

No. 692,672.

Patented Feb. 4, 1902.

R. JOOST & B. T. GEORGE.
INSECT DESTROYING APPARATUS.

(Application filed Oct. 5, 1901.)

(No Model.)

Fig. 1.

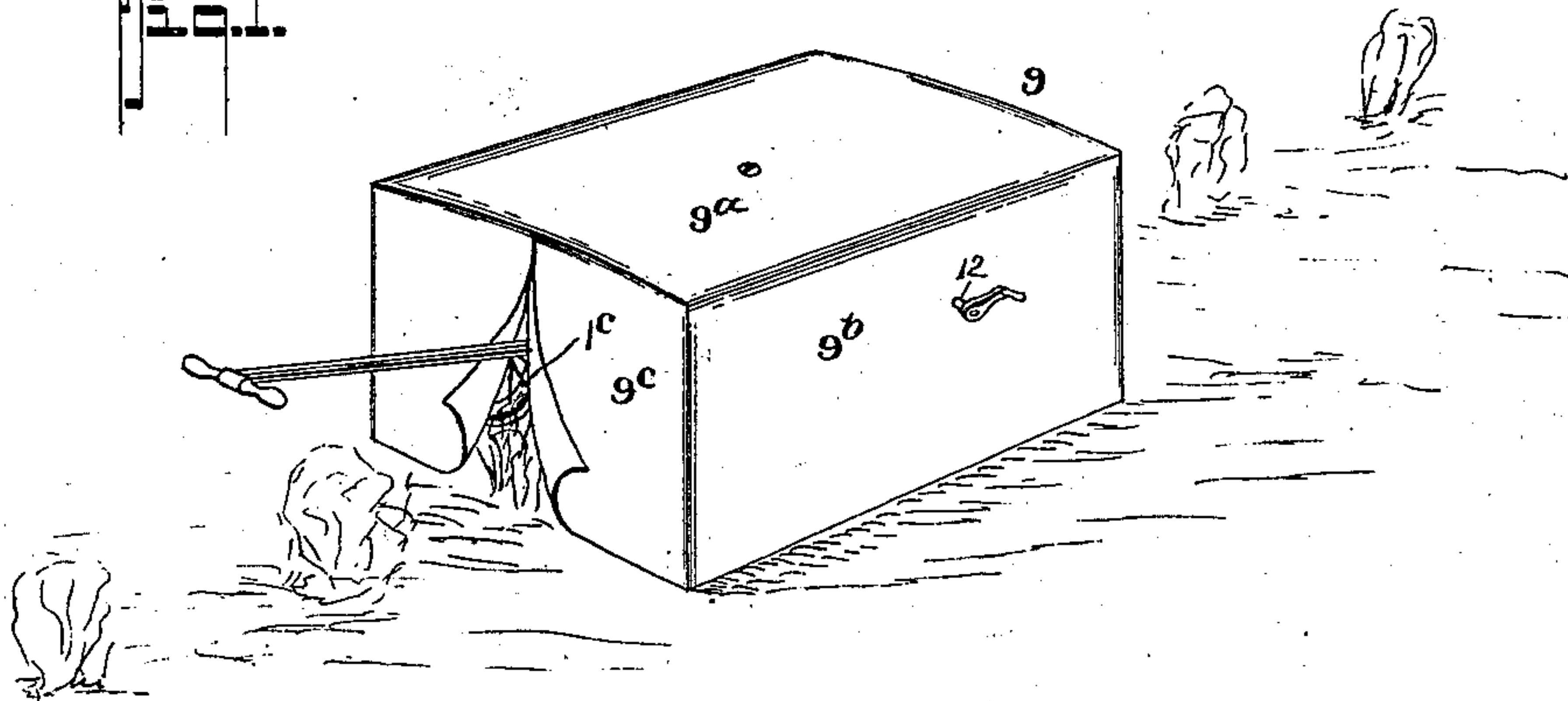


Fig. 2.

