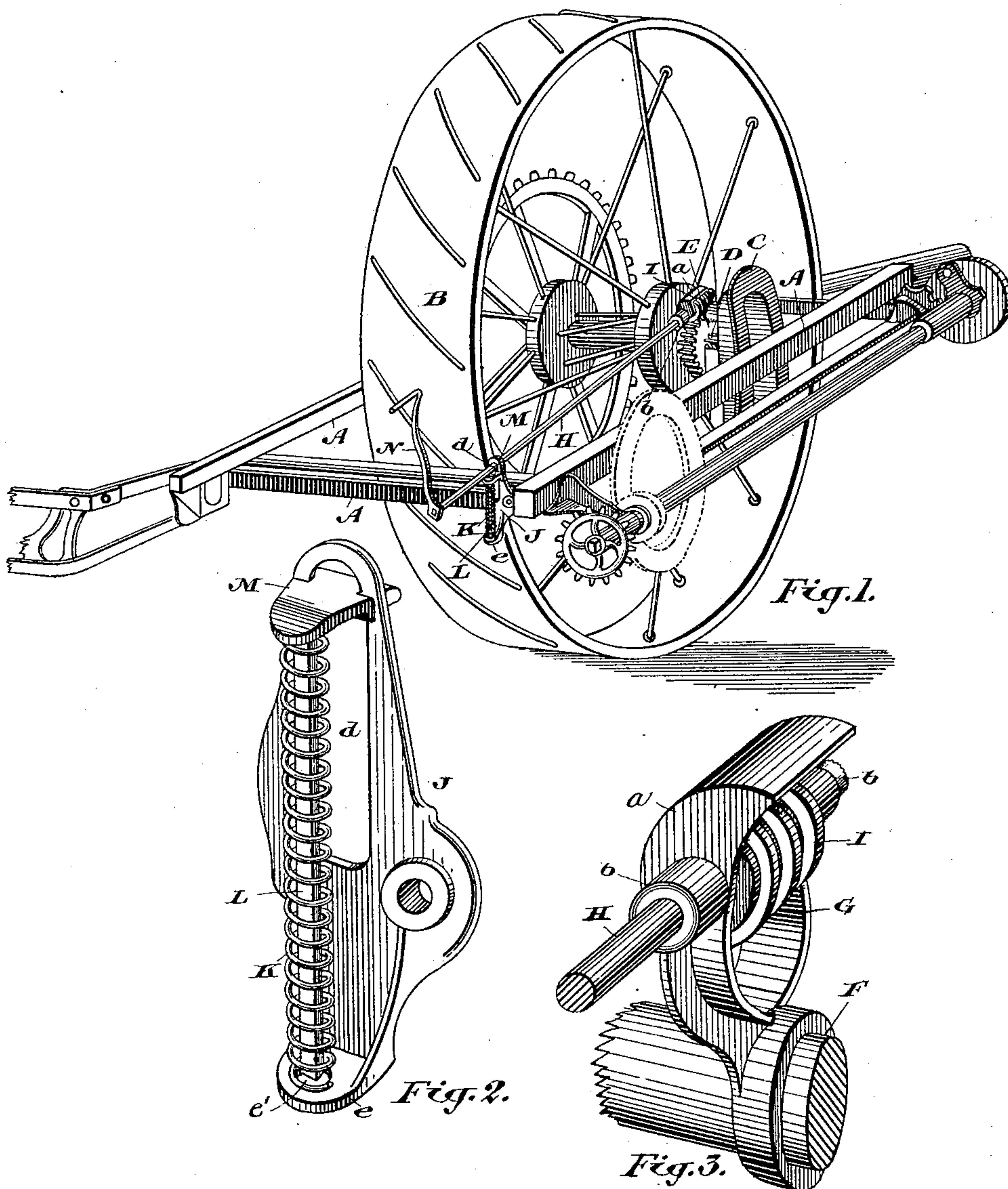


(No Model.)

J. WEDLAKE.
HARVESTER.

No. 368,260.

Patented Aug. 16, 1887.



Witnesses.
H. B. Fetherstonhaugh
J. M. Jackson.

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Attys

UNITED STATES PATENT OFFICE.

JAMES WEDLAKE, OF BRANTFORD, ONTARIO, CANADA, ASSIGNOR TO
A. HARRIS, SON & COMPANY, (LIMITED,) OF SAME PLACE.

HARVESTER.

SPECIFICATION forming part of Letters Patent No. 368,260, dated August 16, 1887.

Application filed February 8, 1887. Serial No. 226,972. (No model.)

