

No. 751,314.

PATENTED FEB. 2, 1904.

A. LINDGREN.
CULTIVATOR.

APPLICATION FILED OCT. 13, 1903.

NO MODEL.

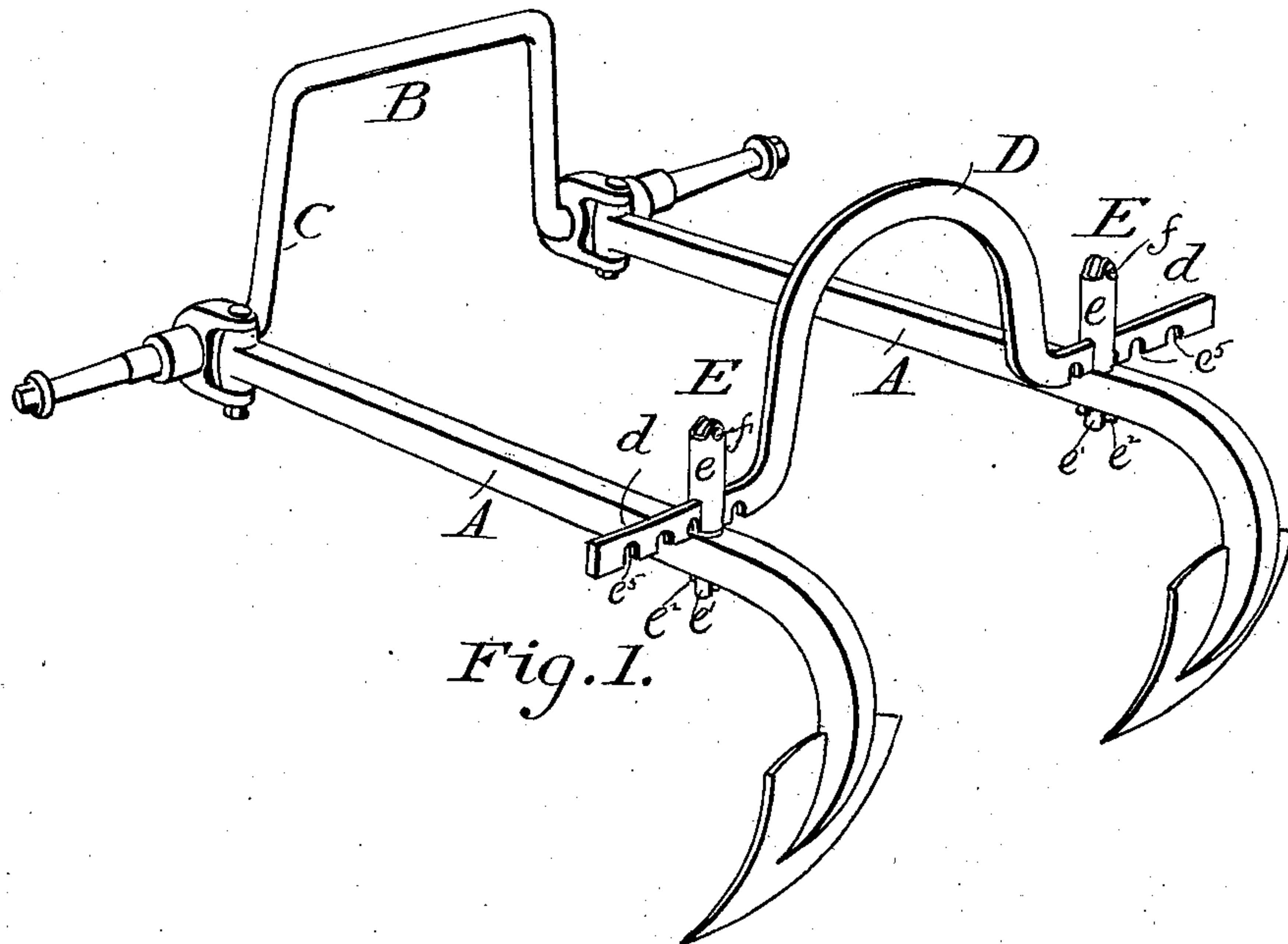


Fig. 1.

