

(No Model.)

N. C. SAMPLE.
PLOW.

No. 500,513.

Patented June 27, 1893.

FIG:1

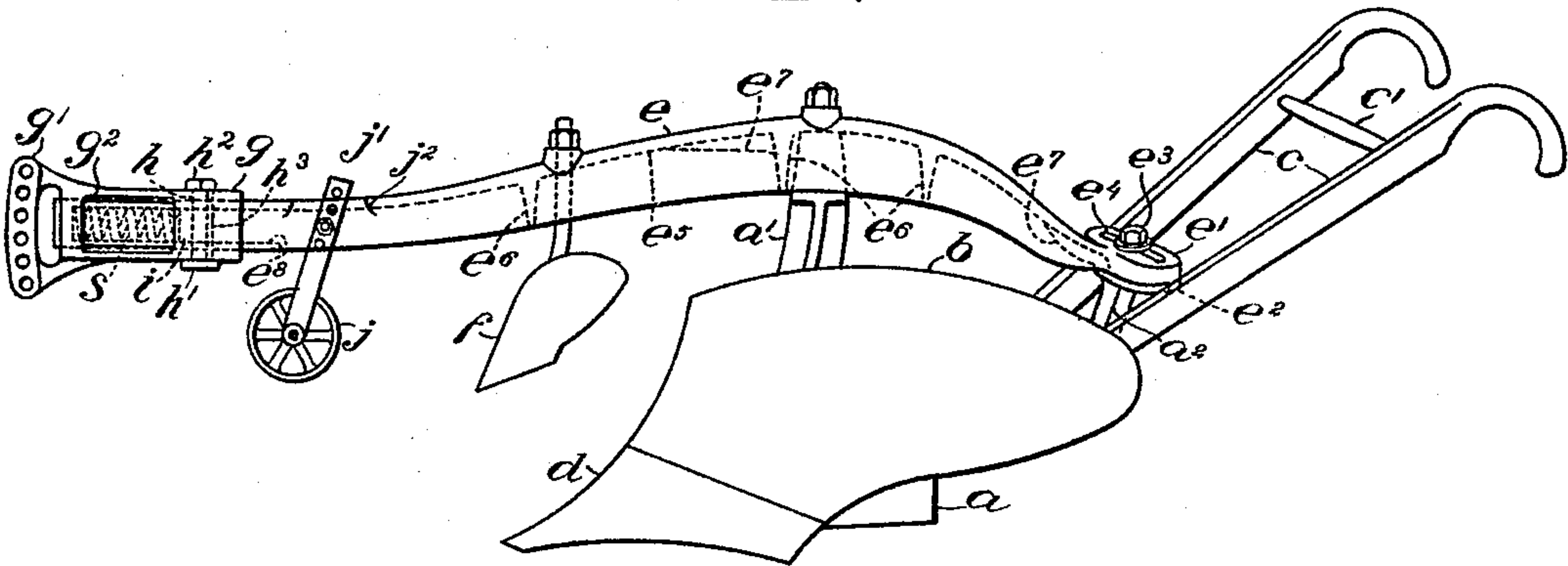