To all whom it may concern:

Be it known that I, JAMES WEDLAKE, of the city of Brantford, in the county of Brant, in the Province of Ontario, Canada, machin-
ist, have invented certain new and useful Im-
provements in Harvesters, of which the fol-
lowing is a specification.

The invention relates to that class of har-
vesters in which the main frame is adjustably
connected to the drive-wheel of the harvester;
and the object of the invention is to arrange
a spring which will relieve the worm-shaft and
the frame of the machine from any jar caused
by the drive-wheel passing over an obstruc-
tion.

It consists, essentially, in placing a spring
on the frame of the machine in such a position
that it will support the worm-shaft by which
the frame is raised and lowered, substantially
in the manner hereinafter more particularly
explained.

Figure 1 is a perspective view of the drive-
wheel and rectangular main frame provided
with my improved device. Fig. 2 is an en-
larged perspective detail of the bracket and
relief-spring. Fig. 3 is an enlarged perspec-
tive detail of the worm and its supporting-
bracket.

A represents the rectangular frame which
surrounds the drive-wheel B.

C is a segment-standard fixed to the frame A,
and having an internal rack formed on it with
which the spur-pinion D meshes. This pinion
D is connected to the worm-wheel E, which is
fastened upon the axle F of the drive-wheel B.
A corresponding segment-standard and spur-
pinion are located on the inner side of the
frame A; but as they form no part of my inven-
tion it is not necessary to show them in the
drawings.

G is a bracket sleeved on the axle F, and de-
signed to support the inner end of the worm-
shaft H, upon which the worm I is fixed. The
bracket G is formed substantially as shown in
Fig. 3, and has a cap, a, formed on its top end
to cover the worm I and protect it from dirt.
It is also formed so as to provide a bearing, b,
for the worm-shaft H on either side of the
worm I. The worm-shaft H extends over the
frame A to the rear, as shown in Fig. 1, and

passes through a slot, d, which is formed in
the bracket J, fixed to the frame A, as indi-
cated.

K is a spiral spring, its bottom end resting
on the shelf e, formed on the bottom of the
bracket J. A spindle, L, passes through the
spiral spring K, and is connected at its top
end to a cap, M, which rests upon the top of
the spring K, and is fitted into the slot d, as
indicated in Fig. 2. A hole, e', is left in the
shelf e to permit the spindle L to pass through
it when the spring K is compressed by press-
ure directed upon the top of the cap M.

It will be noticed that the worm-shaft H,
which passes through the slot d, rests upon the
cap M; consequently any downward pressure
on the said worm-shaft H must be supported
by the spring K.

As the inner end of the worm-shaft H is sup-
ported by the bracket G, sleeved on the axle
F, and the worm I is geared to the standard
C, as before described, so that the weight of the
frame A shall be supported by the said worm
I, it follows, therefore, that when the wheel B
is jarred by passing over an obstruction the
outer end of the worm-shaft H is pressed down,
and the spring K, which supports the outer end
of the said worm-shaft H, will naturally give,
so as to relieve the frame A from the jar which
otherwise would be directed against it. This
will be evident if we consider that as the pin-
ion D, wheel E, bracket G, worm I, and its
shaft H (being all rigidly connected) form
practically a lever fulcrumed on the axle F,
whose outer end is supported by the spring K,
any tendency of the axle of the wheel to rise
in the guide C will cause the pinion D, wheel
E, bracket G, worm I and its shaft H to move
slightly around the axle of the wheel as a cen-
ter, and thus depress the cranked end of said
shaft H against the force of the spring K.
Should, therefore, the wheel B pass over any
obstruction, there will be a tendency of the
pinion to rise on the rack, and thus cause the
lever formed of the shaft H, &c., to press on
the spring K, which would give way to the
pressure, and thus relieve the jar caused by
passing over the obstruction.

In addition to the worm-shaft H acting in
connection with the spring K for the purpose

of relieving the frame A from any jar, as described, I also use it for the purpose of raising and lowering the frame A on the axle F. For this purpose I provide a crank, N, fixed to the
5 end of the worm-shaft H, by turning which the worm I is caused to act on the worm-wheel E, which, as before described, is connected to the pinion D, which meshes with a rack formed on the back of the standard C.

10 What I claim as my invention is—

A shaft provided with a worm, a worm-wheel connected to the main axle of the machine and meshing with said worm, a spur-pinion rigidly

connected to the said worm-wheel, and a rack
15 formed on a segment-standard attached to the frame of the machine, in combination with a spring on said frame, designed to form a lateral support for the end of the shaft on which the worm is fixed opposite to the worm, substantially as and for the purpose specified.

Brantford, January 28, 1887.

JAMES WEDLAKE.

In presence of—

LLOYD HARRIS,
JAMES GRANT.