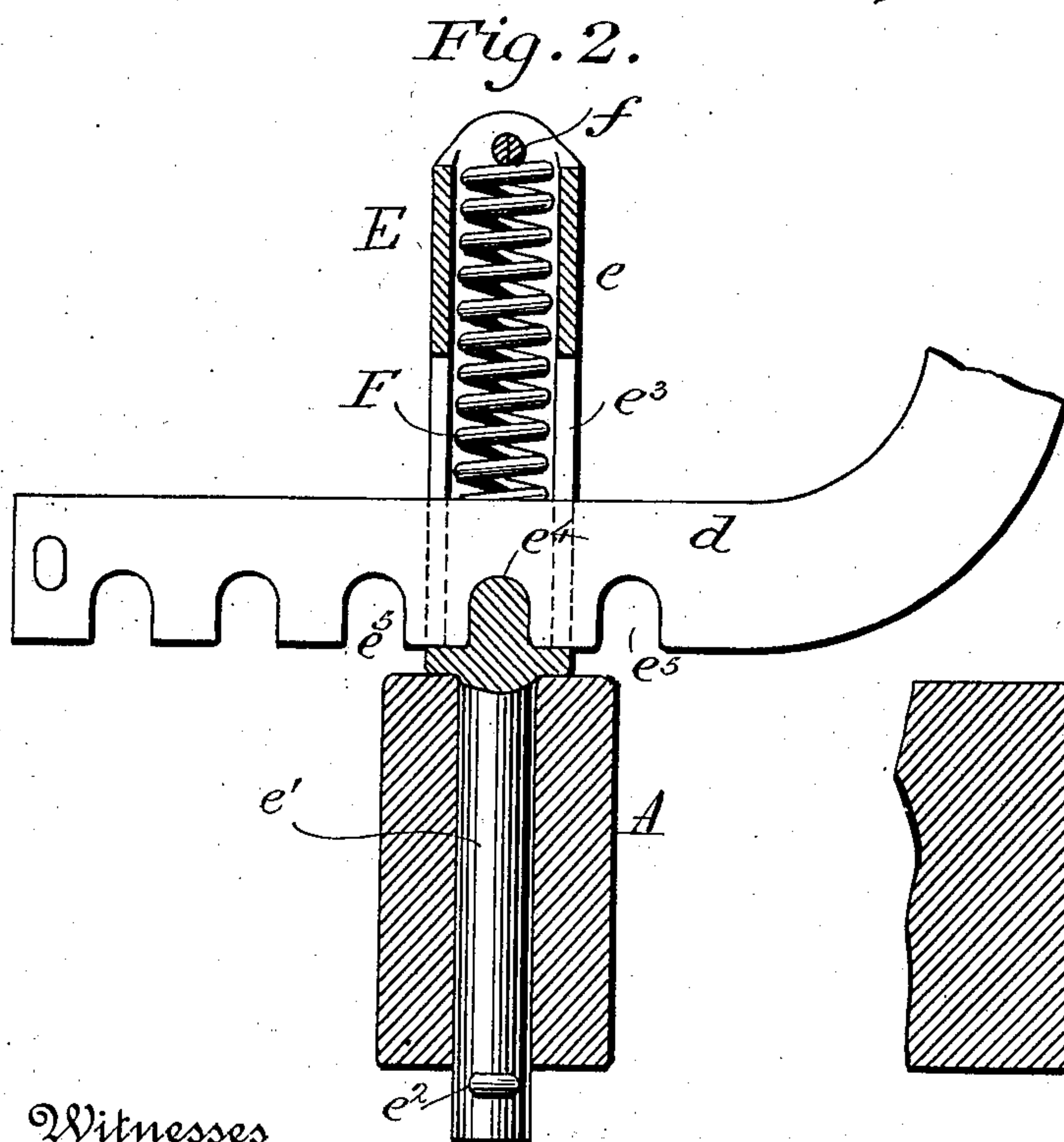


Fig. 2.

