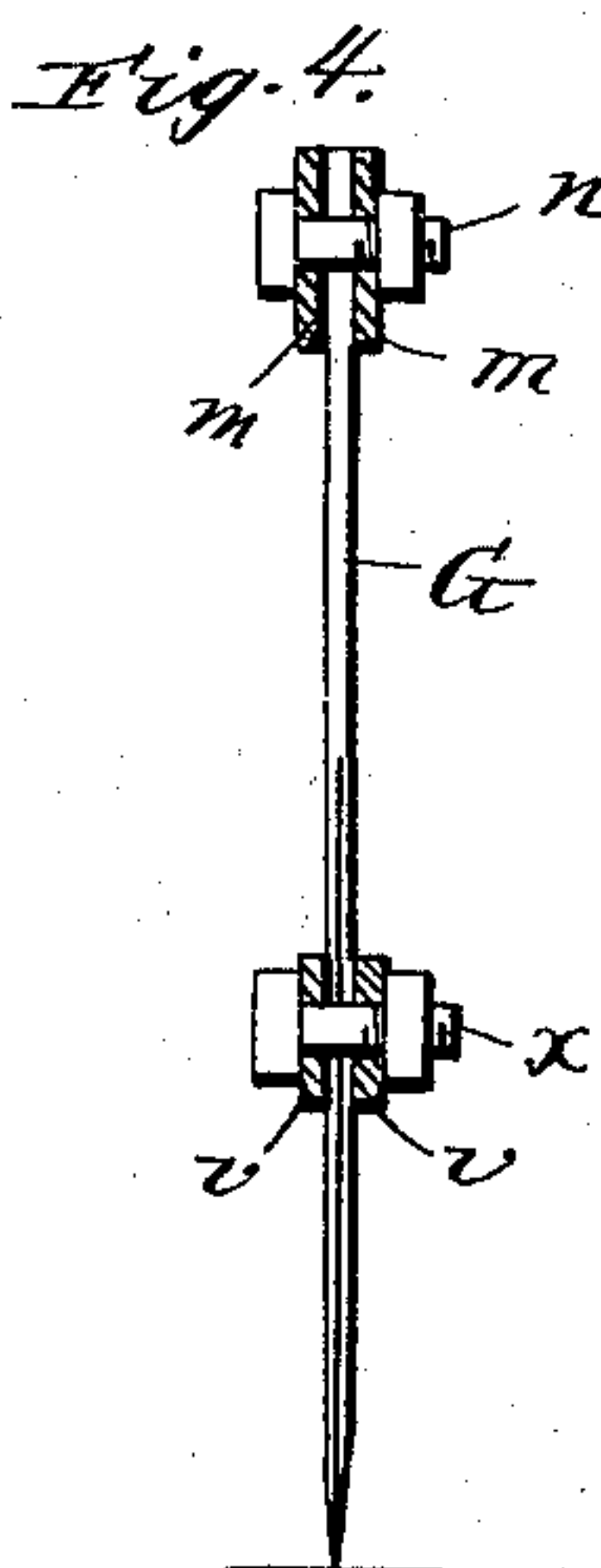
