

No. 716,874.

Patented Dec. 30, 1902.

H. DRYSDALE.
ANIMAL SHEARS.

(Application filed May 20, 1902.)

(No Model.)

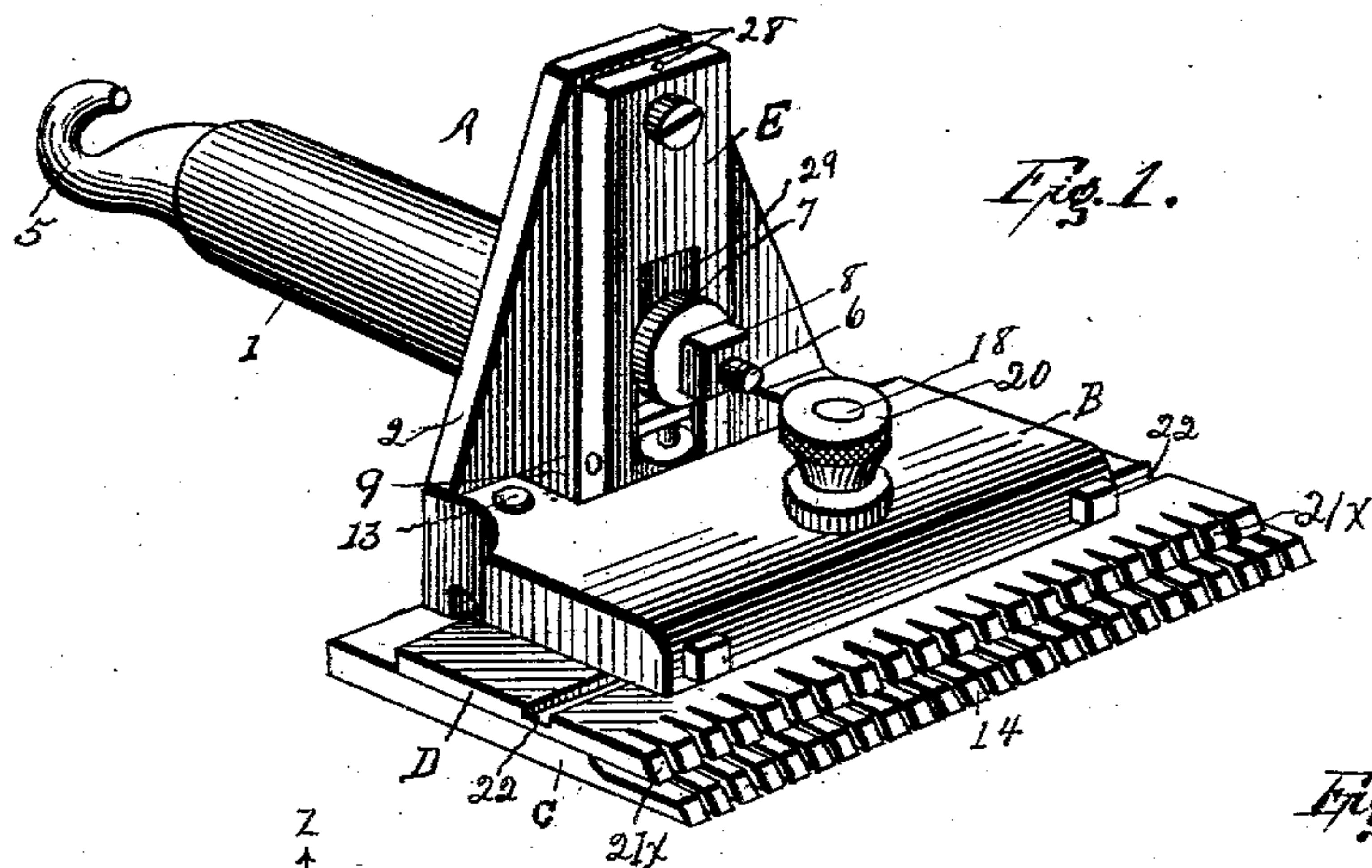


Fig. 1.

