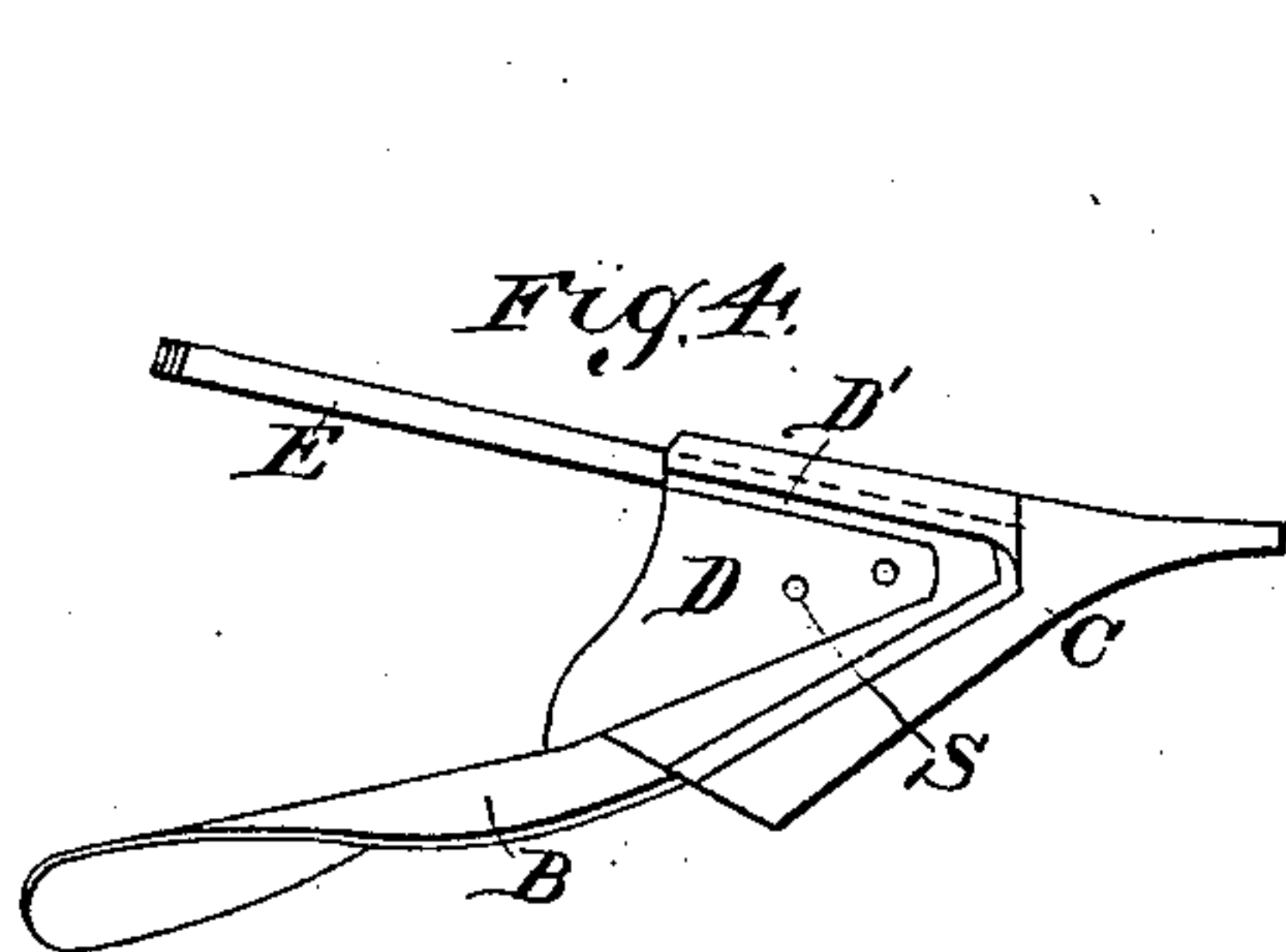
