

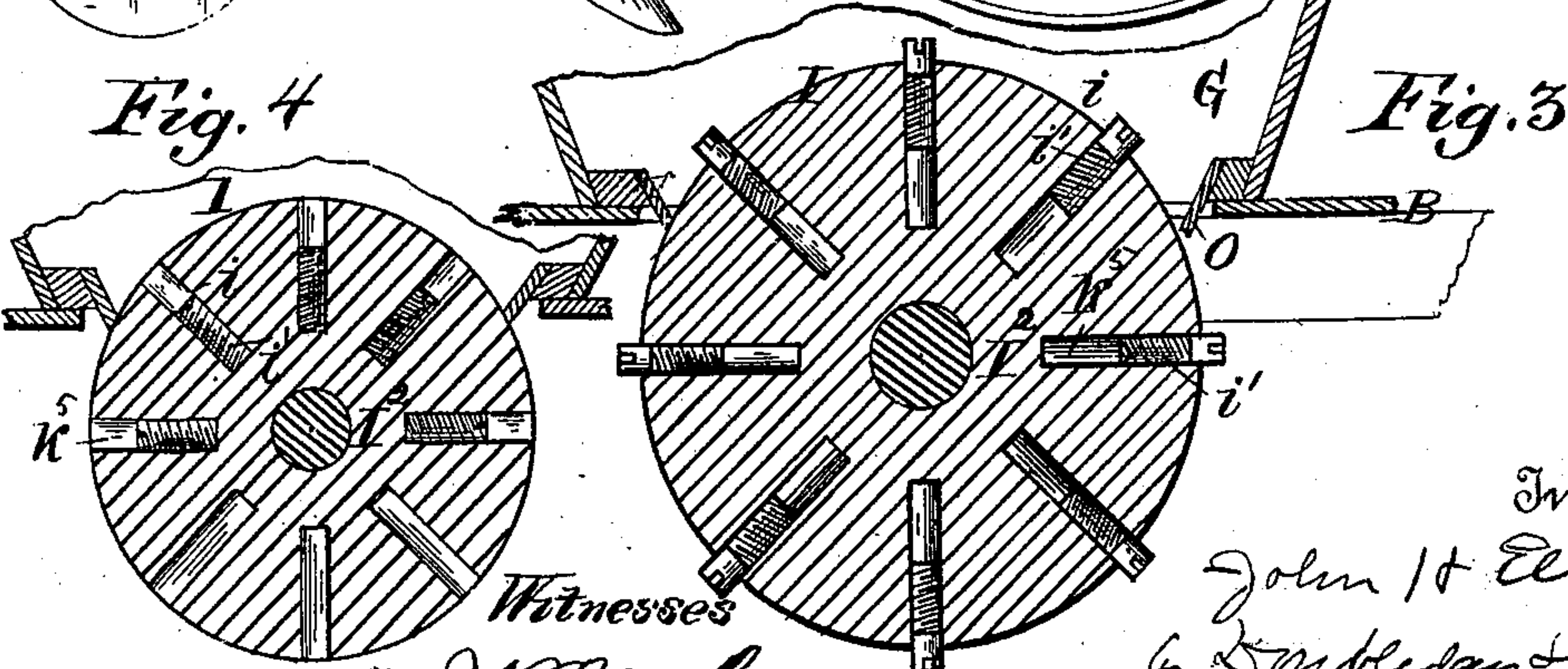
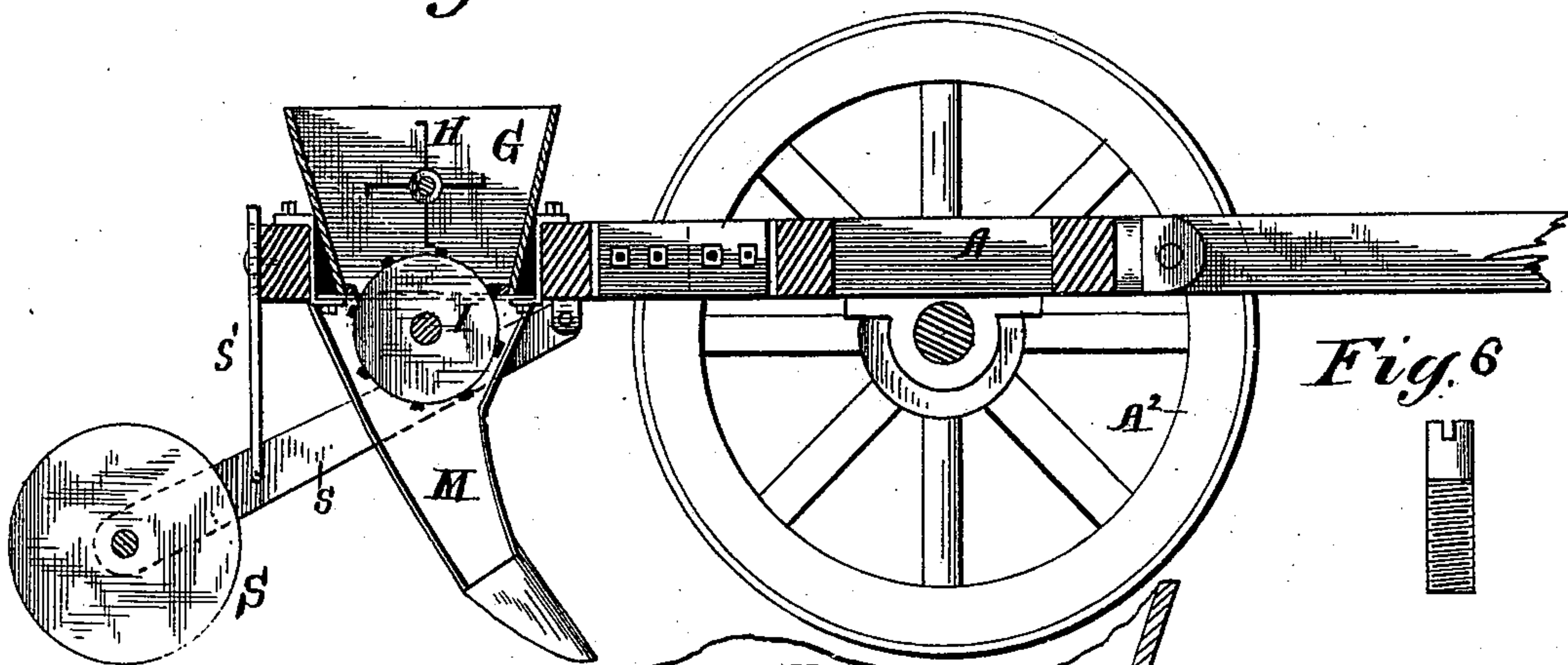
