

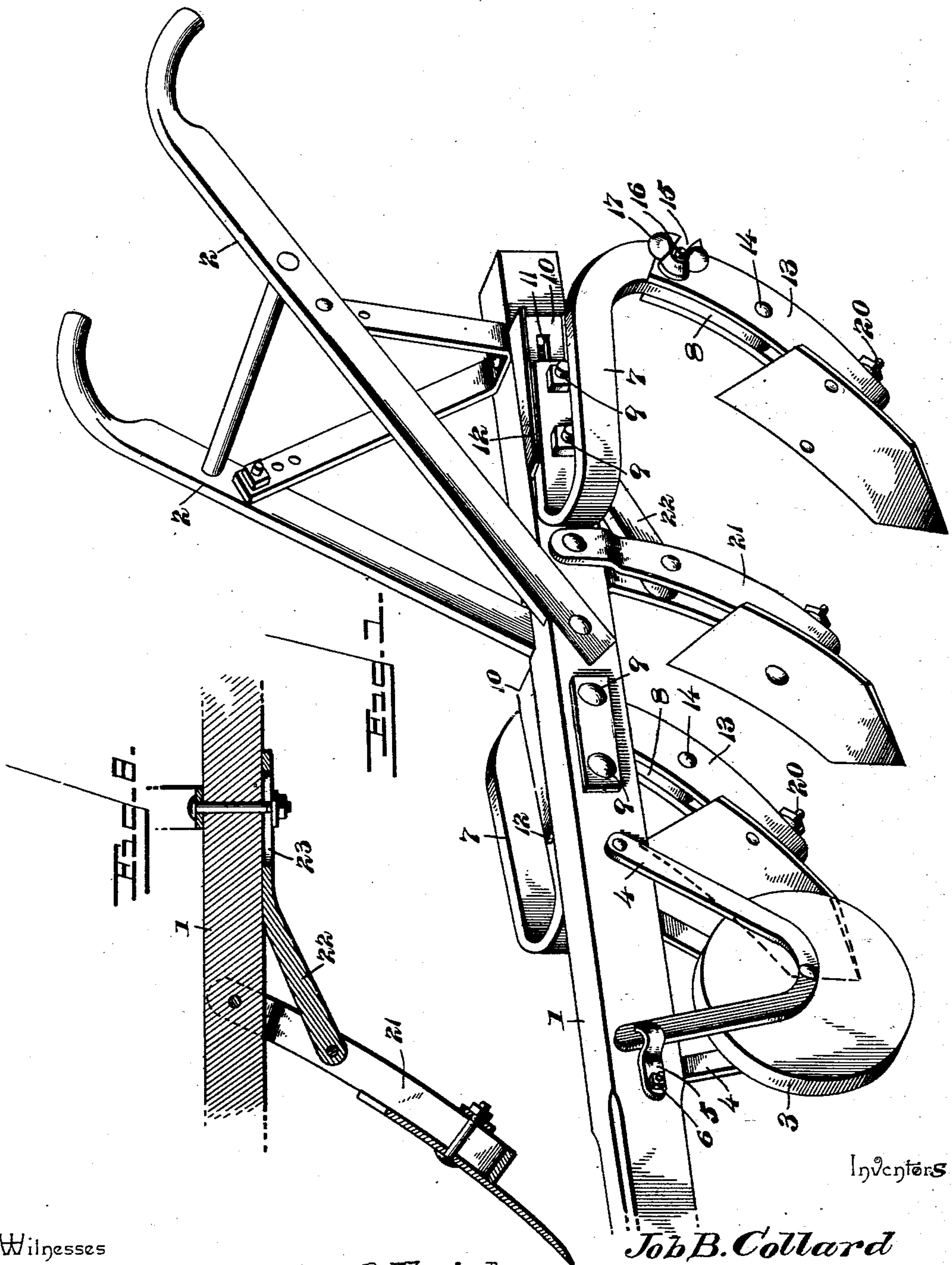
(No Model.)

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J. B. COLLARD & H. J. HENSARLING.
CULTIVATOR.

No. 570,842.

Patented Nov. 3, 1896.