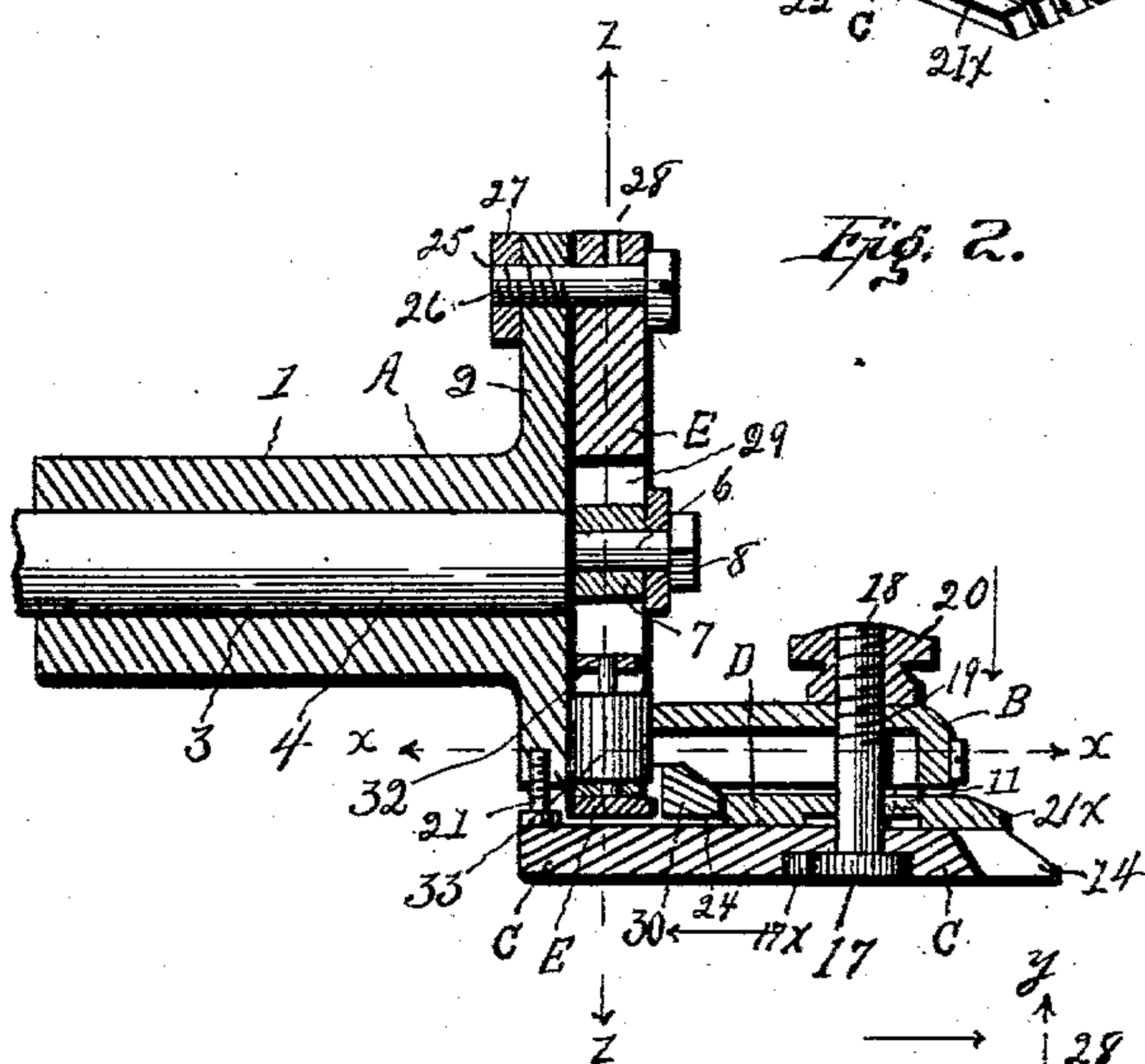


Fig. 2.