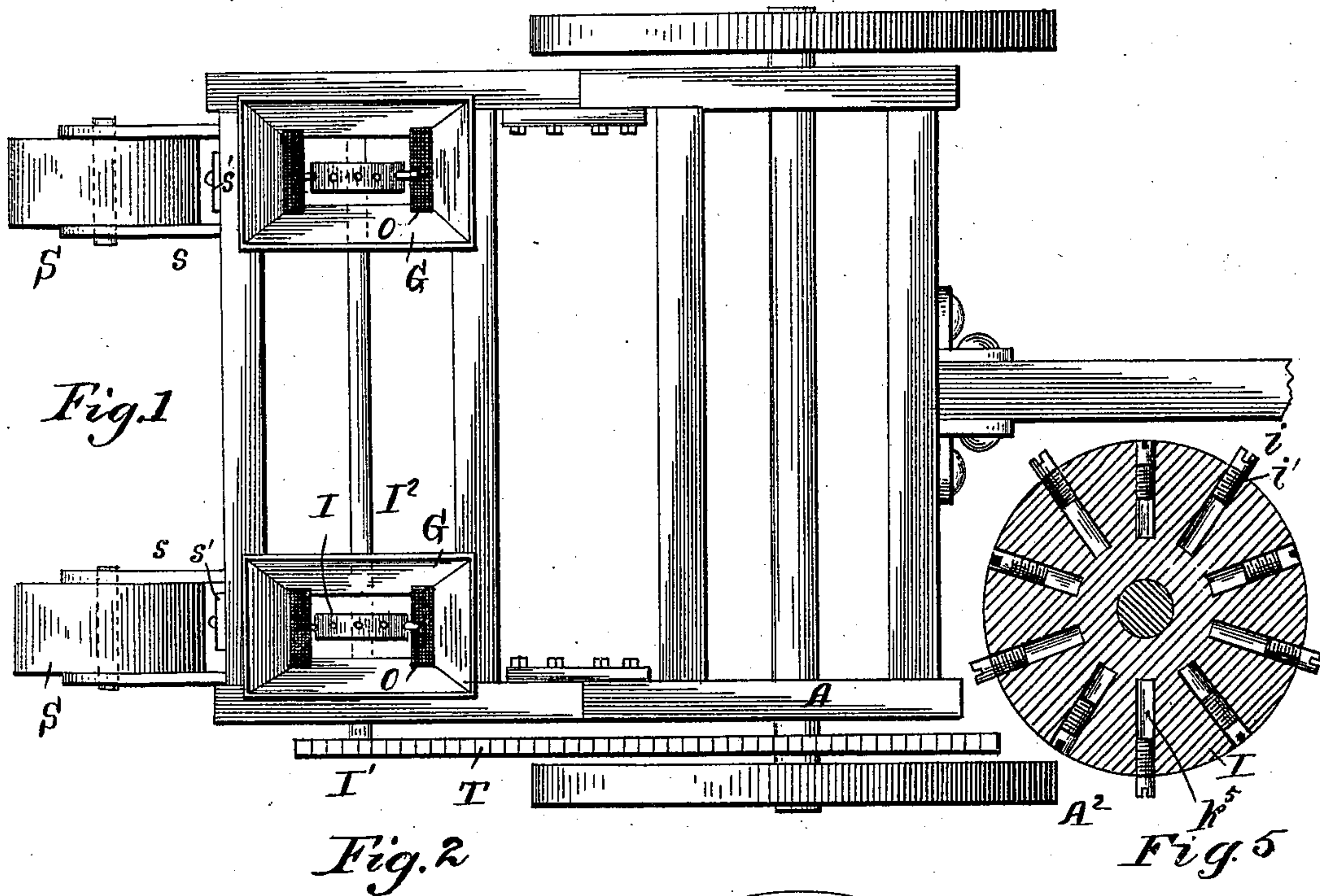
(No Model.)