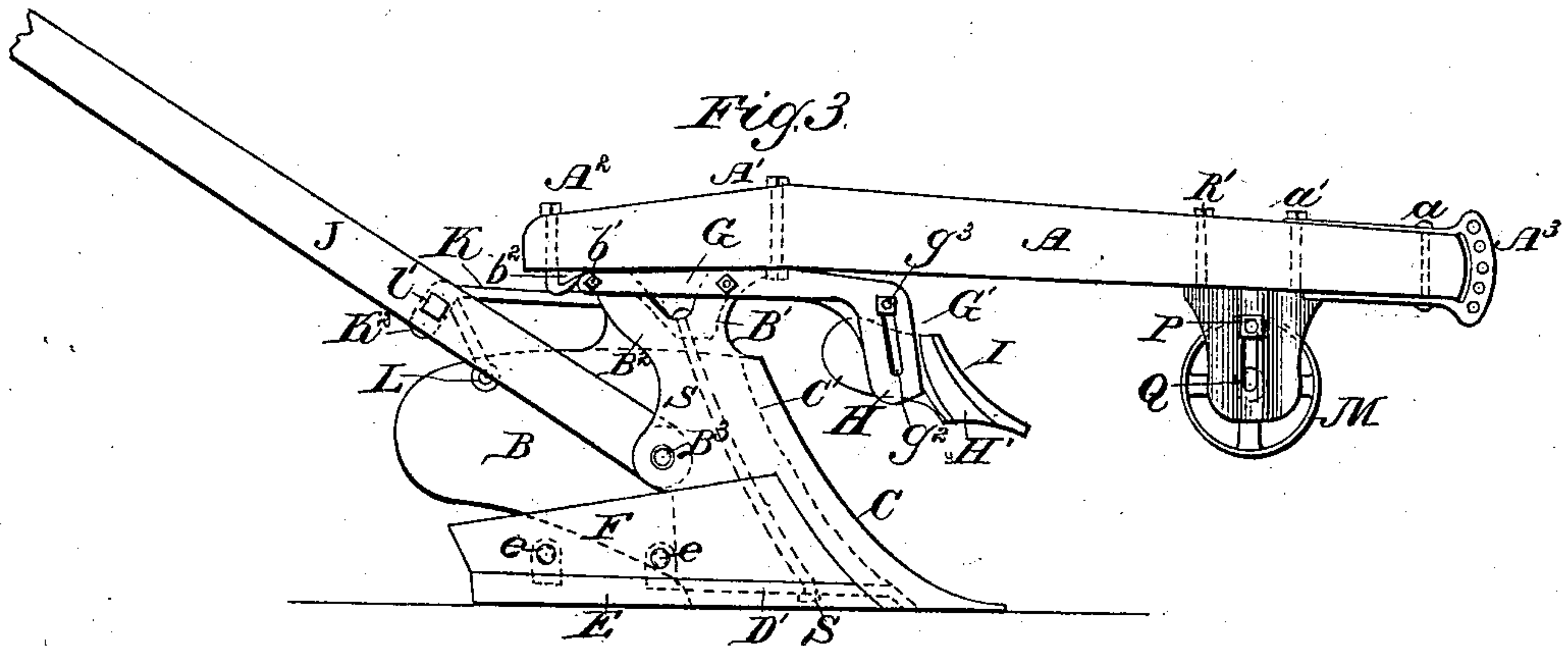
2 Sheets—Sheet 2.