FIG:2

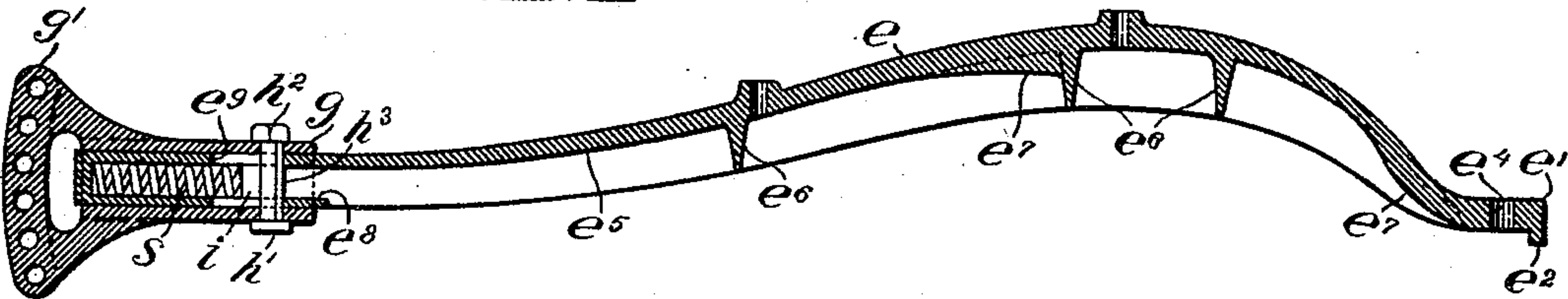


FIG:3

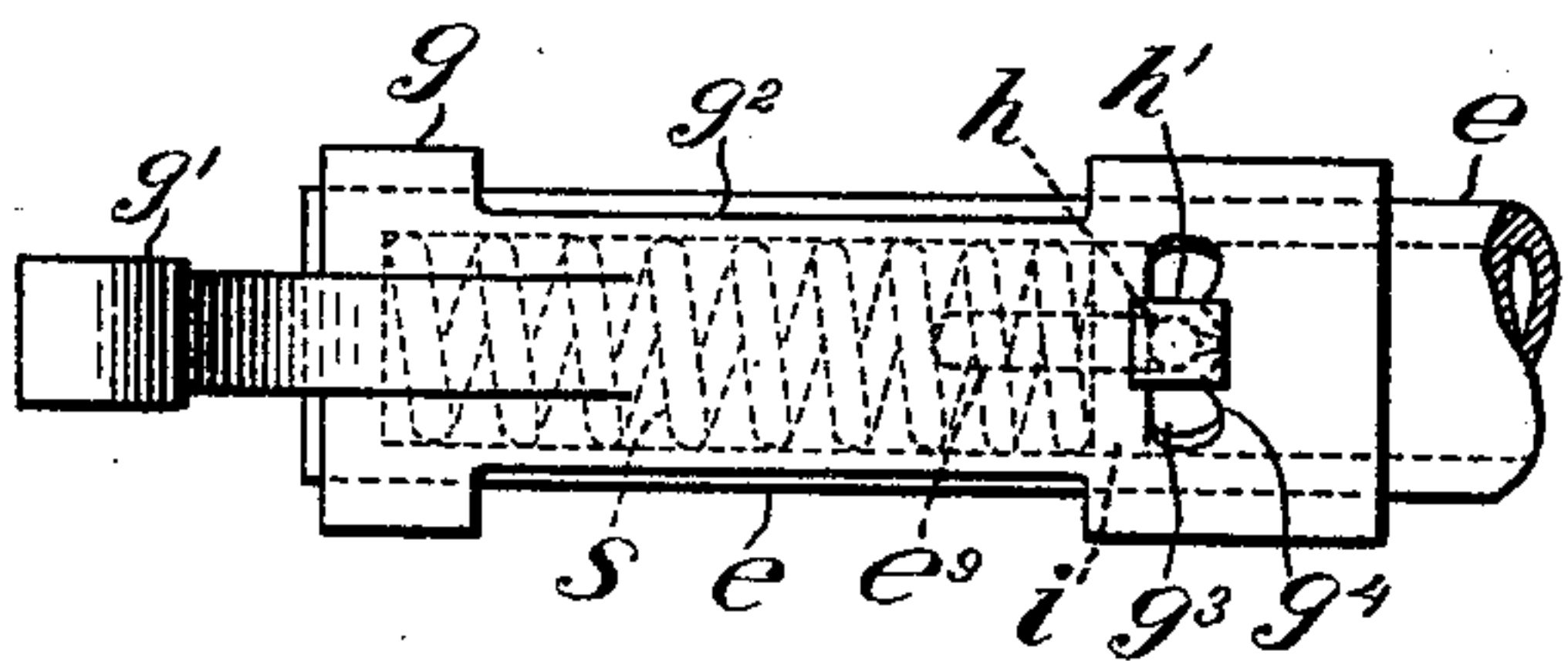


