

(No Model.)

2 Sheets—Sheet 1.

A. J. HUBNER & R. RATHOFF-SCHMIDL VON SEEBERG.
CARRIAGE TOP.

No. 509,472.

Patented Nov. 28, 1893.

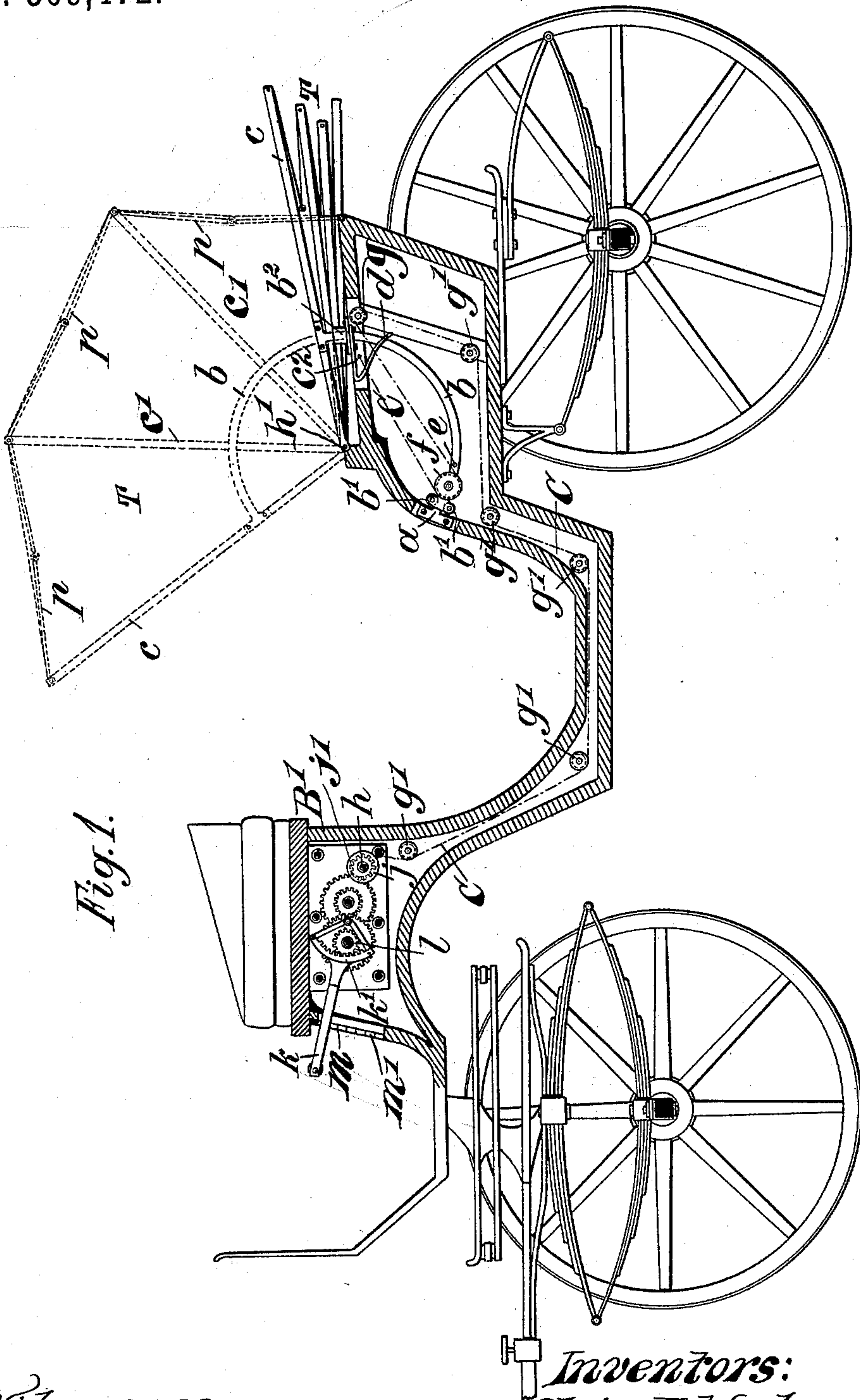


Fig. 1.

Witnesses:

H. G. Dieterich
M. G. L. Higgins.

Inventors:

Alois J. Hubner and
Rudolf Rathoff-Schmidl von Seeberg.

By Henry M. Atty

(No Model.) 2 Sheets—Sheet 2.
A. J. HUBNER & R. RATHOFF-SCHMIDL VON SEEBERG.
CARRIAGE TOP.