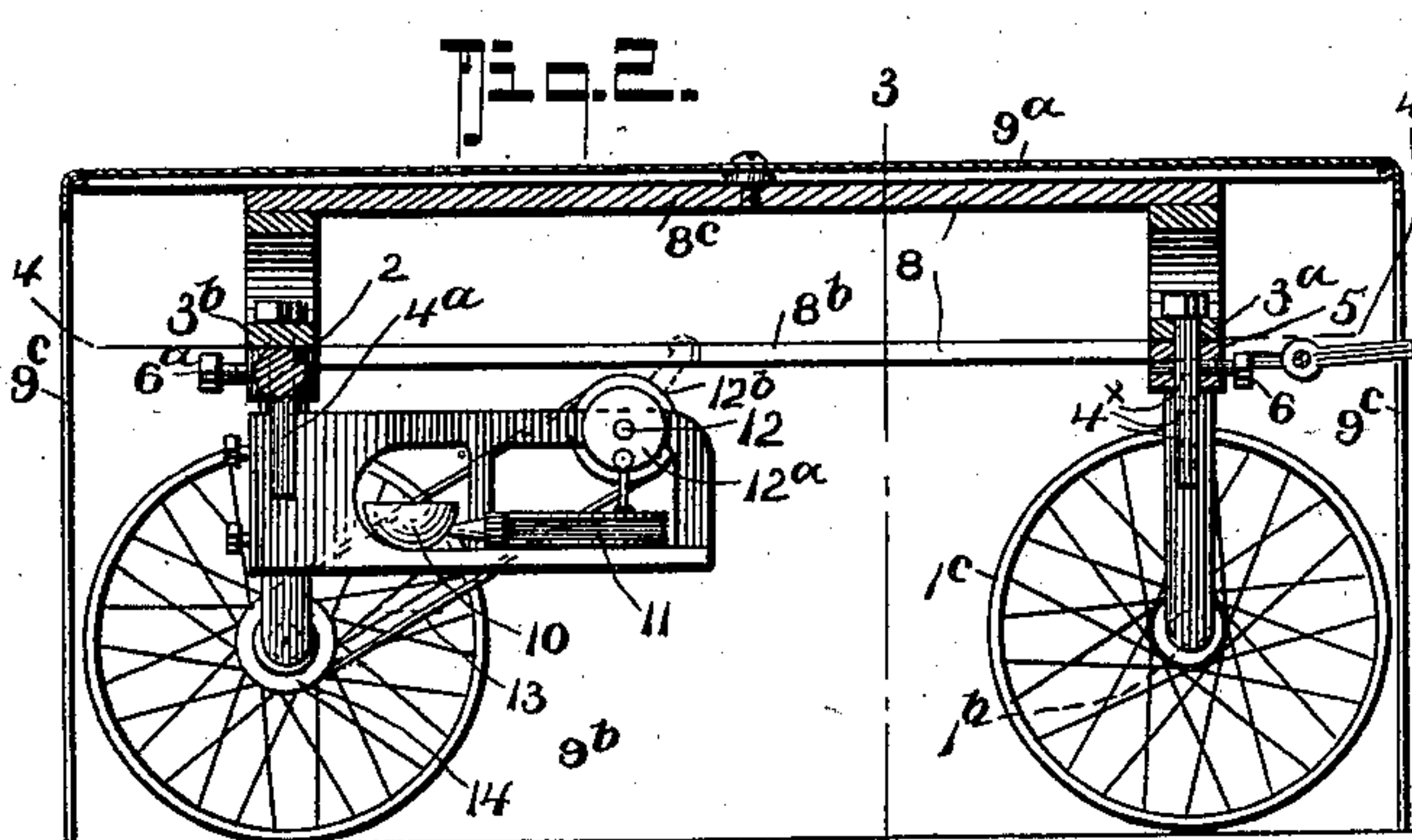


Fig. 3.