FIG:4

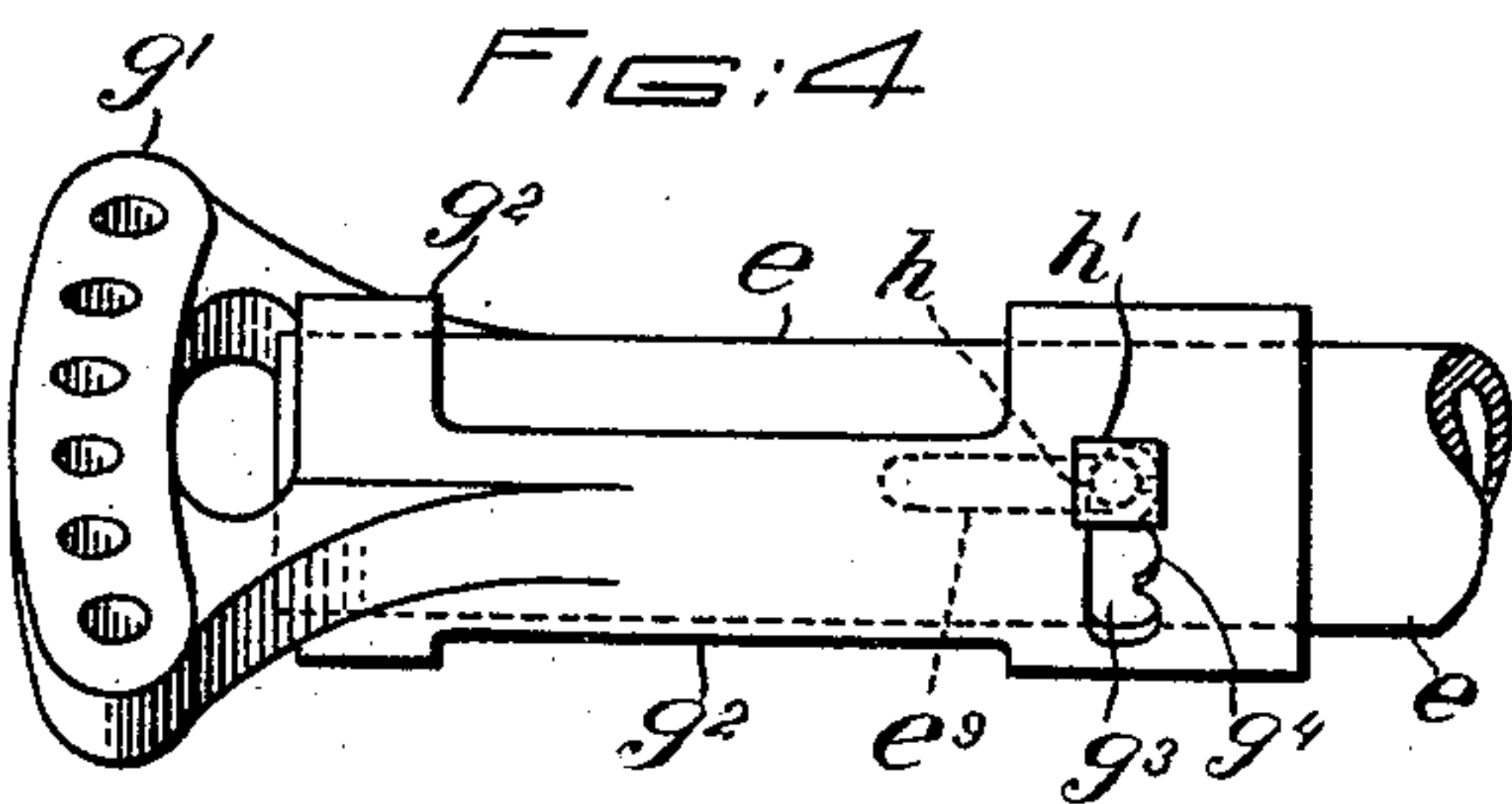
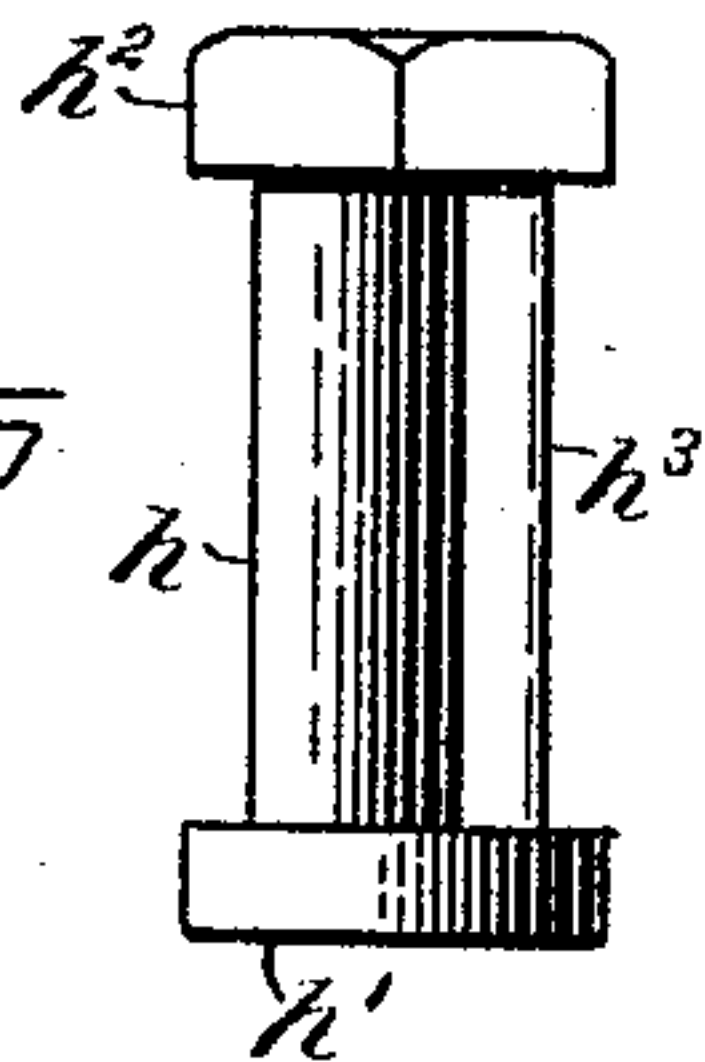