Witnesses

E. H. Stewart.
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By *Their* Attorneys *Hiram J. Hensarling*

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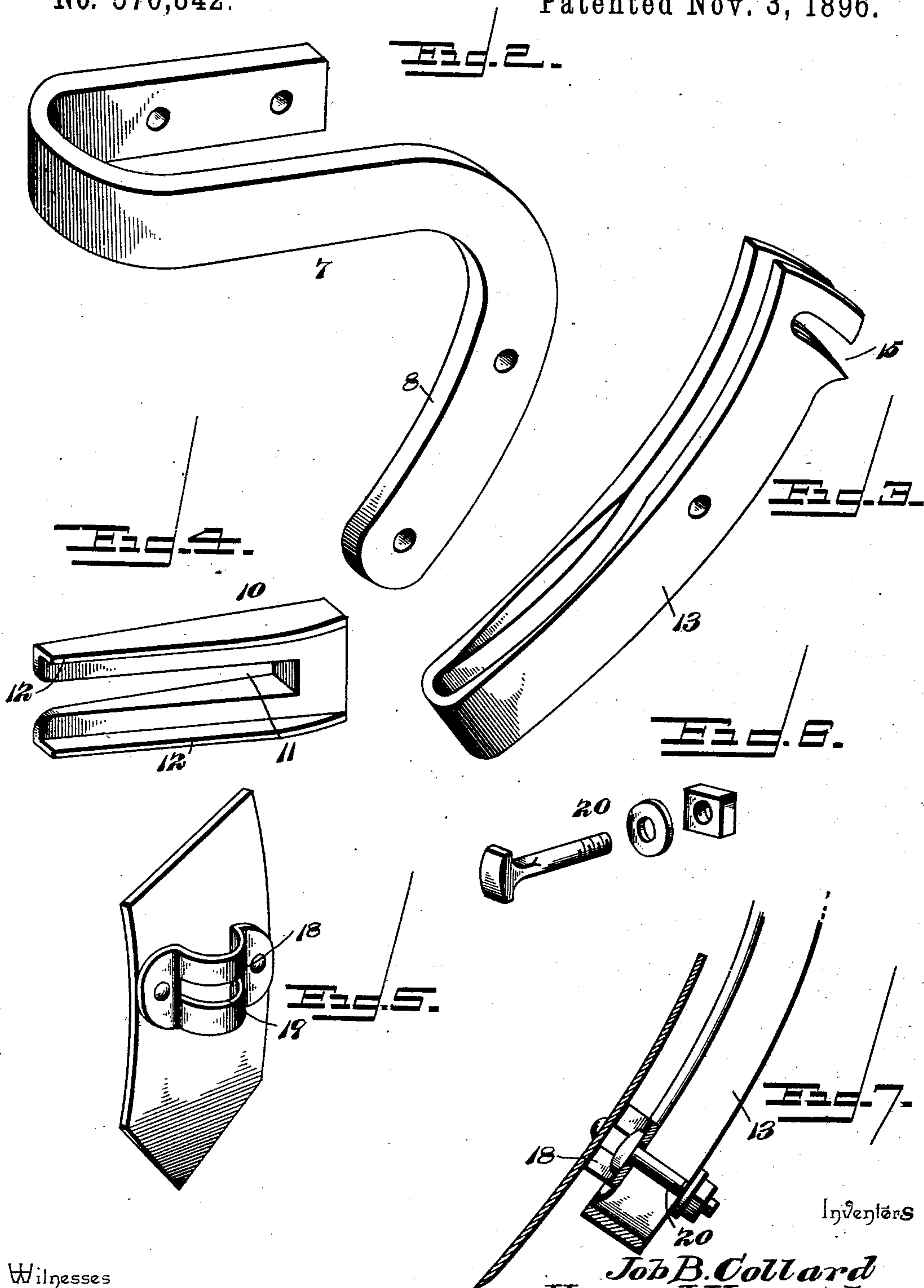
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UNITED STATES PATENT OFFICE.

JOB BROWN COLLARD AND HIRAM JOHEL HENSARLING, OF ROGERSVILLE,
TEXAS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 570,842, dated November 3, 1896.

Application filed August 22, 1895. Serial No. 560,144. (No model.)

To all whom it may concern:

Be it known that we, JOB BROWN COLLARD and HIRAM JOHEL HENSARLING, citizens of the United States, residing at Rogersville, (Rogers Prairie,) in the county of Leon and State of Texas, have invented a new and useful Cultivator, of which the following is a specification.

This invention relates to an improvement in cultivators, and has for its object to simplify and improve implements of the character described with a view to producing a cultivator which shall be capable of various adjustments whereby the distance between the shovels may be increased or diminished and the angles of the shovels changed for the purpose of throwing the earth in the desired direction.

A further object of the invention is to provide a standard of novel construction comprising a stationary member bolted to the beam and a foot member having a pivotal relation with said stationary member and capable of being adjusted as to its angle, and also capable of yielding backwardly when the shovel meets with an obstruction for the purpose of preventing the fracture or twisting of said standard.

Other objects and advantages of the invention will appear in the course of the subjoined description.