3 Sheets—Sheet 1.

J. H. ELWARD.
PLANTER.

No. 545,583.

Patented Sept. 3, 1895.



Witnesses
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J. C. Turner

Inventor
John H. Elward
by Embury & Bliss
his Attorneys

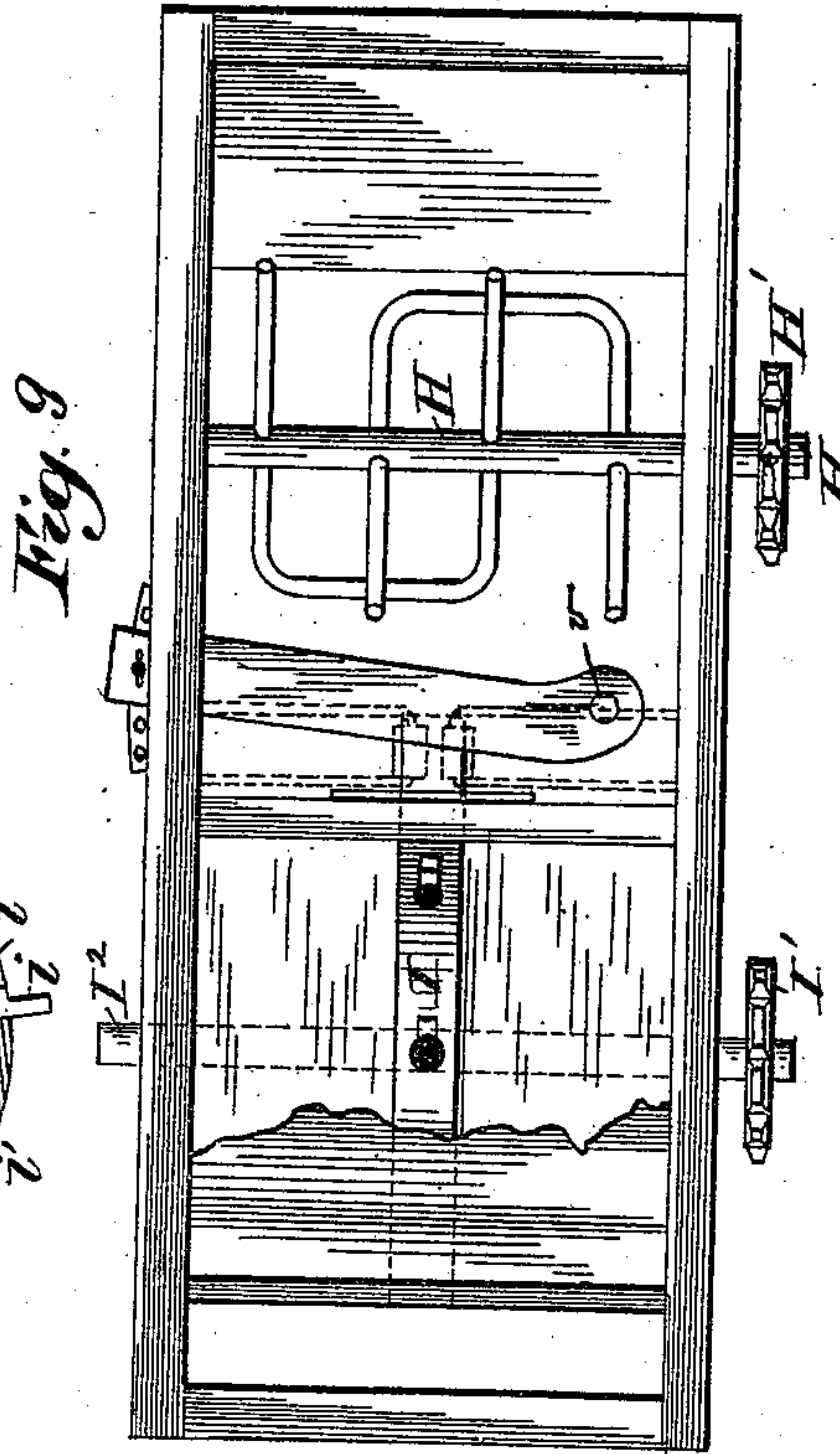
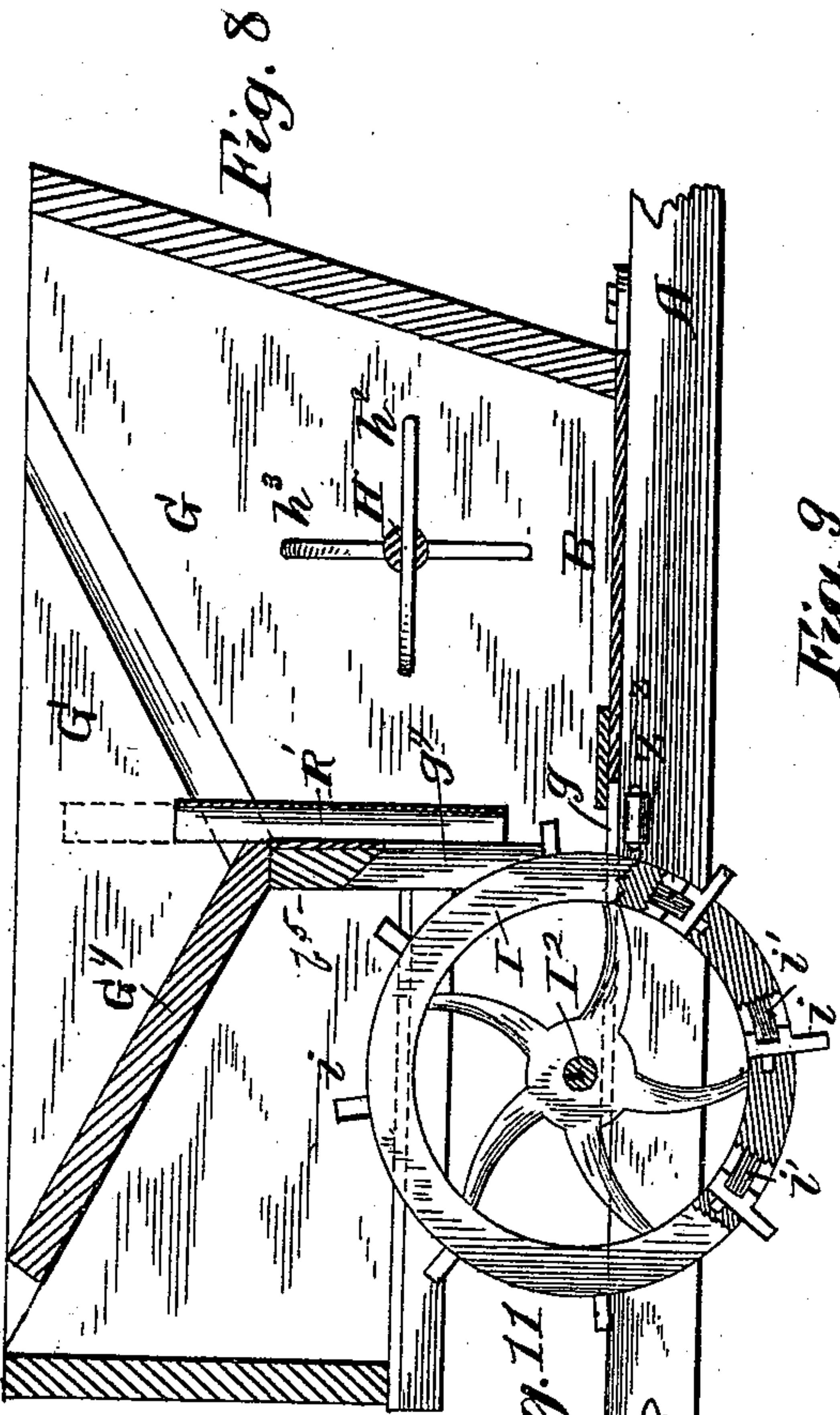
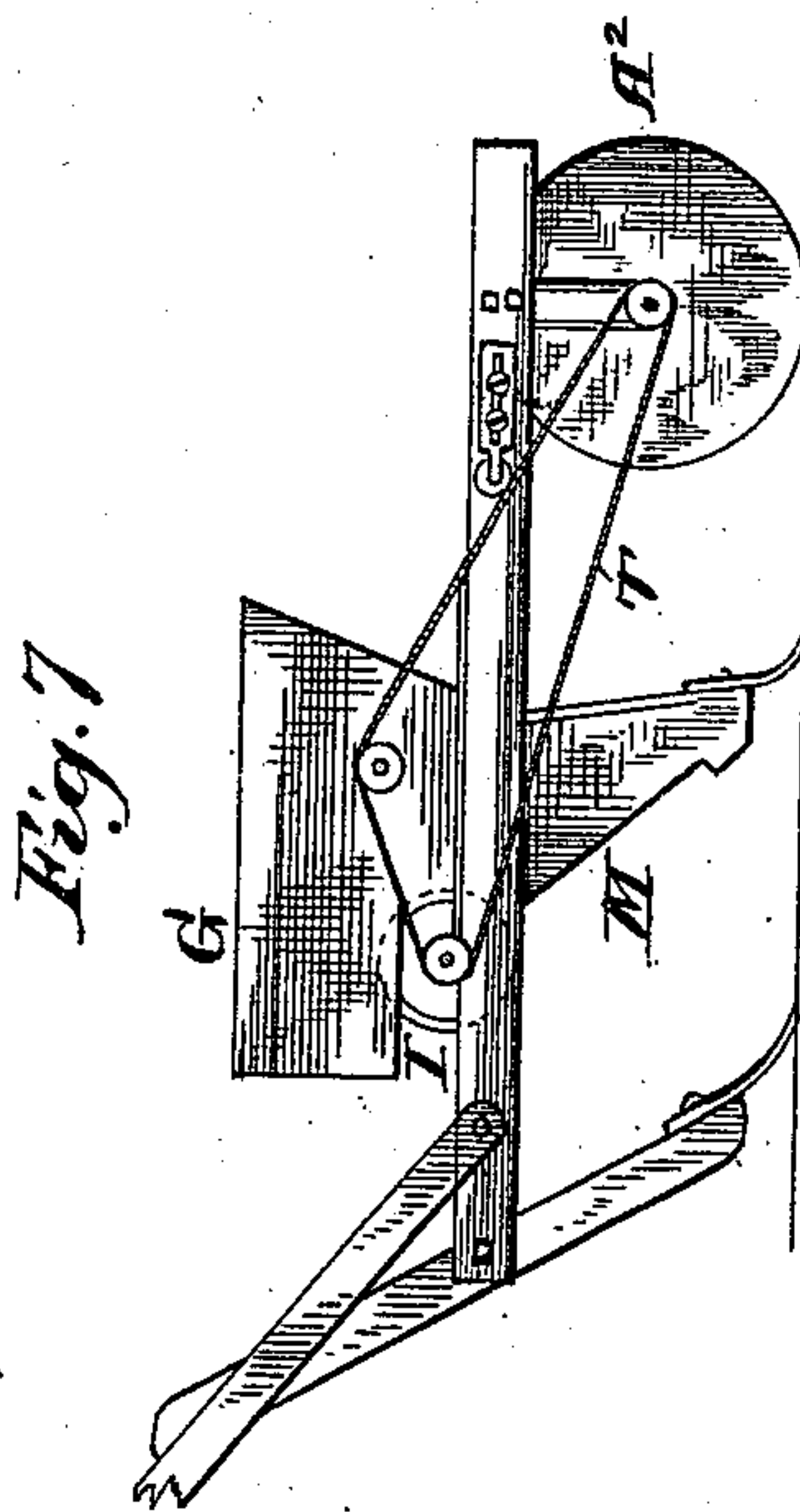