FIG:5



WITNESSES:

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INVENTOR:

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ATT'Y.

UNITED STATES PATENT OFFICE.

NEWTON C. SAMPLE, OF PHILADELPHIA, ASSIGNOR OF ONE-HALF TO SAMUEL RAMSEY SAMPLE, OF INTERCOURSE, PENNSYLVANIA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 500,513, dated June 27, 1893.

Application filed March 24, 1893. Serial No. 467,459. (No model.)

To all whom it may concern:

Be it known that I, NEWTON C. SAMPLE, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Plows, of which the following is a specification.

The principal objects of my invention are first, to provide a light, strong and comparatively inexpensive plow-beam; second, to provide simple and efficient means for attaching the end of the beam to the frame-work of the plow in such manner that the beam may be adjusted in respect to the plowshare; third, to provide simple and efficient devices for supporting a spring between the clevis and the plow-beam, in order to relieve the team of undue strain in the event of the plowshare becoming wedged or otherwise impeded; and fourth, to provide compact means, whereby the clevis may be slightly turned about the horizontal axis of the beam in order to change the line of draft toward the right or left, so that the width or depth of the furrow slice may be increased or diminished as required.

My invention consists of a plow provided with a channeled beam of U-shape in cross section having webs ranging transversely of the channeled portions and having reinforcing ribs.

My invention further consists of a plow provided with a channeled beam having a slotted projection adapted for attachment to the frame-work of the plow and having a rib for reinforcing the union of the channeled portion of the beam and slotted projection.