The invention consists in a cultivator-plow embodying certain novel features and details of construction and arrangement of parts, whereby advantages in point of simplicity and adaptability are attained, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of an improved cultivator-plow constructed in accordance with this invention. Fig. 2 is an enlarged detail view of the plow-standard. Fig. 3 is a similar view of the pivoted foot member of said standard. Fig. 4 is a detail view of the spacing-wedge. Fig. 5 is a detail perspective view looking toward the rear of one of the shovels, showing the cuff bolted thereto. Fig. 6 shows the form of the bolt by means of which the shovel is held and adjusted. Fig. 7 is a detail sec-

tion taken through the lower end of the pivoted foot member and showing the means for adjusting the angle of the shovel secured thereto. Fig. 8 is a longitudinal section through the rear portion of the beam, showing the manner of securing the center plow-point thereto.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates an ordinary wooden plow-beam, to which are secured the usual rearwardly and upwardly inclining and diverging handles 2, secured together and braced with relation to the rear end of said beam, as shown, or in any convenient manner.

3 designates a supporting and steadying wheel, which is preferably arranged about centrally of the plow-beam and beneath the same, and is supported and journaled in a pair of U-shaped brackets 4, pivoted at one end upon opposite sides of the plow-beam. The opposite ends of said brackets are disposed upon opposite sides of the plow-beam and are adapted to slide between the same and a pair of clamping-plates 5, the latter being held in place by means of a tightening-bolt 6.

By loosening and tightening the bolt 6 the free ends of the U-shaped brackets may be adjusted and clamped, thus enabling the wheel 3 to be carried to any desired elevation with relation to the beam, the object of which is to regulate the depth to which the shovels shall penetrate the soil, and also to steady the operation of the plow and facilitate the carrying of the plow from place to place.

The beam 1 has secured thereto, upon opposite sides and in rear of the wheel 3 and preferably adjacent to the rear end of said beam, a pair of standards 7, arranged one upon each side thereof. Each of said standards comprises a U-shaped or reversely-curved upper portion for the purpose of spacing the main body of the standard and the shovel attached thereto the desired distance laterally from the vertical plane of the beam, and said standard also comprises a depending and forwardly-inclining arm or portion 8, to which is secured

the pivoted foot member, as will hereinafter appear. This standard is secured to the plow-beam by means of a pair of bolts 9, which extend through perforations in the inner arm of its U-shaped upper portion and also through the beam and in a slightly-oblique relation to the latter, in such manner as to provide for the interposition of a slotted wedge 10. The wedge 10 is made of considerable thickness at its rear edge and tapers thence to a thin edge at its front portion and is formed with a centrally-located longitudinally-extending slot 11, which opens out at the front edge of the wedge and is adapted to stride and receive the bolts 9, which secure the standard to the beam. This wedge is further provided at its top and bottom edges with outwardly-projecting integral flanges 12, the same being spaced sufficiently apart to receive between them the inner arm of the upper U-shaped portion of the standard 7. This wedge is inserted between said arm of the standard and the adjacent face of the plow-beam from the rear, and it will be apparent that the farther said wedge is advanced toward the front end of the plow-beam the greater will be the distance between the standard 7 and the point of the shovel attached thereto and the vertical plane of the beam. When the desired adjustment is reached, the bolts 9 are tightened, and the standard thus held securely and rigidly in place. By duplicating this construction upon each side of the beam it will be seen that the standards are capable of being adjusted toward and away from each other for the purpose of increasing or diminishing the space between the furrows to be formed.

13 designates the pivoted foot member, forming part of the complete standard, said foot member being formed, preferably, from a single piece or blank of bar steel or iron, the same being curved upon itself, as shown, in such manner as to form parallel arms or portions, which stride and embrace the depending portion 8 of the standard 7, said foot member being hinged thereto by means of a pivot 14, which passes through the lower extremity of said depending portion of the standard. The parallel arms or portions of the pivoted member 13 are extended upwardly beyond their pivot and are formed with expanded upper ends, adapting them to be provided with segmental slots 15, struck on the arc of a circle, of which the pivot 14 is the center.

16 designates a threaded bolt, which passes through the depending portion of the standard at a point in alinement with the segmental slots 15, referred to. This bolt is headed upon its inner end to engage the upper end of the inner portion of the foot member and receives upon its outer threaded end a winged or thumb nut 17.

Under the adjustment shown in Fig. 1 the segmental slots 15 engage with and pass over the bolt 16, when, by tightening the thumb-nut, it will be seen that the pivoted foot mem-

ber is held from vibrating upon its pivotal connection with the standard.