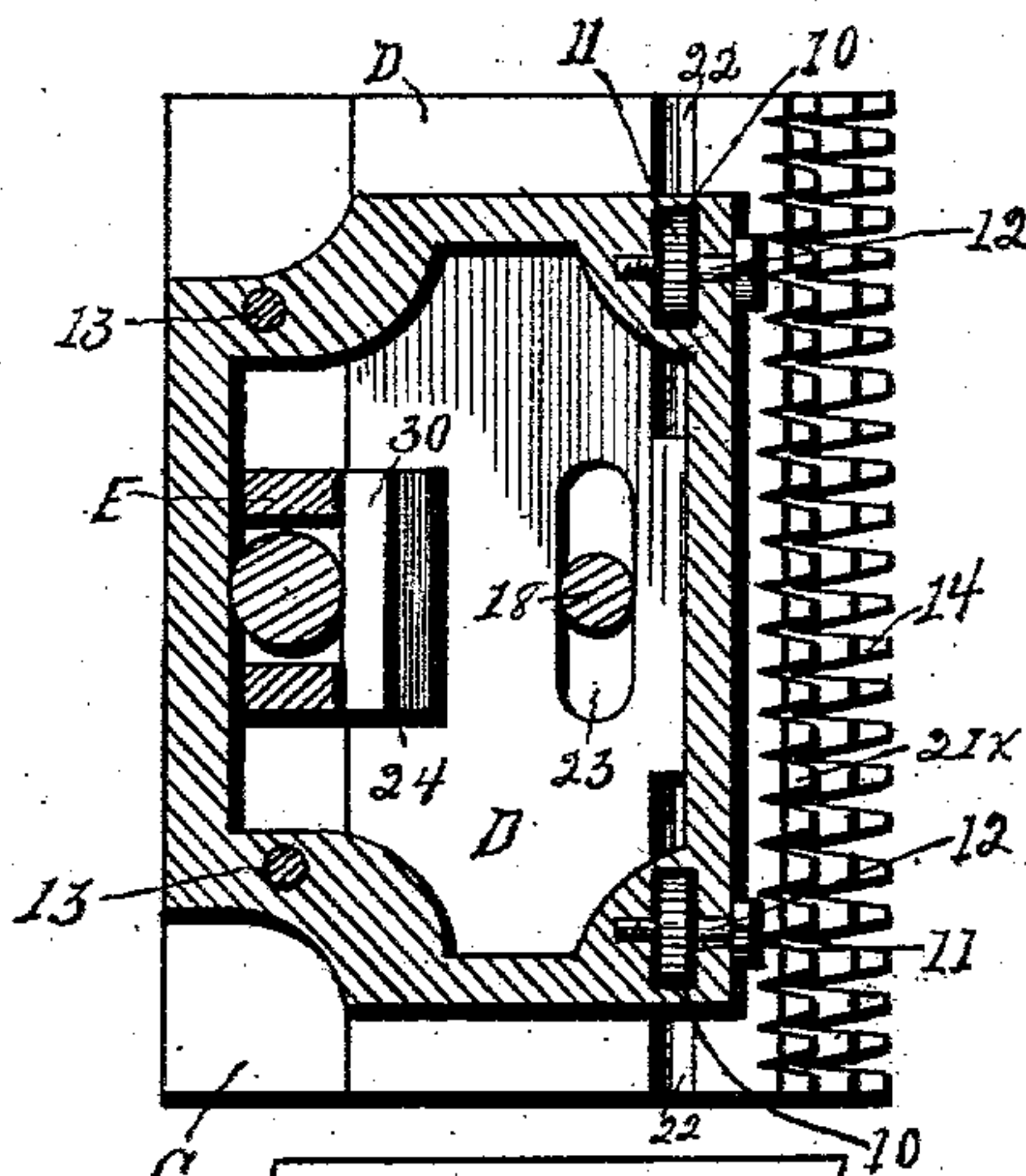


Fig. 3.

Fig. 4.