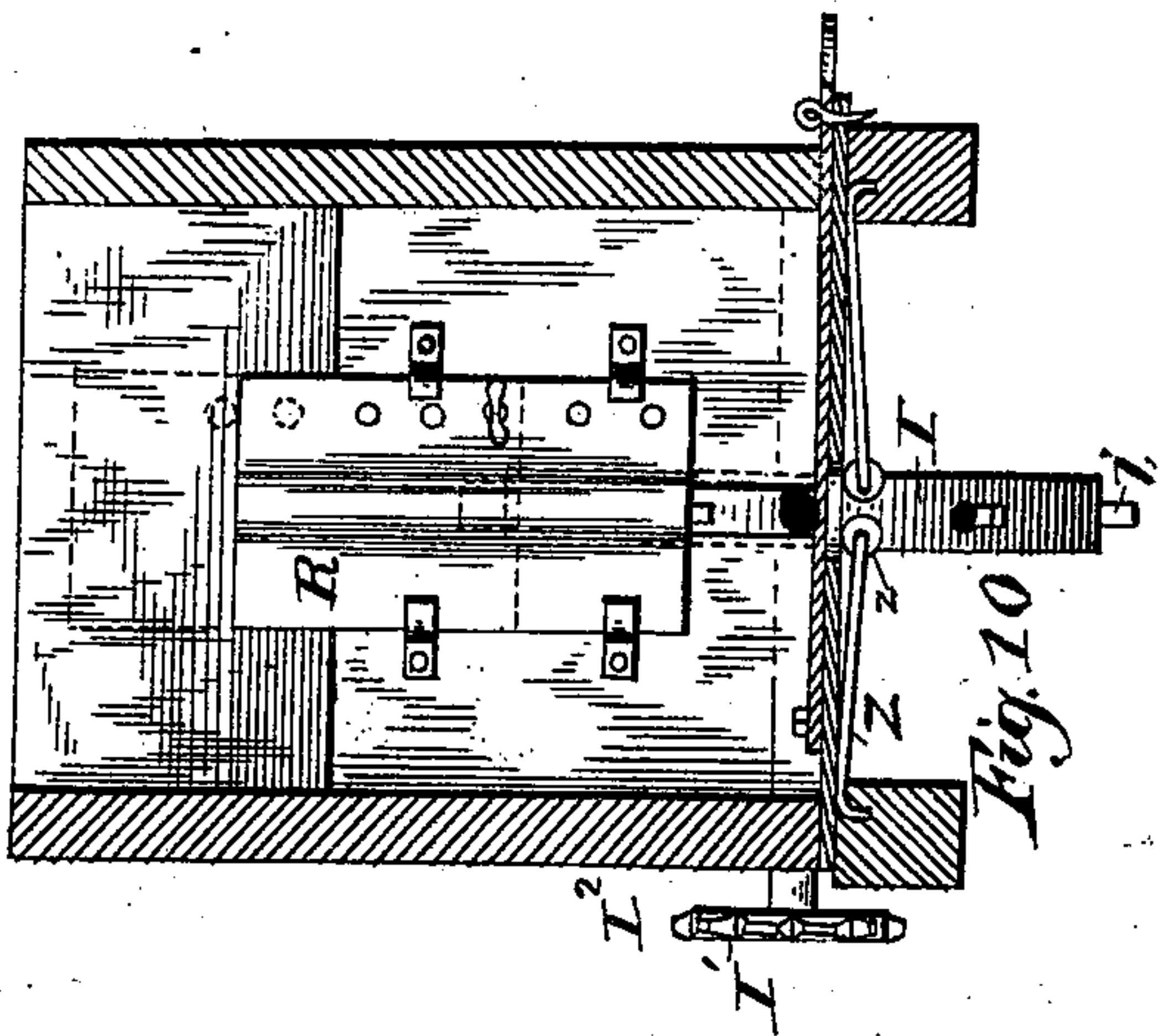
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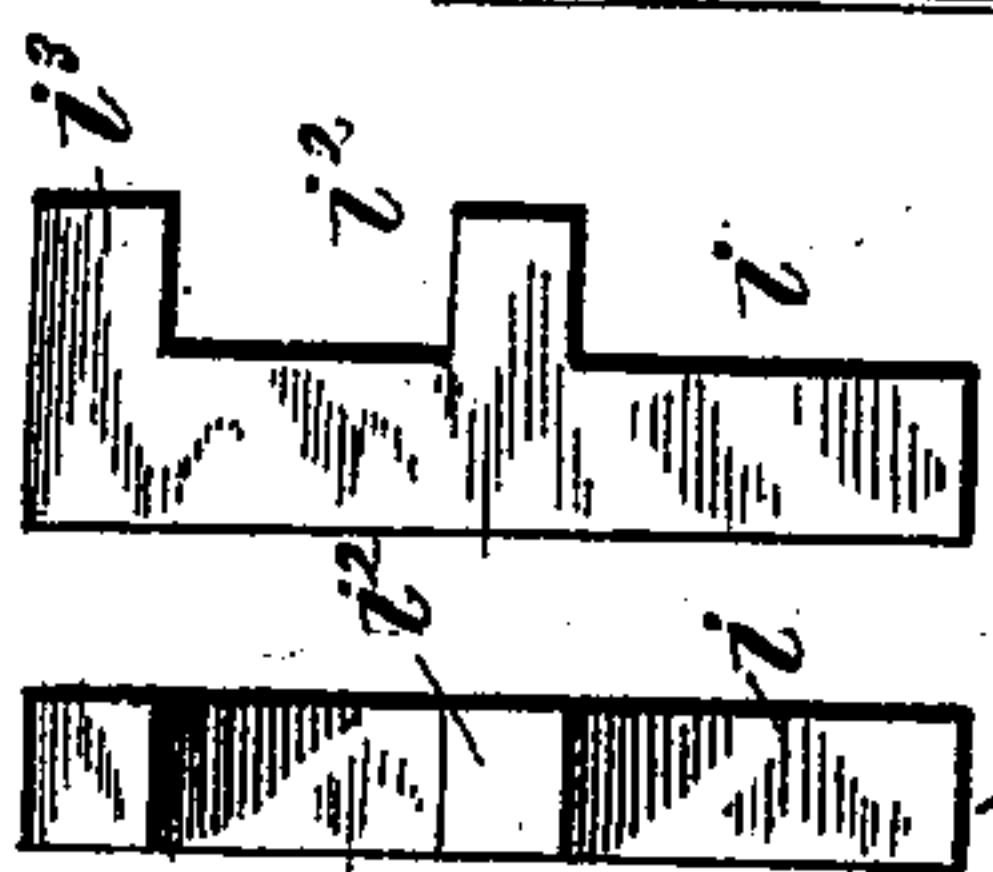
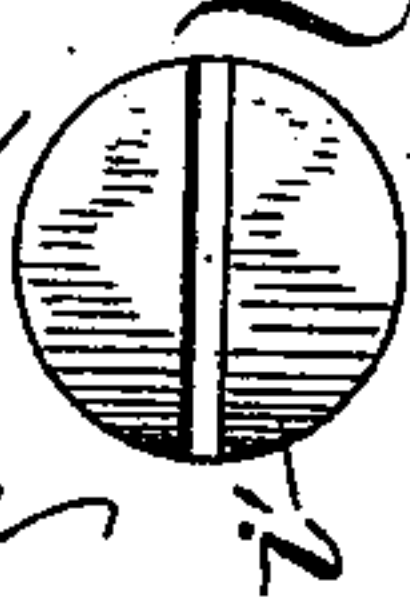
J. H. ELWARD.
PLANTER.