A. G. CHRISTMAN.

PLOW.

No. 254,533.

Patented Mar. 7, 1882.



Witnesses.
Frank P. Kinsey
Daniel C. Heller

Inventor
Augustus G. Christman
per Thomas P. Kinsey
Atty

UNITED STATES PATENT OFFICE.

AUGUSTUS G. CHRISTMAN, OF READING, PENNSYLVANIA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 254,533, dated March 7, 1882.

Application filed June 16, 1881. (Model.)

To all whom it may concern:

Be it known that I, AUGUSTUS G. CHRISTMAN, of the city of Reading, county of Berks, State of Pennsylvania, have invented a new and
5 useful Improvement in Plows, of which the following is a specification.

This invention is more particularly related to that class of plows so arranged as to be shod indifferently with either a cast or wrought iron
10 or steel share or point, and is an improvement upon the plow for which Letters Patent were granted me, numbered 223,660, January 20, 1880.

Referring to the drawings herewith, which
15 form part of this specification, Figure 1, Sheet 1, is an elevation of the plow on the mold-board side; Fig. 2, Sheet 1, a plan, looking down on the top of the beam, with the jointer removed; Fig. 3, Sheet 2, an elevation on the landside of
20 the plow; Fig. 4, Sheet 2, a reverse plan of the plow; Fig. 5, Sheet 2, plan and side elevation of the special shoe and jointer-bar; Fig. 6, Sheet 2, plan and side elevation of the adjustable braces; Fig. 7, Sheet 2, plan and eleva-
25 tion of the caster-wheel slide and dust-guard; Fig. 8, Sheet 2, plan and elevation of the caster-wheel pedestal; Fig. 9, Sheet 2, sectional elevation and reverse plan of the standards B' B², showing the serrated bolt-head and recess
30 for same in standard B².

Similar letters indicate similar parts, and in describing the same A indicates the plow-beam; A', the fulcrum-bolt; A², the adjusting-bolt; A³, the clevis; a and a', clevis-bolts; B, the
35 mold-board, having a front standard and seat, B', and a rear standard and seat, B², cast with and forming a part of the mold-board; B³, fulcrum-ear for handle J' on the landside, and B⁴ fulcrum seat or pad for handle J on the mold-
40 board side of the plow. b b' are palms on the side of the rear standard, B², at the top, and the are struck with a radius from the fulcrum-bolt A', and provided with an undercut flange, b², at the rear to engage with the hook-head of the
45 adjusting-bolt A². C is the plow share or point; D, a special shoe permitting changes of the share from wrought to cast iron, or vice versa; D', flange of shoe forming part of landside when using a cast-iron point; E, landside-shoe; e e,
50 ears for bolting to the landside. F is the land-

side proper, secured by bolts to the off-side rear extension of mold-board. G is a jointer-bar, secured by bolts g g' to the front and rear standards, B' B², on the land side of the beam, and is extended forward of standard B' and
55 bent downward at nearly a right angle, forming a head, G', provided with a sunken-face, H, and an oblong bolt-slot, g²; H', a seat for the jointer, provided with a head, H², a raised ledge on its back fitted to the sunken face of
60 the head G', adjustable for height on and secured to the head G' of the jointer-bar G by a bolt, g³, sliding in the slot g². I is the jointer-share, secured to the seat H' by bolts i i'; J J', the handles of the plow, J being fulcrumed on
65 the mold-board at the seat B⁴, and J' on the ear B³ of the front-standard rear extension of the mold-board; K, a bifurcated brace at the rear of the plow, the head K' of which is secured to the standard B² underneath the palms
70 b b'. The outer or rear ends of the brace-arms have sector-palms K², with a corresponding bolt-slot therein, and are fastened to the handles J J' by bolts l l'. L, a brace extending from the upper edge of the mold-board B to
75 the handle J, and retained in contact with the same by the bolt l. The handle end of the brace L has a sector-palm, L', similar to those of the brace K, which are thus constructed for the purpose of allowing the adjustment of the height
80 of the handles at the rear. M is a caster-wheel of the usual construction. N is a shield or dirt-guard sliding over the outside end of the wheel-shaft or pin O, and projecting partially over the hub of the wheel M. N' is a similar shield,
85 cast with or secured to the sliding-head P and protects the pin O on the inside of the wheel.