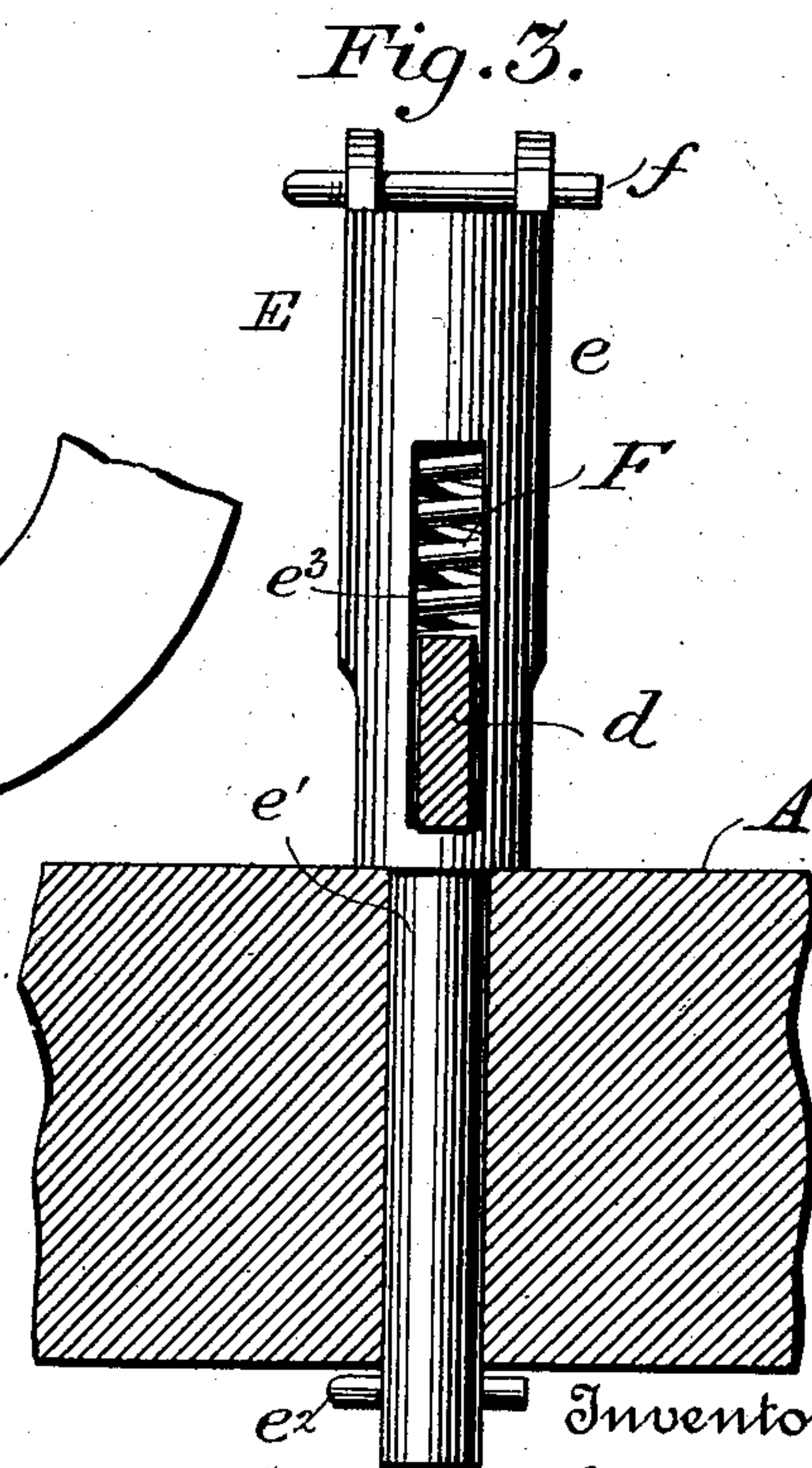


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

AUGUST LINDGREN, OF MOLINE, ILLINOIS, ASSIGNOR TO MOLINE PLOW COMPANY, A CORPORATION OF ILLINOIS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 751,314, dated February 2, 1904.

Application filed October 13, 1903. Serial No. 176,885. (No model.)

To all whom it may concern:

Be it known that I, AUGUST LINDGREN, of Moline, county of Rock Island, and State of Illinois, have invented a new and useful Improvement in Cultivators, of which the following is a specification.

This invention has reference to cultivators; and it relates more particularly to the transverse connecting member, usually in the form of a yoke or arch, which is employed to connect the beams together at a point in rear of their connection with the frame of the machine to cause them to move in unison. In the practical operation of machines equipped with these connecting-yokes it is frequently desirable to adjust the beams to and from each other to vary the distance between them according to the character of the work to be accomplished, and to meet this requirement I have devised a connection between the yoke and the beam of improved form and construction by means of which the beams may be quickly and easily adjusted and when adjusted will be firmly and effectively held in the desired position.

Referring to the drawings, Figure 1 is a perspective view of a cultivator having my invention embodied therein. Fig. 2 is a rear view in the nature of an elevation, partly in section and on an enlarged scale. Fig. 3 is a side elevation of my improved connecting device and the adjacent portion of the beam, also on an enlarged scale.

In the accompanying drawings, A A represent two fore and aft beams connected at their front ends to a cultivator-frame B, which may be of any appropriate construction, but which in the present instance embodies an arched axle C to straddle the row of plants under cultivation, the beams being connected at the sides of the arch to horizontal extensions of the same in such manner that the beams may be moved both vertically and laterally at their rear ends, as is customary in machines of this character. These beams may be equipped with blades or shovels of any desired character, so that when the machine is advanced through the field they will act at the sides of the row of plants. The foregoing parts may

be of any approved or well-known construction, and in themselves they constitute no part of the present invention.