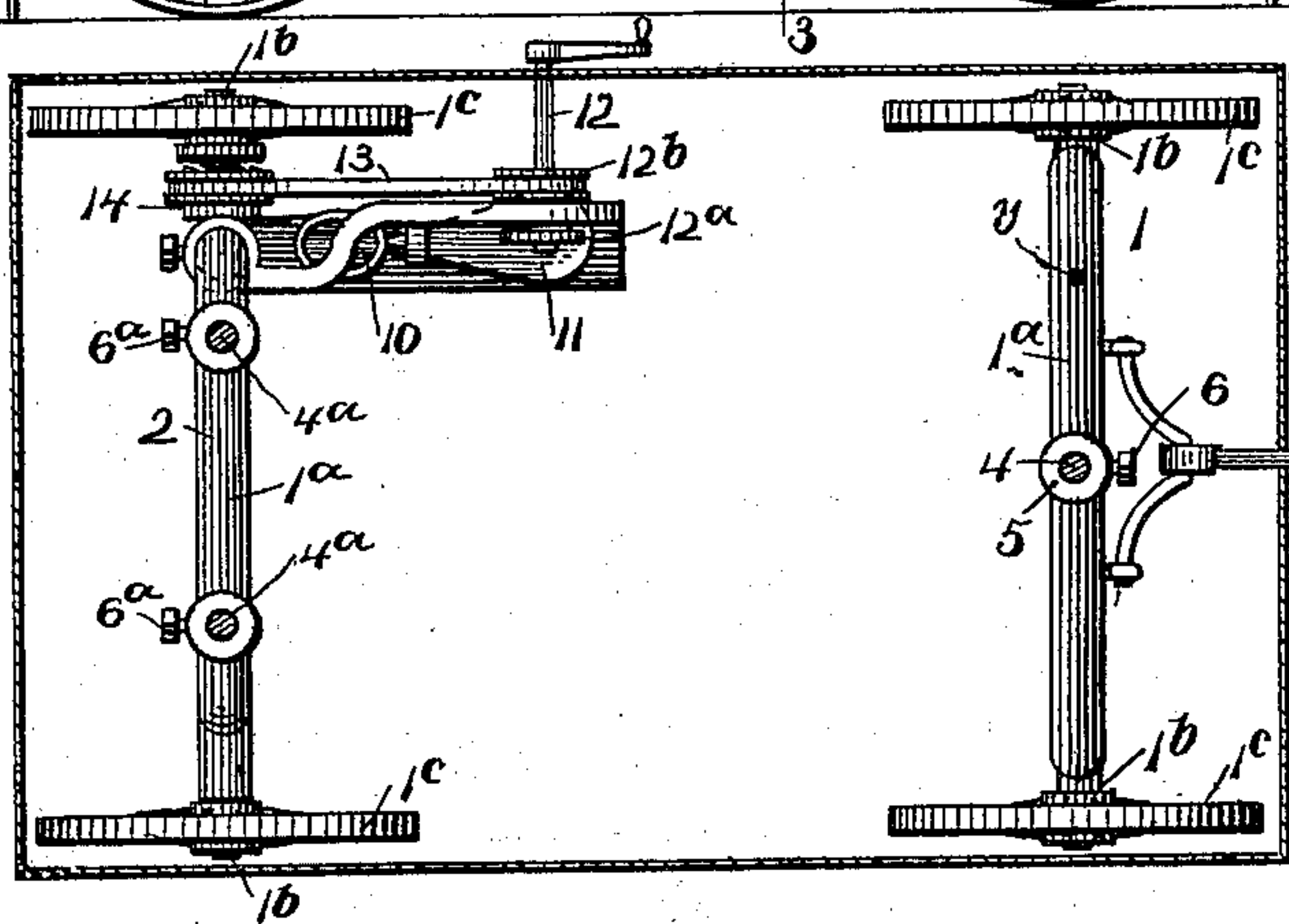
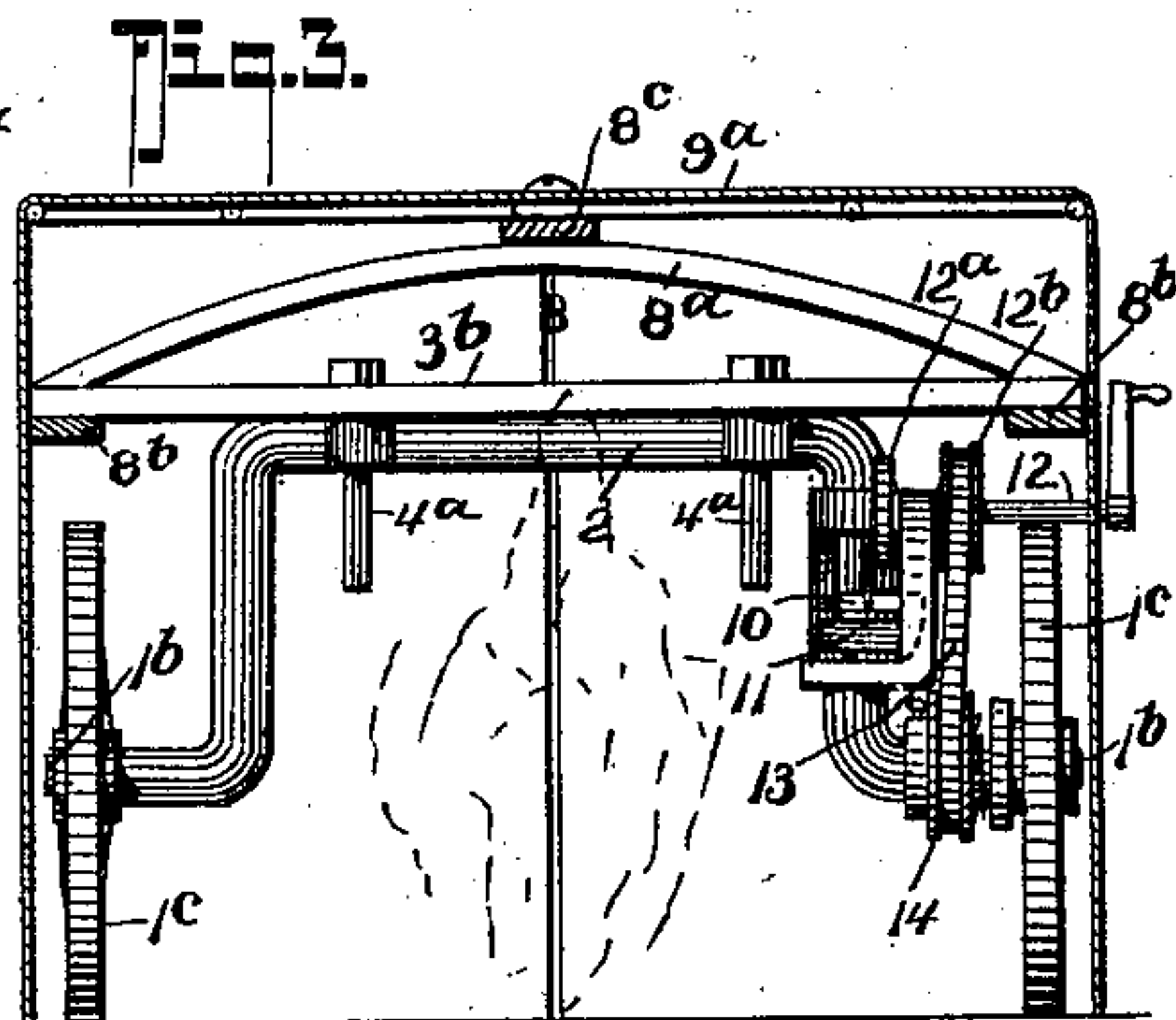