2 Sheets—Sheet 2.

A. J. HUBNER & R. RATHOFF-SCHMIDL VON SEEBERG.
CARRIAGE TOP.

No. 509,472.

Patented Nov. 28, 1893.

Fig. 2.

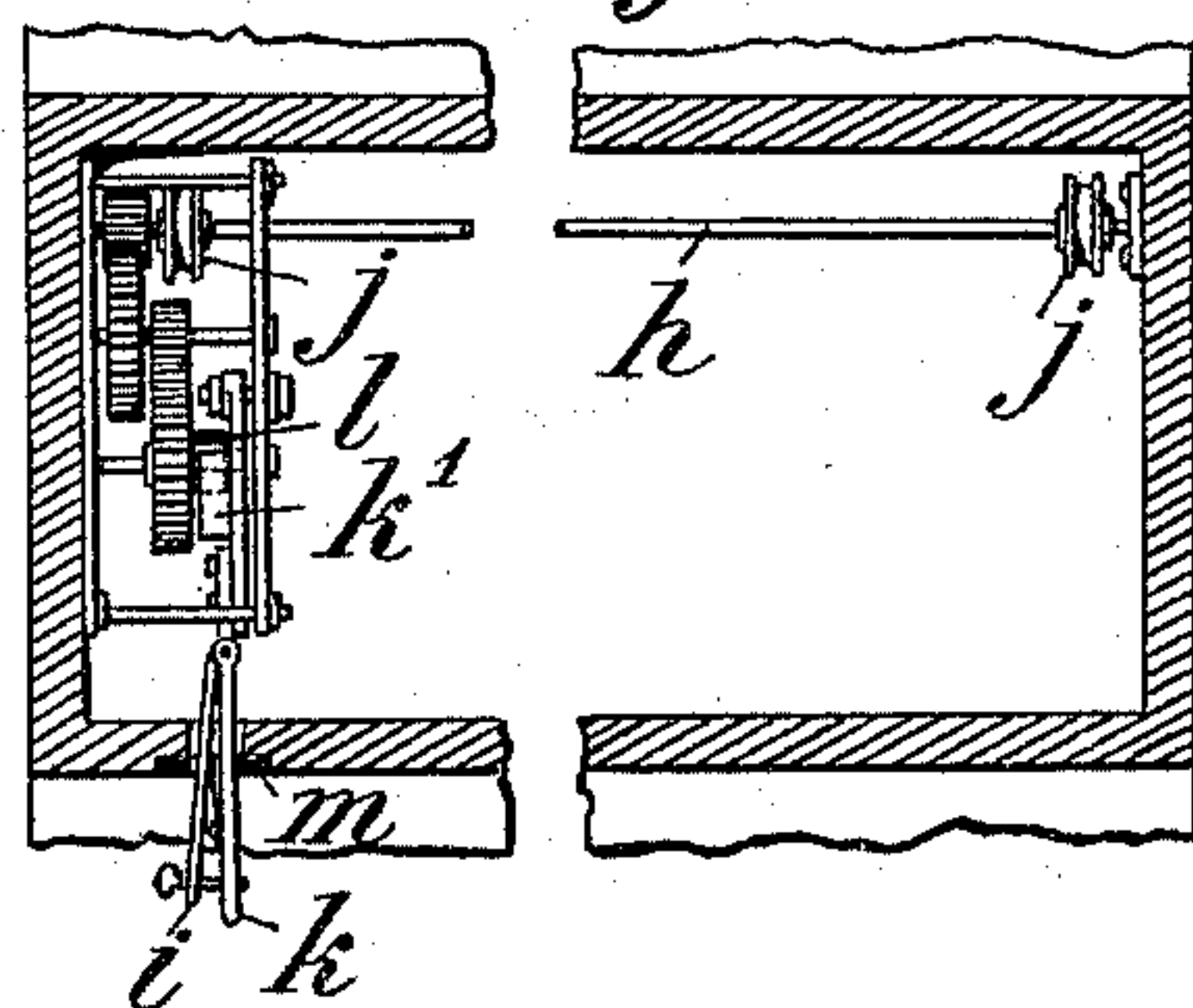


Fig. 3.