D represents a connecting member for the beams, in the present instance in the form of an arch or yoke constructed from a single flat bar of metal bent upward at its center, so as not to interfere with the growing plants, and having at its ends horizontal lateral extensions d , which extend above the beams and to which they are connected by fastening devices E, so that the beams may be caused to move in unison to follow the rows of plants. These fastening devices are designed to admit of the quick and easy adjustment of the beams to and from each other with reference to the connecting-yoke, and as they are identical in form and mode of operation a description of one will suffice. These fastening devices each consist of a tubular casing e , having a depending stem e' , seated loosely in a vertical hole or socket in the beam and confined by a cotter-pin e'' , extending through the stem at the under side of the beam, or by other suitable fastening means. The tubular casing extends vertically above the beam and is formed with a vertical slot e''' , extending transversely therethrough, through which slot the horizontal extension d of the yoke extends and in which it may be locked at different points by means of a locking-lug e^4 , extending upward from the base of the casing on the inside and adapted to engage in either of a series of open slots or notches e^5 in the lower edge of the extension d . The engagement of the lugs and notches is yieldingly maintained by means of a spiral spring F, seated in the casing above the extension d of the arch, with its upper end bearing against a confining-pin f at the upper end of the casing and its lower end bearing frictionally on the upper smooth edge of the extension d . As a result of this construction the lug may be disengaged from the notch in which it is seated by forcibly moving the parts relatively in a vertical direction against the action of the spring, thereby compressing the spring, after which the yoke and beam may be shifted relatively in a horizontal direction until the

next notch arrives opposite the lug, whereupon the parts being released the spring will then expand and force the lug into the notch. In consequence of this construction and mode
 5 of operation of the fastening devices it is only necessary in order to adjust the beams, or either of them, to take hold of the upper part of the yoke and raise one end against the action of the spring sufficient to disen-
 10 gage the notch from the lug, when the beam may be moved laterally to the desired position until the notch corresponding to this position arrives opposite the lug, whereupon the parts being released the spring will again
 15 force the lug into the notch and hold them yieldingly interlocked. It is seen, therefore, that these coöperating devices form, in effect, a spring-actuated lock admitting of the easy and quick adjustment of the beams and in-
 20 suring an effective connection of the beams with the arch when adjusted to the desired position.

Having described my invention, what I claim is—

25 1. In a cultivator, the combination with the frame, of shovel-carrying beams connected therewith and movable laterally with reference to each other, a connecting member for said beams independent of the frame of the
 30 machine, to cause said beams to move in unison, and spring-actuated locking devices for securing said connecting member to the beams, substantially as described.

35 2. In a cultivator, the combination with the frame, of shovel-carrying beams connected therewith and movable laterally with reference to each other, a connecting member for said beams interlocked therewith, and means for holding the said member and beams yield-
 40 ingly interlocked.

45 3. In a cultivator, the combination with the frame, of laterally-movable shovel-carrying beams connected therewith, a connecting-yoke for said beams, fastening devices between the yoke and the beams adapted to be released by the relative movements of the yoke and beams, and means for holding said parts yieldingly against said relative movements.

50 4. In a cultivator and in combination with the frame, laterally-movable shovel-carrying beams connected therewith, a connecting-yoke for said beams, fastening devices between the

yoke and beams adapted to be released by a relative movement of the yoke and beams in a vertical direction, and means for holding
 55 said parts yieldingly against vertical relative movement.

60 5. In a cultivator and in combination with the frame, laterally-movable shovel-carrying beams, a connecting-yoke for said beams, fastening devices carried by the beams and adapted to be interlocked with the yoke at different points to vary the distance between the beams, and means for holding said parts yieldingly in-
 65 terlocked.

70 6. In a cultivator and in combination with the frame, laterally-movable shovel-carrying beams connected therewith, a connecting-yoke for said beams having a central arched portion and horizontal lateral extensions, fasten-
 75 ing devices carried by the beams and formed to interlock at different points in the length of the horizontal extensions, and a spring acting to hold the said parts interlocked.

80 7. In a cultivator the combination with the frame of laterally-movable shovel-carrying beams, a connecting-yoke for said beams having horizontal lateral extensions formed with notches, a frame or casing carried by the beam and having a lug adapted to engage in the
 85 notches, and a spring mounted in the frame or casing and bearing on the horizontal extension of said yoke and acting to hold the lug yieldingly in the notches.

90 8. In a cultivator and in combination with the beams, a connecting-yoke formed with horizontal lateral extensions provided in their lower edges with notches, a casing having a depending stem seated loosely in the beam and formed with a transverse slot through which
 95 the lateral extension of the yoke loosely extends, a lug on the casing adapted to be engaged in the notches, and a spring seated in the casing above the lateral extension of the yoke and bearing on the upper edge of the same.

In testimony whereof I hereunto set my hand, this 15th day of September, 1903, in the presence of two attesting witnesses.

AUGUST LINDGREN.

Witnesses:

L. C. BLANDING,
 C. H. LIPPINCOTT.