The foot member 13 below its pivotal connection with the standard is formed with a concaved front face, as clearly shown in the drawings, which adapts said member to receive and form an efficient seat for the cuff of the shovel which is to be applied to said foot. This cuff, designated at 18, is preferably formed from a sheet-metal blank, although of course it may be cast, if preferred, said cuff comprising a curved or substantially semicircular central portion and flat end portions, which are perforated for adapting said cuff to be bolted or otherwise secured to the rear face of a shovel or plow-point of any ordinary or preferred form and construction.

The cuff 18 is formed in its curved or semicircular central portion with a slot 19, extending transversely of the shovel and adapted to receive the shank of a T-headed bolt 20, the shank of said bolt also passing through the pivoted foot member 13 or between the parallel side portions thereof. The head of the bolt 20 corresponds approximately in width to the distance between the side portions of the pivoted foot member and is also of a width adapting it to pass through the slot 19 of the cuff referred to, after which such head is given a quarter-turn, which will adapt it to engage the cuff and bind the same against the concaved forward face or edge of the foot member. By means of this construction it will be seen that by loosening the bolt the angle of the shovel may be readily adjusted for throwing the earth in either direction and also that the height of said shovel with relation to the foot member may be regulated with ease and rapidity. In practice the thumb or winged nut 17 is tightened sufficiently only to hold the pivoted foot member in place under usual or ordinary conditions, thus adapting said foot upon its coming in contact with a rock or other heavy obstruction to yield backwardly or rock upon its pivot and prevent injury thereto and to the standard to which it is attached.

21 designates a centrally-disposed standard or foot, which is interposed between the side standards and has a plow-point or shovel secured thereto in a manner similar to the side standards, or said central point or shovel may be applied directly to the standard, as shown in Fig. 8, without the use of the slotted cuff 18, if so desired. The upper end of this standard 21 strides the beam 1 and is pivotally united thereto by a transverse horizontal bolt, as shown, and has pivotally connected to it an inclined rearwardly-extending brace 22, the rear end of which is longitudinally slotted, as shown at 23, to receive a securing-bolt passing vertically through the beam. This construction provides for adjusting the angle of the central standard 21 and for removing the same with ease, when desired.

From the foregoing description it will be apparent that a very simple, inexpensive, and

efficient construction of cultivator-plow is obtained, in which ample provision is made for adjusting the distance between the shovels, for regulating the angles of the shovels for the purpose described, for adjusting the height of the shovels relatively to the standards, for adjusting the angle of the pivoted foot members with relation to the standards, and for releasing the upper ends of said foot members and thus adapting the lower ends thereof to recede or yield backward upon coming in contact with an obstruction.

The plow constructed as hereinabove described is interchangeable and may be used for a variety of purposes. By removing the side plows and leaving the central one a single or scooter stock plow is obtained. By securing both of the side plows or shovels to the rear bolts a lister or garden plow is formed. By securing the side plows or shovels upon the forward pair of bolts a middle splitter is obtained. By omitting the central plow-point or shovel and arranging the side shovels, as shown in Fig. 1, a double-shovel plow or cultivator is produced. By omitting the central plow and arranging both of the side plows on the rear pair of bolts a straddle-jack plow is formed, while with the plow-points or shovels arranged in the manner shown in Fig. 1, with the center point or shovel in place, what is known as a "three-plow cultivator" is produced. Thus it will be seen that the plow is interchangeable, may be applied to a variety of uses, and may be easily and quickly changed from one character of plow or cultivator to another.

It will be apparent that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a plow or cultivator, the combination

with the beam thereof, of a standard comprising a rigid horizontally-disposed upper portion which is U-shaped or recurved, a rigid depending arm or portion, a shovel secured thereto, and means for adjustably fastening the inner arm of said U-shaped upper portion to the beam, substantially as specified.

2. In a plow or cultivator, the combination with the standard thereof having a curved depression in the advance edge of its foot, of a shovel, a curved cuff on said shovel seated in said depression, and a clamping device for binding said cuff in the depression of the standard, whereby the shovel may be adjusted, substantially in the manner and for the purpose described.

3. In a plow or cultivator, a standard having its forward face concaved or recessed, as described, in combination with a shovel provided upon its rear face with a curved or substantially semicircular cuff formed with a slot extending transversely of the shovel, and a T-headed bolt engaging said cuff, substantially as and for the purpose specified.

4. In a plow or cultivator, the combination with a standard, of a pivoted foot member formed from a metal blank bent or recurved upon itself to form substantially parallel side portions embracing said standard, said side portions having concaved forward edges, a shovel having secured to its rear face a curved or substantially semicircular and slotted cuff fitting said concaved edges, and a bolt engaging said cuff and having its shank extended between the parallel side portions of said pivoted foot, substantially as and for the purpose specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOB BROWN COLLARD.

HIRAM JOHEL HENSARLING.

Witnesses:

F. P. CROUCH,

S. O. FLOYD.