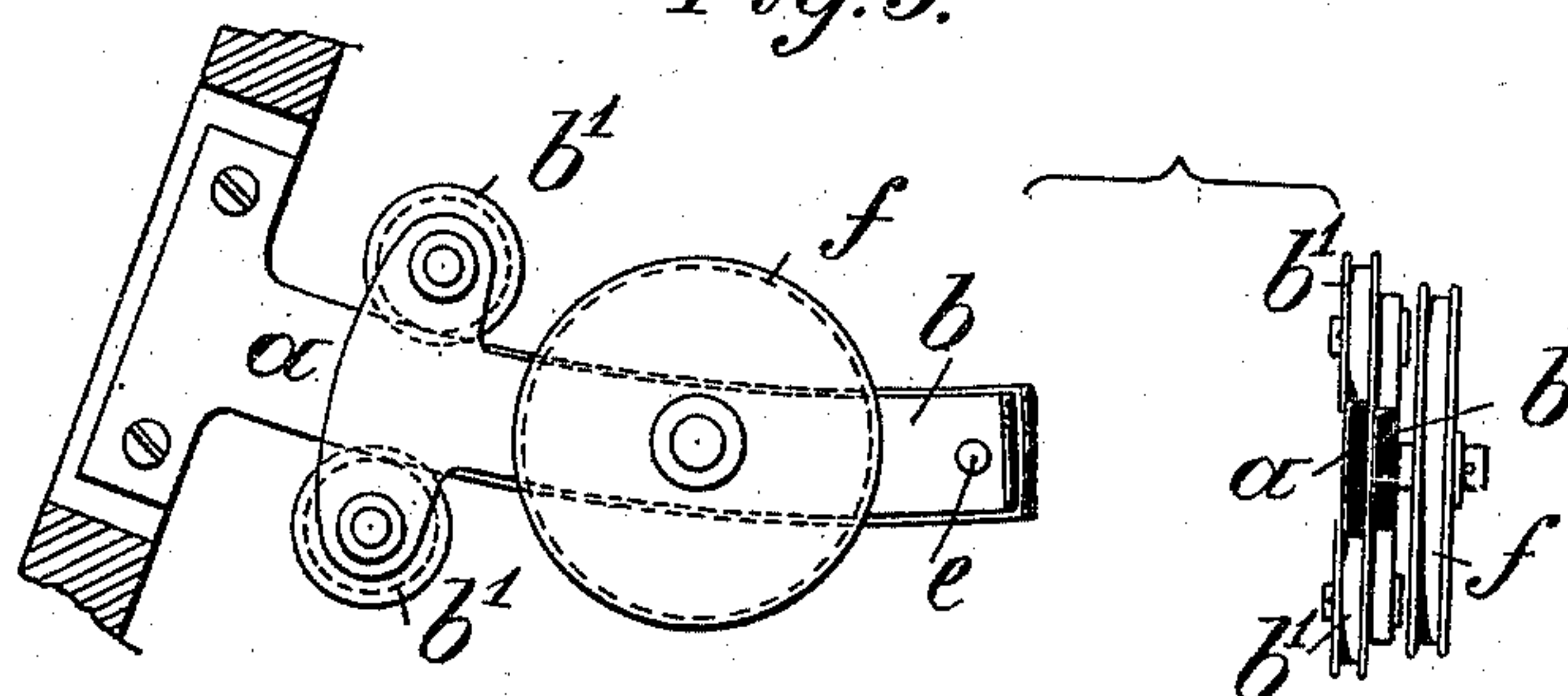
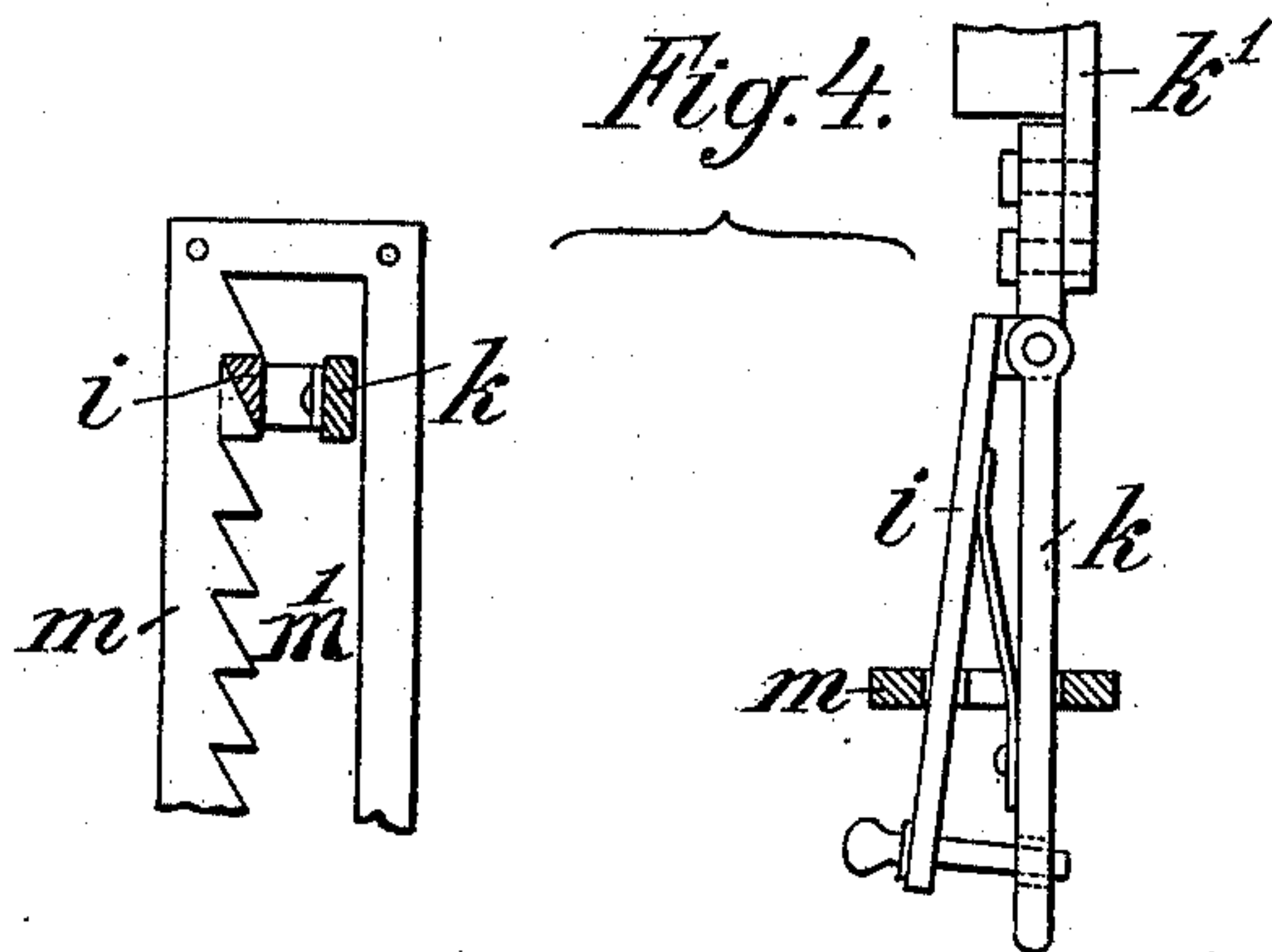