My invention further consists of a plow provided with a beam having a cavity or bore in its front extremity, a spring fitted in said cavity or bore, a cap fitted over said extremity and provided with a clevis, and a pin engaging the spring and cap and afforded a range of movement in slots in the walls of said cavity or bore.

My invention further consists of a plow provided with a beam having a cylindrical recessed extremity, a spring mounted in said recessed extremity, a cap rotatably mounted on said cylindrical extremity and provided with a clevis, and a pin working in longitudi-

nally ranging slots or openings in the wall of the recessed extremity and adapted to engage the spring and one of a series of notches ranging transversely of the opening in the cap. 55

My invention further consists of the improvements in plows hereinafter described and claimed.

The nature, characteristic features and scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof; and in which--

Figure 1, is a perspective view showing the moldboard and rear portions of a plow embodying features of my invention. Fig. 2, is a central section of the beam embodying the features of my invention. Fig. 3, is a top or plan view of the extremity of the beam showing the clevis in vertical position. Fig. 4, is a top or plan view of the extremity of the beam showing the clevis slightly turned in order to adjust the width of the furrow slice; and Fig. 5, is a detached view drawn to an enlarged scale of the clevis retaining pin. 75

In the drawings, the land-side mold-board *b*, and the lower extremities of the hands *c*, are attached to the frame of the plowshare *d*. This frame is provided with an upwardly projecting post *a'*, and with a rearwardly projecting brace *a²*. The beam *e*, is bolted to the post *a'*, and is provided with a projection *e'*, having a depending lip *e²*, that engages the brace *a²*, as illustrated in Fig. 1, in order to impart strength to the construction. The projection *e'*, is adjustably secured to the top of the brace *a²*, by means of a set-screw *e³*, that engages the brace *a²*, and works in a slot *e⁴*, in the projection *e'*, so that the beam *e*, may be turned about the post *a'*, to adjust the width of the furrow slice and then clamped to place by means of the set-screw *e³*. The beam *e*, is preferably made of metal and in such case is channeled along its under side, as at *e⁵*, Fig. 2, and is U-shaped in cross section, in order to lighten its weight without materially diminishing its strength. 95

e⁶, are webs ranging transversely of the channeled portions *e⁵*, of the beam *e*, and located near the points of connection of the post *a'*, and colter *f*, with the beam *e*, in order to impart additional rigidity to the latter. 100

e^7 , Fig. 2, are ribs ranging longitudinally of the beam e , and adapted to reinforce the same at the union of the beam and projection e' , and in proximity to certain of the webs e^6 .
 5 The front extremity of the beam e , is cylindrical and is provided with an internal cavity or recess e^8 , for the accommodation of a spiral spring s , which by yielding serves to relieve the team of undue strain in the event of the
 10 plow becoming wedged or otherwise stopped, as will be hereinafter more fully explained. The spring s , may be readily inserted into the channeled portion of the beam and then fitted into the recess e^8 .

15 g , is a cap fitted onto the cylindrical portion of the end of the beam and provided with a clevis g' , to which the draft is applied. For the sake of lightness portions of the curved walls of this cap g , may be cut away
 20 as shown at g^2 , Fig. 4.

h , is a pin afforded a range of movement in openings e^9 , disposed longitudinally of the cylindrical portion of the beam e , and adapted to engage a washer or gasket i , that rests
 25 upon the rear end of the springs s . The ends of this pin h , work in transversely ranging opening g^3 , in the wall of the cap g , and are respectively adapted to engage a series of notches g^4 , cut or otherwise formed in the
 30 rear edges of the openings g^3 , so that the cap g , and clevis g' , may be turned in respect to the beam in order to shift the line of draft to the right or to the left. In the present instance the pin h , is provided with a head h' , a square
 35 end h^2 , and a feather h^3 , Fig. 5, adapted to work in the notches g^4 , as will be hereinafter more fully explained.

j , is a gage-wheel journaled to brackets j' , secured to portions j^2 , of the beam which are
 40 built out and flattened for their reception.

c' , is a spanning-rod that serves to brace the upper portions of the handles c .