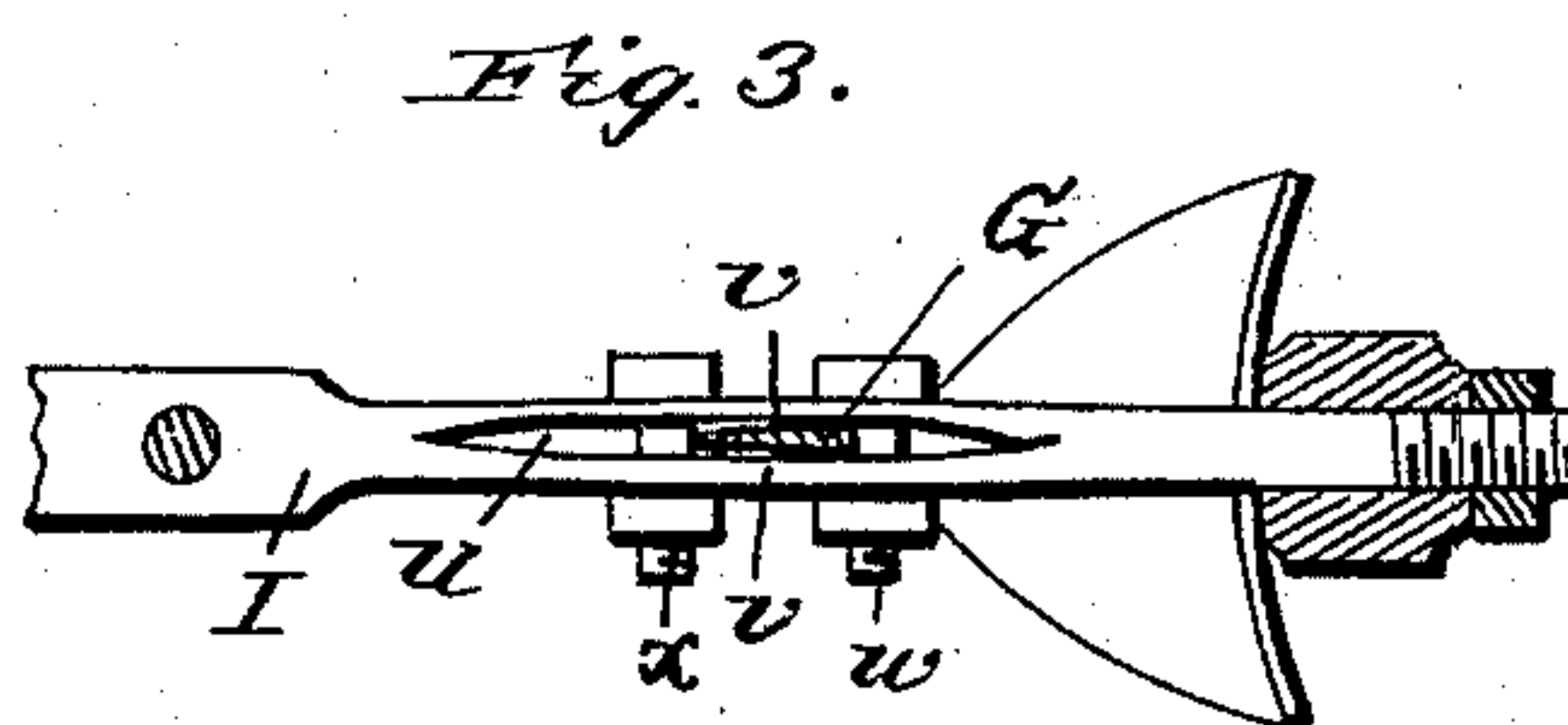
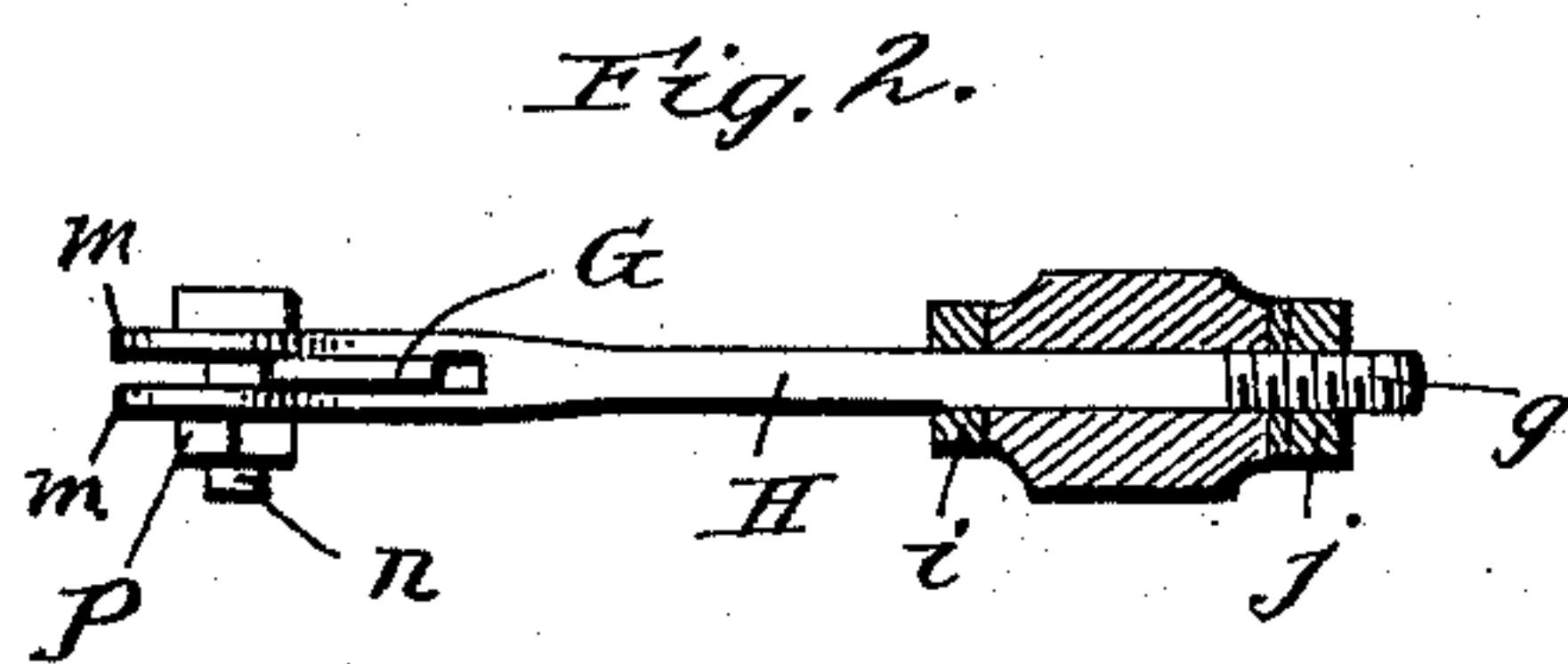