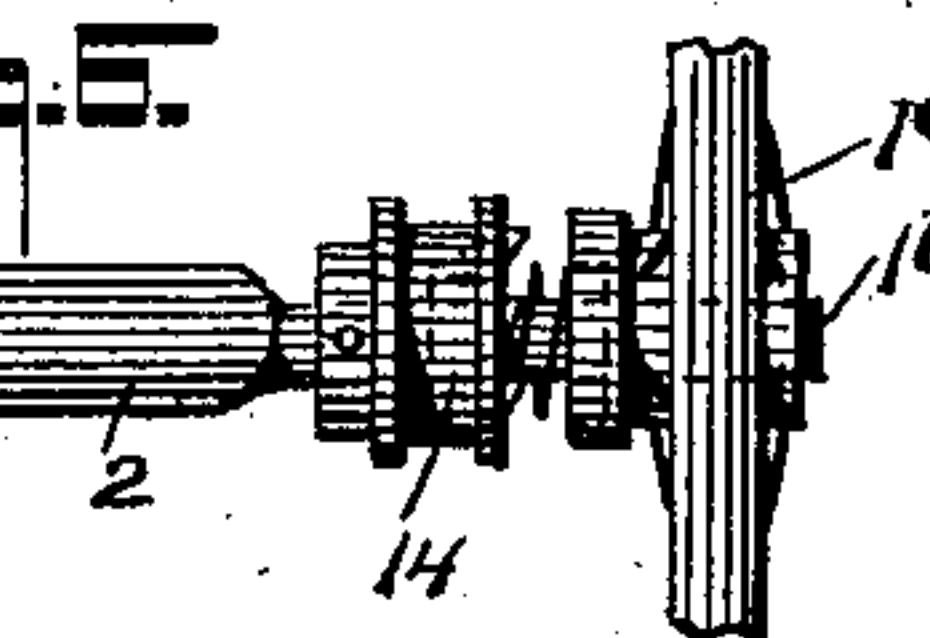
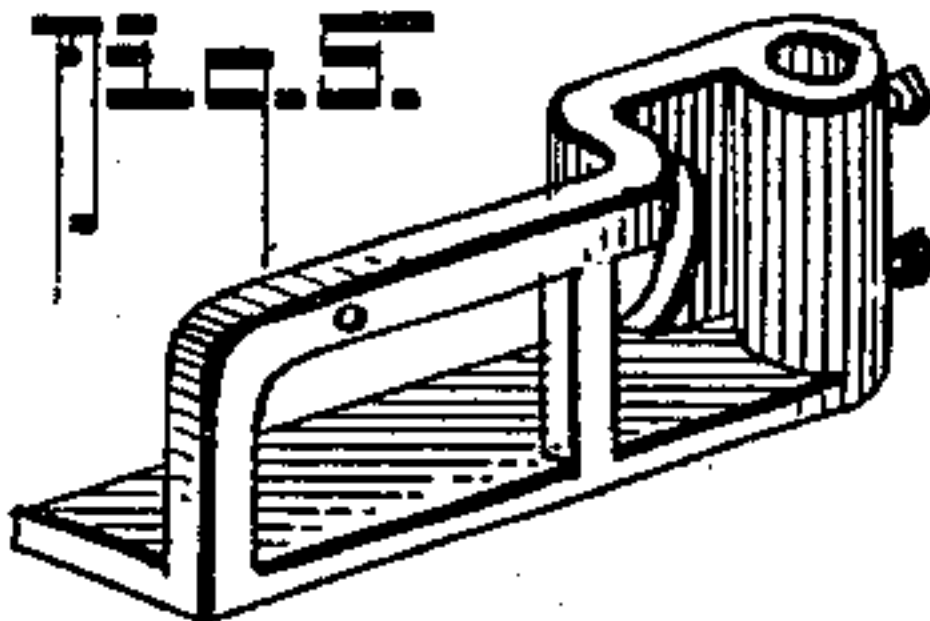