No. 545,583.

Patented Sept. 3, 1895.



Witnesses
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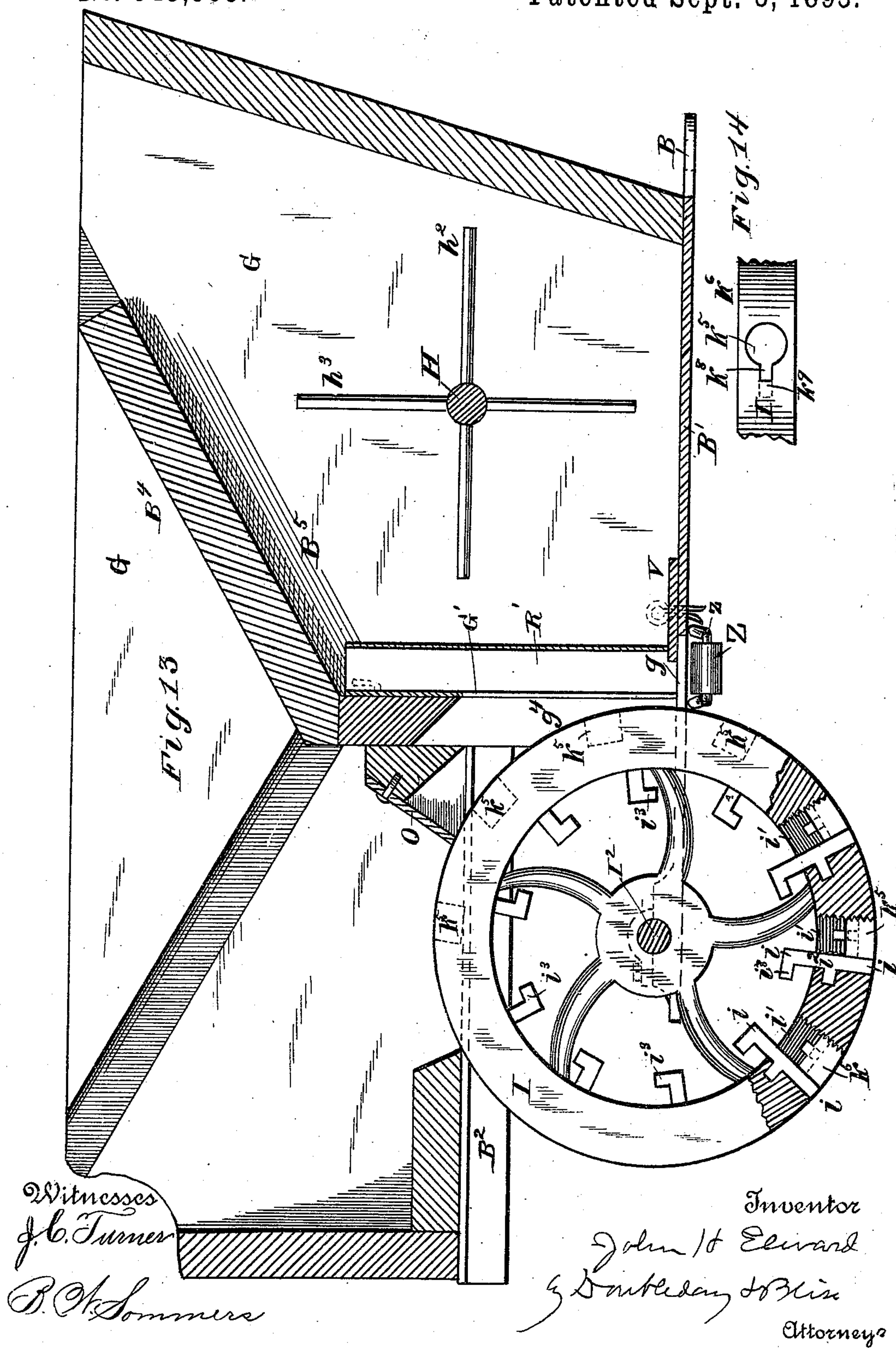
(No Model.)