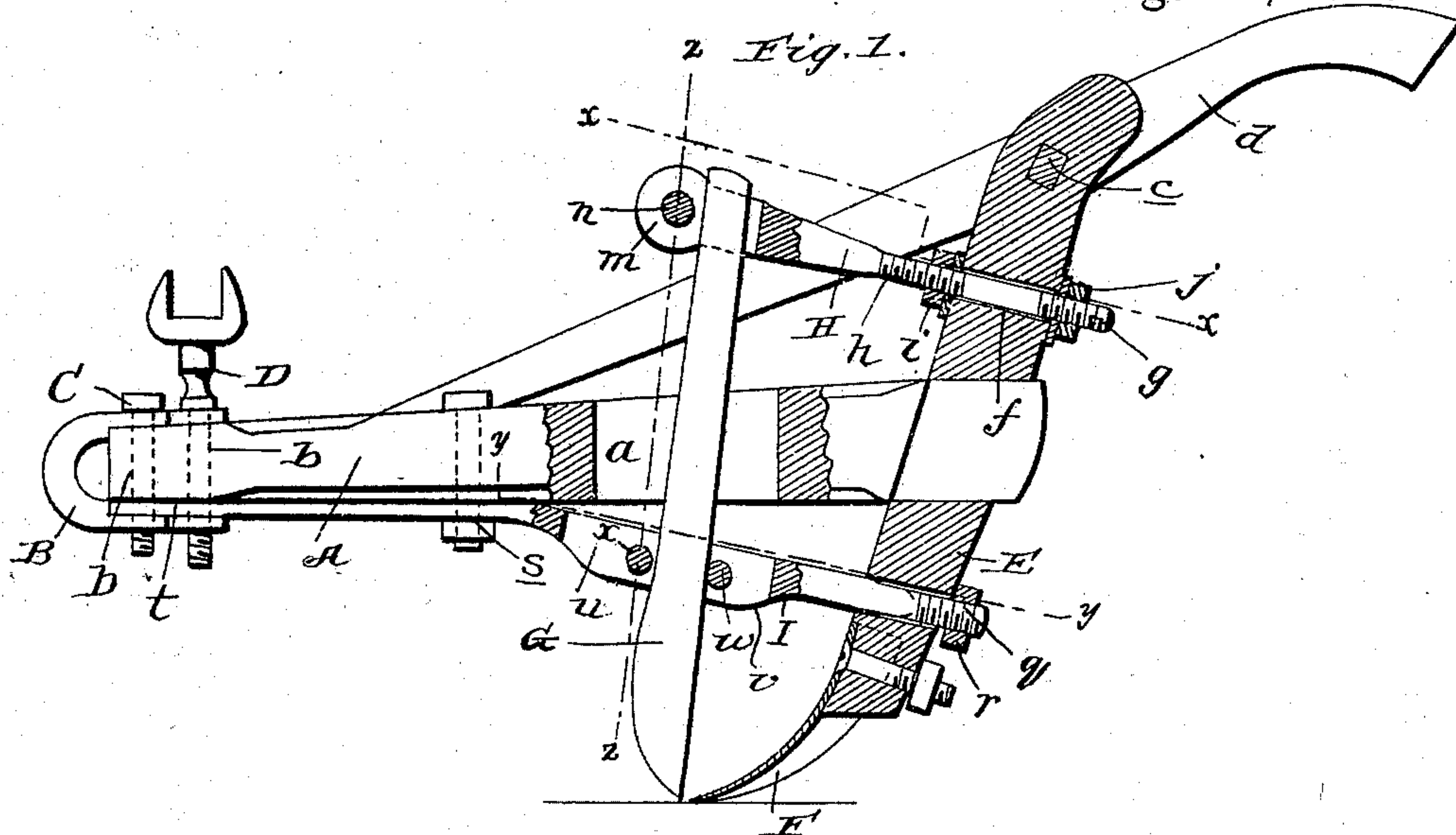