The mode of operation of the hereinabove described plow is as follows:—In the event
 45 of the plow becoming wedged or otherwise stopped, the recoil is taken up by the spring s , and the team is relieved of undue strain. Under these circumstances the pin h , moves forward through the slots e^9 , in the curved
 50 walls of the cylindrical end of the beam e , thus permitting the team to draw the cap g , forward for a short distance against the force of the springs s , and until the team can be stopped, in order to permit the plow-man to free the
 55 plow. The width of the furrow slice may be increased or diminished by loosening the set-screw e^8 , and turning the beam e , around the post a' as a center towards the right or left as may be required and then clamping it in
 60 such position by means of the set-screw. This result may also be accomplished by turning the cap g , in respect to the cylindrical portion of the beam e , as shown in Fig. 4, so that the upper and lower portions of the clevis g' , may
 65 be shifted toward the right or left, whereby the line of draft is transferred. In order to

turn the cap g , the pin h , is caused to disengage one of the notches g^4 , and is then caused to engage another of the notches g^4 , in order
 70 to maintain the cap in position after it has been turned. The pin h , may be readily caused to disengage one of the notches g^4 , by turning the pin h , by means of a wrench or key applied to the square head h^2 , in such manner that the
 75 feather h^3 , is turned out of one of the notches g^4 , and after the cap g , has been turned into the required position the pin h , may be caused to engage another of the notches g^4 , by turning the pin h , by means of the wrench or key
 80 in such manner that the feather h^3 , is turned into the other of the notches g^4 . By this arrangement the pin may be readily and rapidly transferred from one notch to another.

Having thus described the nature and objects of my invention, what I claim as new, 85 and desire to secure by Letters Patent, is—

1. A plow provided with a channeled beam of U-shape in cross-section having integral transverse webs and integral longitudinal reinforcing ribs and said beam pivotally attached to the frame of the plow and provided
 90 with a projection having a lip for engaging another part of the frame of the plow, and a set-screw for adjustably connecting the projection and frame, substantially as and for
 95 the purposes set forth.

2. A plow provided with a beam having a cylindrical extremity, a pin, lug or projection connected with said extremity, a revoluble cap provided with a clevis and with a notched
 100 slot or opening for the accommodation of said pin, lug or projection, substantially as and for the purposes set forth.

3. A plow provided with a beam having a cylindrical extremity, a revoluble-cap provided with a clevis and with a notched-slot, a pin revolubly carried by said extremity and provided with a feather adapted to the notches
 105 of said slot, and means for turning said pin, substantially as and for the purposes set forth. 110

4. A plow provided with a beam having a cylindrical recessed extremity, a spring mounted in said recessed extremity, a cap rotatably mounted on said extremity and provided with a clevis, a pin working in longitudinal
 115 ranging slots in the wall of the recessed extremity and adapted to engage the spring and a series of notches ranging transversely of the wall of said cap, substantially as and for the purposes set forth. 120

5. A plow provided with a beam having a recessed cylindrical extremity, a revoluble-cap provided with a clevis and with a notched-slot or opening, a pin working in slots in the walls of said recessed beam and provided with
 125 a feather adapted to the notches of the slot or opening, a spring fitted into the recessed portion of the beam and bearing on said pin, and means for actuating said pin, substantially as and for the purposes set forth. 130

6. A plow provided with a channeled and webbed beam having a cylindrical recessed

extremity and a projection provided with a
lip for engaging the frame of the plow, a bolt
for pivotally attaching the intermediate por-
tion of the beam to the frame, a set-screw for
5 adjustably connecting the projection and
frame, a cap mounted on the cylindrical ex-
tremity of the beam, a spring fitted in the re-
cessed extremity of the beam, and a pin con-
necting the spring and cap and working in

slots in the recessed portion of the beam, sub- 10
stantially as and for the purposes set forth.

In testimony whereof I have hereunto set
my signature in the presence of two subscrib-
ing witnesses.

NEWTON C. SAMPLE.

Witnesses:

THOMAS M. SMITH,
RICHARD C. MAXWELL.