3 Sheets—Sheet 3.

J. H. ELWARD.
PLANTER.

No. 545,583.

Patented Sept. 3, 1895.



UNITED STATES PATENT OFFICE.

JOHN H. ELWARD, OF WHITEWATER, WISCONSIN.

PLANTER.

SPECIFICATION forming part of Letters Patent No. 545,583, dated September 3, 1895.

Original application filed September 15, 1887, Serial No. 249,767. Divided and this application filed December 22, 1887. Serial No. 258,705. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. ELWARD, a citizen of the United States, residing at White-
water, in the county of Walworth and State
of Wisconsin, have invented certain new and
useful Improvements in Planters, of which
the following is a specification, reference be-
ing had therein to the accompanying draw-
ings.

Figure 1 is a plan view of a machine em-
bodying my improvements. Fig. 2 is a longi-
tudinal section of the same. Figs. 3, 4, 5, and
6 are views of details. Fig. 7 is a side eleva-
tion of a somewhat modified form of machine,
also containing the invention. Fig. 8 is an
enlarged section of the seeding device. Fig.
9 is a top plan view of the same. Fig. 10 is a
cross-section. Figs. 11 and 12 show details.
Fig. 13 is a still further enlarged longitudinal
section showing the parts in the position oc-
cupied when planting corn. Fig. 14 is a sec-
tional detail.

Referring to Figs. 1 to 6, there is shown a
framework mounted upon carrying-wheels,
there being side bars A with suitable cross-
girts or framing-pieces, the whole being
mounted upon an axle and ground-wheels A².

In other applications which I have filed I
have shown and described planting mechan-
isms in each of which there was introduced a
corn-planting device and a cotton-planting
device, both adapted to be fed from the same
seed-carrier and each adapted to be thrown
out of action when the other is operating.
The object in the present case is to produce a
construction in which the same working parts,
including one dropping-cylinder, may be used
to plant either corn or cotton-seed, in contra-
distinction to the constructions illustrated
and described in the said other applications
when separate dropping mechanisms were at-
tached to the hopper; and to the attaining
of this object the main feature consists of a
dropping cylinder or wheel so constructed
that it can be used to measure the charges of
corn and separate them from the corn in the
seed-box, and shall have suitable devices for
separating the charges of cotton-seed from
the cotton-seed in the box, both the corn and
cotton-seed feeding devices being contained
in the same cylinder or wheel, and so con-
structed and organized that either may be ad-

justed to an operative position and the other
be inoperative. These features of construc-
tion can be embodied in numerous ways, of
which I have selected for illustration here
two or three of those which I have devised.