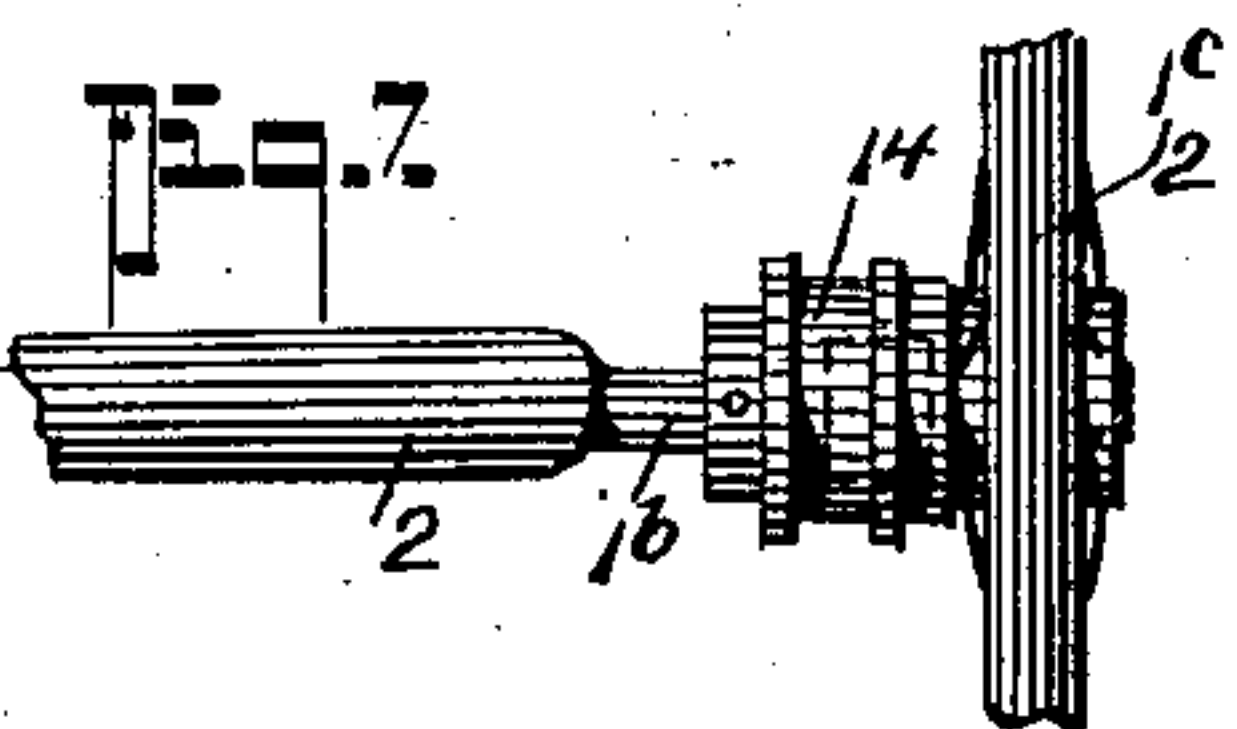
Fig. 4.