(No Model.)

M. M. COCHRAN & S. ADAMS.
PLOW.

No. 544,845.

Patented Aug. 20, 1895.



Witnesses:

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UNITED STATES PATENT OFFICE.

MARTIN M. COCHRAN AND SAMUEL ADAMS, OF TOLL GATE, WEST VIRGINIA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 544,845, dated August 20, 1895.

Application filed April 30, 1895. Serial No. 547,860. (No model.)

To all whom it may concern:

Be it known that we, MARTIN M. COCHRAN and SAMUEL ADAMS, citizens of the United States, residing at Toll Gate, in the county of Ritchie and State of West Virginia, have invented certain new and useful Improvements in Plows; and we 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.

Our invention relates to improvements in plows, and more particularly to that class of plows known as "shovel-plows;" and it has for its general object to provide a plow embodying a root-cutter, arranged in advance of its shovel, and a cheap, simple, and advantageous means through the medium of which the root-cutter may be adjustably fixed at various distances above and at various distances in advance of the point of the shovel, such means being also adapted to permit of a ready removal of the cutter from the plow when desired, as will be presently described.

Other objects and advantages of the invention will be fully understood from the following description and claims, when taken in conjunction with the annexed drawings, in which—

Figure 1 is a side elevation, partly in section, of our improved plow; and Figs. 2, 3, and 4 are sections taken in the planes indicated by the lines *x x*, *y y*, and *z z*, respectively, of Fig. 1.

In the said drawings similar letters designate corresponding parts in all of the views.

A indicates the beam of our improved plow, which is provided at an intermediate point of its length with a longitudinal vertical slot *a*, and is also provided at or adjacent to its forward end with apertures *b*.

B indicates a clevis which is provided with two pairs of vertically aligned apertures and has its lower apertures threaded.

C indicates the connecting-bolt which extends through the forward apertures of the clevis and the forward aperture *b* of the beam and has its lower end threaded to engage the threaded lower aperture of the clevis.

D indicates an auxiliary connecting-bolt which extends through the rear apertures of the clevis and beam and is threaded to en-

gage the rear lower threaded aperture of the clevis, and preferably has its upper end shaped so that it can be used as a wrench, as presently described, and E indicates the stock, which is connected to the rear end of the beam A and serves for the connection of the plow or shovel F, and is designed to be connected by a suitable cross-bar *c* with the handles *d* which extend rearwardly from the beam, as illustrated.

G indicates the root-cutter or cutting-blade of our improvements, which is arranged in advance of the shovel F and extends through the slot *a* of the beam A, as better shown in Fig. 1.