O is the wheel shaft, pin, or journal, cast with or attached to the sliding head. P is the sliding head for the wheel M, is provided
90 with a shaft, O, therefor, and has a raised ledge on its back, which contacts with a groove in the wheel-pedestal, and guides it for vertical adjustment, being secured to the same by a bolt, P'; Q, a pedestal fulcrumed to the un-
95 der side of the beam by a bolt, a', passing through the rear end of the clevis A³ and the foot Q' of the pedestal, the rear foot, Q², being provided with a sector-slot, R, and bolt R', whereby the pedestal and wheel M are made
100

adjustable horizontally with relation to the plow-point. The pedestal has a sunken face, Q^3 , for the reception of the ledge on the back of the sliding head P, and an oblong slot, q , for the bolt P' , by which the head P is secured at the desired height. S is a bolt which secures the special shoe D to the plow of the standard B' , where a nut retains the same and binds the parts vertically together. To remove the shearing-strain from the bolts $g g'$, which secure the jointer-bar G to the standards B' and B^2 , a recess is made in the front standard at b^4 , and a corresponding lug, b^3 , is cast upon the jointer-bar, and when placed in position relieves the strain upon the bolts $g g'$.

A comparison of my present improvement with that of my patent of January 20, 1880, will show that I have simplified the construction, lessened the number of parts, (of the plow proper,) and have given a more permanent character to all the details connected therewith. The beam is readily adjusted within proper limits to any desired angle with the center draft of the plow by swiveling on the fulcrum-bolt A' , the bolt A^2 being loosened to permit swiveling, and tightened to retain the beam at the desired angle. The handles J J' are adjusted vertically by loosening the bolts $l l'$ and retightening when the proper elevation is reached. The caster-wheel M is also adjustable vertically by loosening and tightening of the bolt P' .

To give additional horizontal angular movement to the beam A, the front standard, B' , has an oblong slot provided for the fulcrum-bolt A' , the slot being inclosed on its rear and two sides at such distance from the edge as will permit the head of the bolt A' to be drawn within the inclosure. The rear face of the recess thus provided is serrated, and the head of the bolt A' is correspondingly toothed, and interlocks with those of the recess. This permits the fulcrum-point to be changed by dropping the bolt-head out of gear with the recess, then shifting the position of the beam A upon the seat of standard B' , returning the bolt-head into the recess, the respective teeth being engaged, when, the nut being tightened, the new position of the fulcrum is rigidly preserved.

I am aware that plow-jointers have been ap-

plied to seats provided for the same upon the heads of jointer-bars, and that they were adapted to be adjustable vertically thereon, and that sliding heads have been employed for carrying the caster-wheels of plows, and for analogous purposes; therefore I do not broadly claim the same; but I believe that I am the first to make such a jointer combination with a plain bar rigidly secured to the standards of a double-standard mold-board plow, or to apply a sliding caster-wheel head to an angularly-horizontally adjustable pedestal.

Having described my invention, I desire to secure by Letters Patent the following claims:

1. In a plow, the combination, with the beam A, of the double standards $B' B^2$, cast with and forming an integral part of the mold-board B, said mold-board being provided with a seat for the point C, landside F, and special shoe D, and with a reverse face having an ear, B^3 , and a pad, B^4 , forming fulcrum-points for the handles J J', substantially as shown, and for the purpose set forth.

2. The combination, with the double-standard mold-board B $B' B^2$, of the straight jointer-bar G, secured by bolts $g g'$ to the standards $B' B^2$, said bar being further provided with a lug, b^3 , adapted to engage a recess, b^4 , in the standard B' , substantially as shown, and for the purpose specified.

3. The straight jointer-bar G, provided with jointer-head G' , in combination with the double-standard mold-board B $B' B^2$, said jointer-bar being attached to the standards $B' B^2$ by bolts $g g'$, lug b^3 , and recess b^4 , substantially as shown, and for the purpose described.

4. The caster-wheel pedestal Q, having a vertical guide-recess, Q^3 , oblong bolt-slot q , fulcrum-foot Q' , and adjustable foot Q^2 , provided with circumferential slot R, in combination with the beam A, bolt R' , clevis A^3 , bolt a' , caster-wheel M, and sliding head P, having bolt P' , and shaft O, substantially as shown, and for the purpose herein set forth.

AUGUSTUS G. CHRISTMAN.

Witnesses:

GEORGE V. CARNER,
EDWARD YEAGER.