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Fig. 7.



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RUDOLPH JOOST AND BENTLEY T. GEORGE, OF GATES, OREGON.

INSECT-DESTROYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 692,672, dated February 4, 1902.

Application filed October 5, 1901. Serial No. 77,694. (No model.)

To all whom it may concern:

Be it known that we, RUDOLPH JOOST and BENTLEY T. GEORGE, residing at Gates, in the county of Marion and State of Oregon, have invented a new and Improved Insect-Destroying Apparatus, of which the following is a specification.

Our invention seeks to provide a simple, inexpensive, efficient, and easily-manipulated means for killing hop-lice, worms, and other insects that injure and destroy cereals, fruits, vegetables, trees, &c.; and our invention in its generic nature comprehends a carriage or frame adapted to straddle the rows of young plants, trees, &c., a vertically-adjustable frame mounted thereon and adapted to support a tent or hood made of cotton fabric to envelop or house up the plant, vegetable, hop-vine, or tree being fumigated, and a furnace for generating chemically-treated smoke and fumes, also mounted in the carriage and movable therewith.

In its more subordinate features our invention includes certain novel details of construction and peculiar combination of parts, all of which will hereinafter be first described in detail and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of our invention, showing the manner of its use. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a cross-section thereof on the line 3 3 of Fig. 2, and Fig. 4 is a horizontal section on the line 4 4 of Fig. 2. Fig. 5 is a detail view of the blower-holding bracket. Figs. 6 and 7 are detail views of the shifting clutch mechanism hereinafter referred to.

In the drawings, in which like numerals indicate like parts in all the figures, 1 designates a front truck-frame and 2 a rear truck-frame, each of which consists of an arched axle 1^a, having end spindles 1^b to receive the carrier-wheels 1^c.