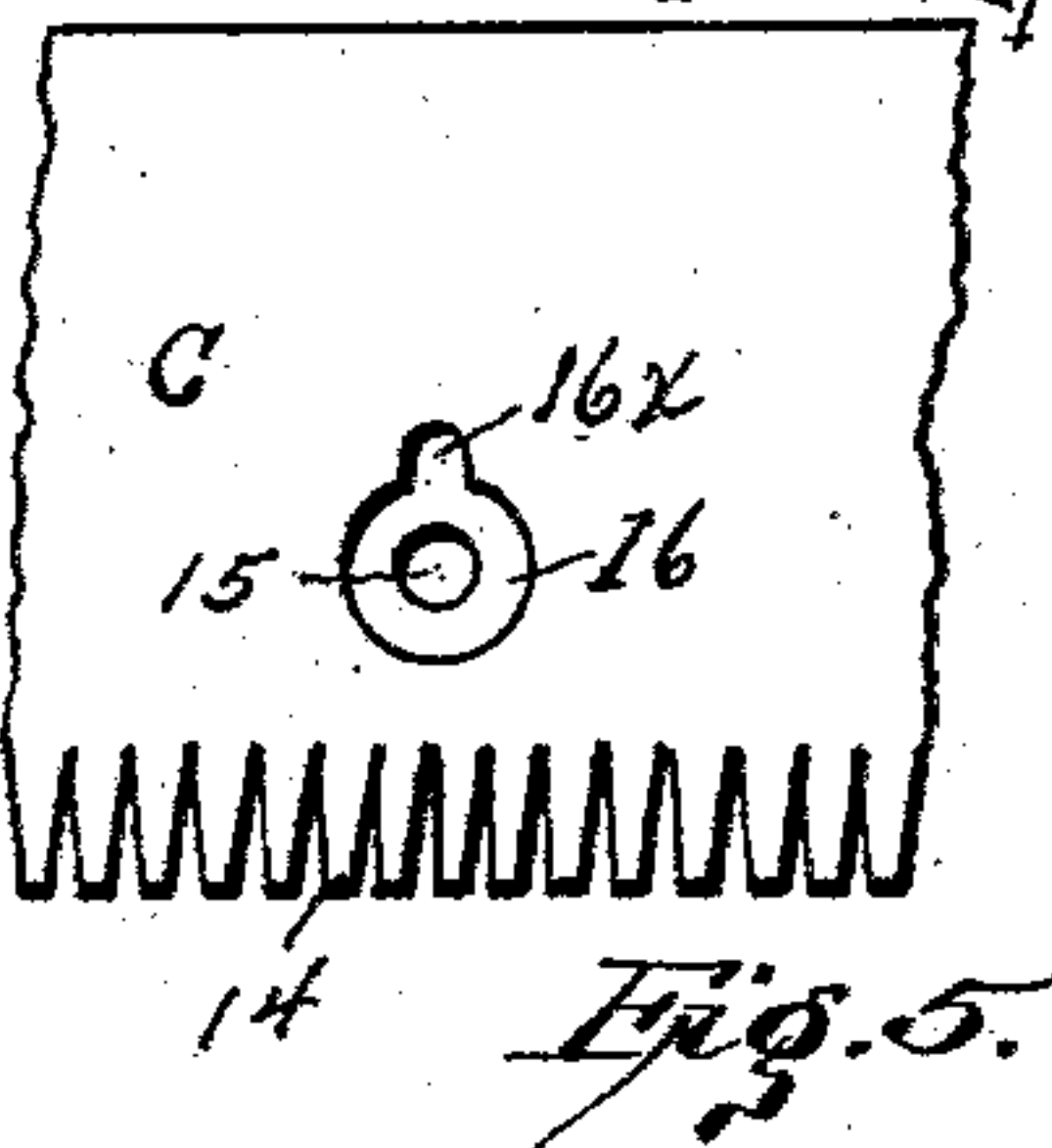
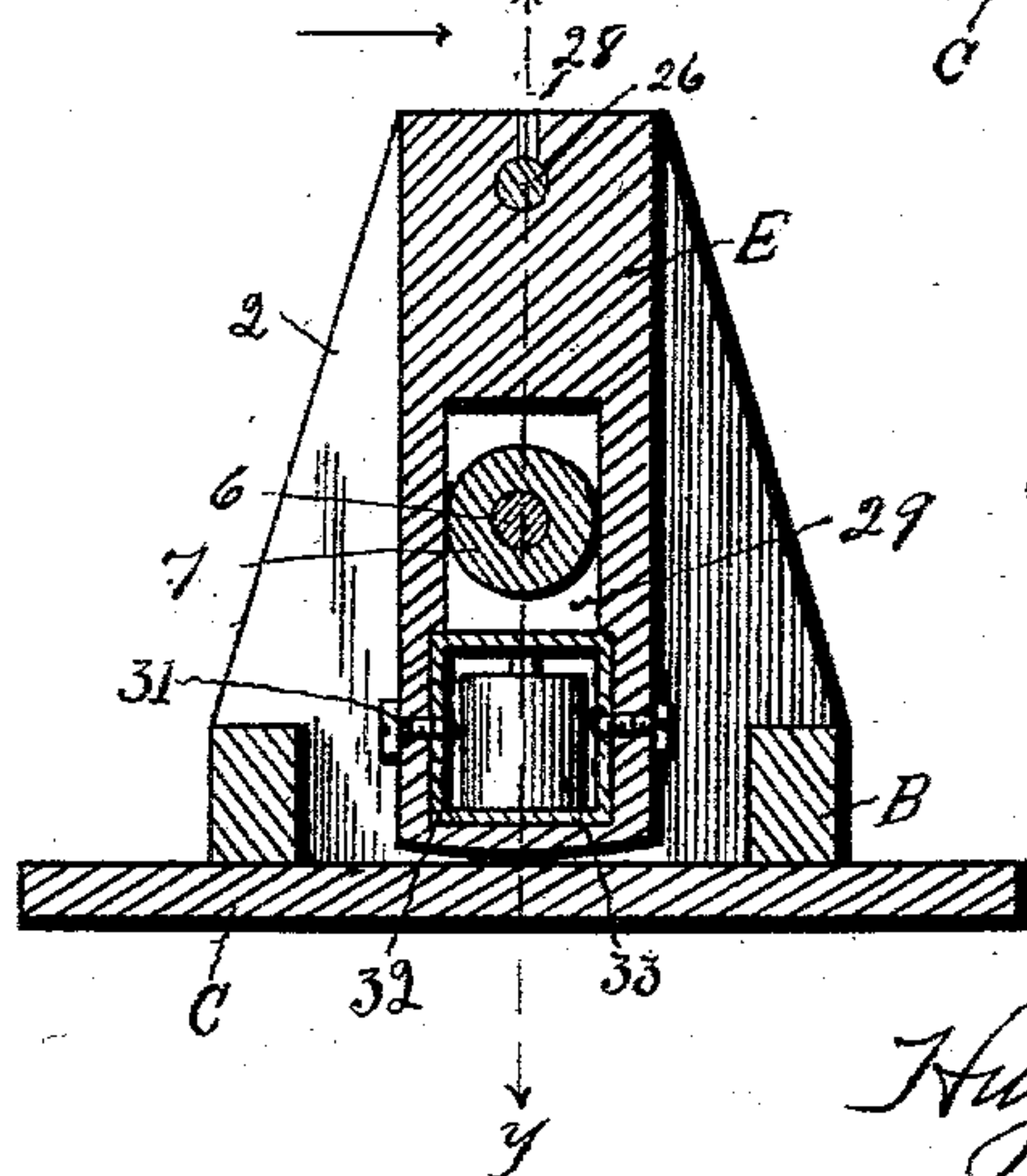