In Figs. 1 and 2 a machine is shown hav-
ing two seed-distributing mechanisms, where-
by it is adapted to plant two rows simulta-
neously, there being a seed-receptacle G on
each side, from each of which the seed is car-
ried to a shoe M, and behind the shoe there
is a packer S, here shown as a rotating wheel
or roller, suspended by carriers S and adjust-
ing devices s'. The seed-dropping cylinder
or wheel is represented by I, which in this
case is constructed in such way and has such
attachments combined therewith that it is
adapted to feed both corn and cotton. Cups
k⁵ are formed therein or attached thereto,
which, under proper adjustment of parts, are
adapted to receive the seed from the mass in
the hopper and carry it round to the point of
dropping. When the seed adapted thereto
is being planted, more or less of the chambers
in each of these cups is left open, so that the
seed can readily drop into them as shown in
Fig. 4. For planting cotton use is made of
teeth i, adapted to be projected out from the
periphery of the wheel, and also adapted to
be carried back flush with the surface of the
cylinder, or to such distance inward as to
have the outer ends inside of the periphery.
These teeth i preferably have threaded por-
tions i', by which they can be carried out or
in, the thread engaging with corresponding
threads in the aforesaid cavities k⁵. More-
over, I prefer to so construct the parts that
the tooth i can itself be made to serve as the
bottom of the seed-cup when corn or analo-
gous seed is to be planted. To effect this, the
depths of the cups and the length of the parts
i i' are so related that the latter can be either
caused to project or can be depressed com-
pletely below the surface of the cylinder. It
will be seen that the cups thus have adjust-
able bottoms. I provide a cut-off O, which
consists of a rubber or flexible flap slit or
slotted in the plane of the teeth i and adapted
to operate in an obvious way. The hopper,
as shown is Figs. 1 and 2, is suspended from
a frame more or less similar to the ordinary
grain-drill frame, but it is adapted to be

readily withdrawn therefrom and attached to the frame of an ordinary walking-planter, as will be seen.

In Figs. 7 to 14 I have shown in another embodiment the features of the invention illustrated in the figures above described. In the last construction the parts i i' of the dropping-cylinder in Figs. 1 to 6 are made in two pieces and one is situated by the side of the other. The seed-cup cavities in Figs. 7 to 14 are substantially similar to those in the aforesaid construction, except that they each communicate with a supplemental opening or passageway through the periphery, (indicated by k), into which are fitted and through which can slide the picking-fingers i .

In Figs. 7 to 10 the parts are adjusted for the planting of cotton. The hopper is provided with two bottom plates, that at B^2 being elevated somewhat above that at B' . By means of a guide or sliding bottom B^4 material can be thrown into either end of the box or hopper, although this is not an essential element of the construction. I prefer to have the cotton-seed tend to move down into the forward end of the box when it is being planted, and arrange the part B^4 as shown in Fig. 8, there being a stirrer or agitator at h^2 h^3 , substantially similar to those above described. There is a short vertical wall at b^5 , having a slotted plate more or less similar to that in the constructions shown and described in said other applications. In said vertical wall there is a slot through which the cotton-picking fingers can pass to engage with the seed. There is here also a sliding cover R' , which can be adjusted vertically, as shown by the full and dotted lines in Figs. 8, 10, and 13. Below the escape-aperture g in the bottom there are cut-off rollers Z , mounted on springs z , which are inserted into the frame-bars, as shown in Fig. 10. The seed-delivering parts are here arranged as follows: The part i' is turned to have the projections i^3 i^4 lie toward the center of the cavities k^5 , and the part i lies between the lugs i^2 i^3 , so that when the part i^2 is turned one way or the other the projecting parts of the fingers i can be adjusted relatively to the periphery. Power is taken by means of the chain at T from the ground-wheel A^2 to the shaft I' , and as the cylinder or wheel I revolves the teeth or fingers i project through the slot at g^4 , engage with the desired amount of cotton-seed, press it down between the rollers Z , and deliver it to the shoe M . A supplemental regulation can be attained by means of a cut-off valve V , pivoted at v and adapted to be so moved in one direction or the other as to close more or less of the bottom aperture g .

In Fig. 13 the feeding devices are adjusted for the dropping of corn. In this case the cotton teeth or fingers i are turned half-way

around, so that the lug i^2 shall lie in a chamber k^9 , leaving the unbroken side of each finger turned toward the seed-cup. The parts i' are arranged to form bottoms for the seed-cups and can be adjusted to any required depth.

In both the forms shown in Figs. 1 to 6, on the one hand, and in Figs. 7 to 13, on the other, the screw-threads on the parts i' constitute a means whereby, first, the cotton-seed dropping-teeth may be made inoperative while the cylinder is dropping corn; second, the bottoms of the seed-cups can be adjusted, and, third, the seed-cups can be closed entirely while the cylinder is dropping cotton-seed. It will be seen that by means of the parts i i' in either of the two constructions last referred to the intervals of planting can be regulated. In planting cotton, for instance, every alternate part i can be projected outward and the others can be put flush with the periphery of the cylinder or wheel, or a still fewer number can be allowed to project, or all can be projected. So, too, when planting corn some of the cups may be more or less opened and others may be left closed in order to vary the intervals of dropping.

I do not herein claim any of the combinations set forth in my other application, Serial No. 249,767, filed September 15, 1887, or in my Patent No. 373,226, dated November 15, 1887, of which application and patent the present case is a division so far as relates to the claims herein and so far as relates to the specific construction shown in Figs. 1 to 10, inclusive, and to those features of construction and arrangement in the other machines herein shown, which are also embodied in the first said form in Figs. 1 to 10.

What I claim is—

1. In a combined corn planter and cotton planter, the combination with the hopper, of the seed dropping wheel having a series of cavities, fingers adapted to project from the periphery of said wheel and also to be placed inside of said periphery, and a series of independent screw threaded devices for adjusting said fingers to different positions and holding them in one or the other, substantially as set forth.

2. The combination with the hopper or seed receptacle having two compartments, of a seeding wheel mounted below one of said compartments and at the side or end of the other and having a series of seed cavities and a series of adjustable seeding fingers, substantially as set forth.

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

JOHN H. ELWARD.

Witnesses:

THOS. E. WOODS,
ISAAC JIMERSON.