3 designates a tent-supporting frame, which consists of the front and rear end bars 3^a 3^b, that extend transversely of the carriage, and said bars are of such length that their ends project beyond the wheels 1^c 1^c, as clearly shown in Fig. 3, the reason for which will presently

appear. The front bar 3^a is centrally supported on a long king-bolt 4, that passes down through the crown of the front arched axle, which at its crown portion has a pendent hub 5, apertured to receive a clamping pin or bolt 6, also adapted to pass through any one of a series of apertures 4^x in the front bolt 4, as shown in Fig. 2. The rear bar has two long bolts 4^a 4^a, that pass down through a pair of apertures in the crown of the rear axle, and these bolts are also apertured, as at 4^y, to receive the clamping pins or bolts 6^a 6^a, that also engage the apertures in the hubs 5^a 5^a.

By using two vertical bolts to engage the rear axle and only one of said bolts to engage the front axle the entire carriage-frame will be held from running awry or wobbling, and yet permit of the front axle being properly turned for guiding.

To hold the front axle from turning when it is desired that the entire apparatus is to run straight ahead, a supplemental hole is made in the front bar to register with a supplemental aperture *y* in the axle, said apertures being intended to receive a lock or key pin.

By supporting the bars on the axle members, as described, they can be readily adjusted vertically to suit the height of the plants or vines and young trees. For high trees the vertical bolts may be formed of sections clamped together to get the height desired.

8 designates a skeleton frame consisting of the arch ends 8^a, made fast to the end bars 3^a 3^b, the side bars 8^b, and the central or crown bar 8^c, that extends lengthwise and connects with the crown of the arched ends 8^a, the said parts forming a simple, light, and durable means for supporting a covering or tent 9 of light fabric and consisting of an upper part 9^a and pendent ends and sides 9^b 9^c, which in the practical construction may have reefing means, buttonholes, or ties (not shown) for tucking up the bottom edges, whereby to adjust the pendent portion of the tent to suit the vertical adjustment of the frame 8 and to keep the lower edges of the tent from dragging.

10 designates a burner or furnace for creating the fumigant and for producing a quick

and powerful smoke and vapor. A blower 11 is also mounted on the carriage by suspending it from the rear axle. A means for operating it is also provided, consisting of a cam or crank member 12^a on a shaft 12, having a crank-receiving end whereby it can be rotated by hand-power when desired. It also has a belt-wheel 12^b, connected by a belt 13 with a drive-pulley 14 on the rear axle. This pulley is shiftably mounted on the axle to engage or be moved out of engagement with a clutch-hub on said axle.

By having the blower-operating cam device connected with the axle it can be automatically operated to effect a blower action during the movement of the apparatus over the field or thrown out of gear with the axle, as desired.

From the foregoing description, taken in connection with the drawings, the advantages of our invention are apparent. It will be noticed that the tent can be readily detached from the supporting parts, and by reason of the adjustability of the frame 8 the apparatus can be quickly adjusted for plants, trees, &c., of different heights and the housing made to fit to close over same as to concentrate the fumigant quickly and effectively.

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

1. The combination with the front and rear arched axles, and the vertically-adjustable frame 8, said frame having a single pendent bolt or rod at the front adapted to form the pivot or king bolt for the front axle, and hav-

ing a plurality of rods for slidably connecting with the rear axle, for the purposes specified.

2. The combination with the front and rear arched axles; of the frame 8, consisting of cross-bars, the ends of which are adapted to project beyond the sides of the carriage, said bars having pendent members vertically adjustable on the arched axle, curved cross-bars and longitudinal members, and a flexible covering, adapted to hang pendently over the sides and ends of the carriage and supported on the frame 8, for the purposes described.

3. An improved insect-destroying apparatus, comprising a carriage having front and rear arched axles, a furnace mounted on the carriage, a blower for said furnace, means controlled by one of the drive-axles for operating the blower, a frame projected up from the carriage and a flexible covering detachably suspended from the frame to envelop the entire apparatus, for the purposes specified.

4. The combination with the front and rear arched axles, the frame 8, vertically adjustable on said axles, the detachably-held flexible covering, the furnace carried on the carriage-frame, a blower, a cam device for operating the blower, including a winding-shaft and clutch mechanism on one of the drive-shafts, geared with said winding-shaft, all being arranged substantially as shown and for the purposes described.

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