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

HUGH DRYSDALE, OF CLEVELAND, OHIO.

ANIMAL-SHEARS.

SPECIFICATION forming part of Letters Patent No. 716,874, dated December 30, 1902.

Application filed May 20, 1902. Serial No. 108,248. (No model.)

To all whom it may concern:

Be it known that I, HUGH DRYSDALE, a citizen of the United States, residing at No. 58 Edgewood Place, Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Animal-Shears; and I 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to new and useful improvements in mechanically-operated animal-shears, and especially to that class or type operated by means of power transmitted thereto by means of a flexible shaft or similar means connecting the shears with a suitable source of power.

The object of the invention is to provide an implement of the kind set forth which will be simple and durable in construction and which will be so constructed and operated as to reduce to a minimum the vibratory or shaking tendency of the implement as present in the usual and well-known structures.

The invention consists in the novel arrangement and aggroupment of parts as shown in the drawings, which will be more fully described in the following specification and the novelty of which will be particularly pointed out and distinctly claimed.

I have fully and clearly illustrated my invention in the accompanying drawings, wherein—

Figure 1 is a perspective view of the complete implement. Fig. 2 is a vertical longitudinal section taken on the line *yy* of Fig. 4. Fig. 3 is a transverse horizontal section taken on the line *xx* of Fig. 2. Fig. 4 is a vertical transverse section taken on the line *zz* of Fig. 2, and Fig. 5 is a detail view of a portion of the comb-plate.

A designates the head of the implement, upon which are operatively mounted and aggrouped the various working elements of the invention. This head A comprises a cylindrical hub or handle 1, at the front portion of which is integrally formed a vertical plate 2. Extending longitudinally through the handle 1

and opening through the plate 2 is a bearing 3, in which is rotatably arranged a shaft 4, the rear end of which protrudes beyond the rear of the handle 1 and terminates in an eye or hook 5, by which connection is conveniently made with a flexible shaft or some other like means for transmitting power. At its front end the shaft 4 is provided with a longitudinally-extending pin 6, which is arranged eccentrically to the longitudinal axis of the said shaft and has mounted thereon a suitable antifriction-collar 7, held against displacement by a bur 8, threaded onto the pin.

B designates a cap or pressure plate secured to or formed integrally with the base of the vertical plate 2 and arranged to lie in a plane substantially at right angles thereto. At its rear edge this plate B is slotted or cut away to afford a transverse guideway 9, one side of which is formed by the vertical plate 2. At its front edge the plate B is provided with apertures or sockets 10 10, in which are antifriction-rollers 11 11, which have their bearings upon threaded rods 12 12, let through the front edge of the plate.