H indicates the bar or arm which connects the upper end of the blade G and the stock, and I indicates the strap or bar which connects the lower portion of the blade G and the stock. The rear portion of the bar H, which extends through the opening *f* of the stock E, is of a circular form in cross-section and is threaded, as indicated by *g* and *h*, for the engagement of the securing and adjusting nuts *i j*, which are arranged in front and rear of the stock, as shown. The forward end of said bar H is flattened and bifurcated, as better shown in Fig. 2, so as to form the resilient clamping-jaws *m*, which are adapted to receive the blade G between them and are designed to be clamped upon said blade by the bolt *n*, which extends through them and is provided with a nut *p*, as shown. The bar I, which extends through the stock E below the beam, has but one threaded portion *q* for the engagement of the securing-nut *r*, and it is extended forward and is connected to the beam at an intermediate point of its length, as indicated by *s*, and at its forward end, as indicated by *t*, so as to enable it to brace the connection of the stock E to the beam A and strengthen the connection of the clevis B to said beam. At an intermediate point of its length said bar I is slotted vertically, as indicated by *u*, so as to form the resilient clamping-jaws *v*. (Better shown in Fig. 3.) These jaws *v* are designed to receive the blade G between them, and they are adapted to be clamped against said blade by the transverse bolts *w x*, which extend through them and are provided with nuts, as shown. The bolt D for connecting the clevis B and the beam A

is made in the form of a wrench, as before described, so that it may be removed when desired and employed to turn the nuts *i j* on the bar H, the nut *p* on the bolt *n*, the nut *r* on bar I, and the nuts on the bolts *w x*, extending through the jaws *v* of said bar.

With our improved construction it will be observed that when it is desired to remove the cutting-blade G from the plow, or when it is desired to adjust the same vertically, it is simply necessary to loosen (not remove) the nuts on the bolts *n w x*, when the jaws *m v*, by tending to spring outward, will release the cutting-blade, so as to permit a ready removal or free vertical adjustment of the same. When the blade has been adjusted to the desired position, it may be adjustably fixed in such position by tightening the nuts on the bolts, so as to clamp the jaws against the blade.

When it is desired to adjust the cutting-blade G forward or rearward with respect to the shovel or plow F, it is simply necessary to loosen the nuts on the bolts *w x* and then move the bar H, through the medium of its nuts *i j*, until the cutting-blade rests in the desired position, when it may be adjustably fixed in such position by tightening the nuts *i j* and the nuts on the bolts *w x*.

It will be observed from the foregoing description, taken in conjunction with the drawings, that our improved plow, while very cheap and simple, is very strong and durable; and, it will also be observed that by reason of our peculiar construction the blade for cutting roots and the like may be materially adjusted to suit different conditions, which is an important advantage.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a plow, the combination of the beam having the longitudinal, vertical slot, the stock or standard connected to the beam and carrying a plow, a bar connected to and extending forwardly from the stock above the beam and having resilient clamping jaws at its forward end, a transverse bolt taking through the clamping jaws of the bar and provided with a nut, a bar connected to and extending forwardly from the stock below the beam and having resilient clamping jaws, a transverse bolt taking through said jaws and

provided with a nut, and the root cutting blade arranged between the resilient clamping jaws of the upper and lower bars at the side of the bolts and extending through the longitudinal, vertical slot of the beam, substantially as specified.

2. The plow described comprising the beam having the longitudinal vertical slot, the stock or standard connected to the beam and carrying plow, a bar connected to and extending forwardly from the stock above the beam and having resilient clamping jaws and means for pressing said jaws inwardly, a clevis, the bar connected to and extending forwardly from the stock below the beam and having resilient clamping jaws at an intermediate point of its length and means for pressing said jaws inwardly a bolt taking through and connecting the forward end of said bar, the clevis and the beam, and the root cutting blade arranged between the clamping jaws of the upper and lower bars at the side of the means for pressing said jaws inwardly and extending through the longitudinal, vertical slot of the beam, substantially as specified.

3. In a plow, the combination of the beam having the longitudinal vertical slot, the stock or standard connected to the beam and carrying a plow, the bar H, extending through the stock and having threads at its rear end and at an intermediate point of its length and provided with nuts engaging said threads and resting on opposite sides of the stock; said bar also having resilient clamping jaws at its forward end, a transverse bolt taking through the resilient clamping jaws of the bar H, and provided with a nut, a bar connected to and extending forwardly from the stock below the beam and having resilient clamping jaws, a transverse bolt taking through said jaws and provided with a nut, and the root cutting blade arranged between the clamping jaws of the upper and lower bars at the side of the transverse bolts and extending through the longitudinal vertical slot of the beam, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

MARTIN M. COCHRAN.
SAMUEL ADAMS.

Witnesses:

LEROY LEESON,
MARTIN COCHRAN.