Arranged beneath the cap or pressure plate B in a plane parallel therewith is a comb-plate C, which is secured in position by means of screws 13 13. This comb-plate C is provided with the usual cutting-teeth 14 and has an aperture 15 formed therein, substantially as shown in Fig. 5 of the drawings. About this aperture 15 the plate C is cut away on its under side to form a seat 16 to receive the head 17 of an adjusting-screw 18, the upper end of which extends through an opening 19 in the pressure-plate B and has threaded thereon an adjusting-nut 20, by which the comb-plate is moved toward or away from the pressure-plate.

The seat 16 in the lower face of the comb-plate C is provided with an offset 16^x, in which is seated a lug 17^x, formed on the head 17 of the adjusting-screw, thereby preventing a rotary movement of the said head. In the lower edge of the plate 2 is threaded a spacing-pin 21, against the lower end of which the comb-plate bears and is prevented from being drawn too close to the pressure-plate, and thus binding upon the cutting-plate and retarding its free movement.

D designates the cutting-plate, provided

with the usual cutting-teeth 21^x and arranged between the pressure-plate and the comb-plate and adapted to be reciprocated transversely thereof. This cutting-plate D is
5 formed with channels or guideways 22 22, in which the antifriction-rollers 11 11 rest. At its center this plate D is provided with a transverse slot 23 to provide for the passage of the adjusting-screw 18 and is cut out at
10 its rear edge, as at 24.

In the upper portion of the vertical plate 2 is formed an aperture 25, through which is projected a pivot-pin 26, which is held against longitudinal displacement by means of a bur
15 27, threaded onto the said pin.

In the top of the rocking arm E is an oil-hole 28 to introduce lubricant to the bearing of the arm E.

Mounted on the pivot-pin 26 and arranged
20 to swing thereon is a rocking arm E, which arm is formed with a longitudinal slot or guideway 29, which receives the eccentric formed by the pin 6 and the collar 7 on the end of the rotary shaft 4. The rocking arm
25 E extends downwardly through the slot 9 and is formed at its lower end with a lug or projection 30, which engages the cut-out portion 24 in the cutting-plate D and forms an operative engagement with the said plate to re-
30 ciprocate the same when the shaft 4 is rotated. In order to provide for an easy movement of the rocking arm, the lower end of the slot 29 has secured therein, by means of pins or set-screws 31, a frame 32, in which is
35 arranged a vertically-disposed antifriction-roller 33, which is adapted to bear against the rear edge of the pressure-plate B and the front face of the vertical plate 2.

The operation of the device as above de-
40 scribed is believed to be apparent; but it may be briefly rehearsed, as follows: A rotary movement being conveyed to the shaft 4 in the manner described, the eccentric-pin 6 on the said shaft is revolved, which in turn en-
45 gages the slot or guideway 29 and imparts an oscillatory movement of this arm E, which through its connection with the cutting-plate D reciprocates the said plate, whereby the

cutting-teeth are moved across the teeth of the comb-plate C and sever any hair which
50 may protrude above the face of the plate.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a shearing-machine, the combination
55 with a head, of a comb-plate, a cap-plate, a cutting-plate arranged intermediate the comb-plate and the cap-plate, a rocking arm to actuate the cutting-plate, a roller jour-
60 naled in the rocking arm and adapted to en- gage the head and cap-plate and means to rock the rocking arm.

2. In a shearing-machine, the combination
65 with a head, a comb-plate, a cap-plate and a cutting-plate arranged intermediate the comb-plate and the cap-plate, of an oscillatory arm fulcrumed to the top of the head and adapted to actuate the cutting-plate, and means to oscillate the rocking arm.

3. In a shearing-machine, the combination
70 with a head having a rotary shaft journaled therein, of a comb-plate, a cap-plate having antifriction-rollers mounted therein, a cutting-plate arranged intermediate the comb-plate and cap-plate, a slotted rocking arm to
75 actuate the cutting-plate, and means working in the slot of said arm to oscillate the said arm.

4. In a shearing-machine, the combination
80 with a head having a rotary shaft journaled therein and provided with an eccentric, of a comb-plate, a cap-plate having antifriction-rollers mounted therein, a cutter-plate intermediate the comb-plate and the cap-plate and provided with guideways for said rollers, a
85 rocking arm having a slot to be engaged by the eccentric, a lug to engage the cutter-plate and a friction-roller to engage the cap-plate, and means to regulate the pressure of the cutter-plate on the comb-plate.
90

In testimony whereof I affix my signature in presence of two witnesses.

HUGH DRYSDALE.

Witnesses:

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R. C. LINDER.