Fig. 4.



Inventors:

*Alois J. Hübner und
Rudolf Rathhoff-Schmidt von Seeberg.*

By Henry M. M. Atty

Witnesses:

H. G. Vieterich
W. L. Higgins

UNITED STATES PATENT OFFICE.

ALOIS JOHANN HUBNER AND RUDOLF RATHOFF-SCHMIDL VON SEEBERG,
OF VIENNA, AUSTRIA-HUNGARY.

CARRIAGE-TOP.

SPECIFICATION forming part of Letters Patent No. 509,472, dated November 28, 1893.

Application filed June 1, 1893. Serial No. 476,287. (No model.)

To all whom it may concern:

Be it known that we, ALOIS JOHANN HUBNER and RUDOLF RATHOFF-SCHMIDL VON SEE-
BERG, subjects of the Emperor of Austria-
Hungary, residing at Vienna, in the Province
of Lower Austria, in the Empire of Austria-
Hungary, have invented certain new and use-
ful Improvements in Apparatus for Raising
and Lowering Folding Carriage-Tops; and we
do hereby 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 letters of reference marked
thereon, which form a part of this specifica-
tion.

Our invention has for its object the pro-
vision of means for raising and lowering car-
riage tops from the driver's seat, as will now
be fully described, reference being had to the
accompanying drawings, in which—

Figure 1 is a longitudinal vertical section
of a carriage illustrating the application of
our invention. Fig. 2 is a cross sectional
view of the driver's box illustrating the op-
erating mechanism in elevation, and Figs. 3
and 4 are detail views.

As shown in Fig. 1, a curved guide bar *a*,
concentric with the axis of rotation of the car-
riage top hinge *h'* is provided, that serves as
a guide and supporting track for the rollers
b', *b'*, Figs. 1 and 3, mounted at the outer end
of a correspondingly curved arm *b* secured to
the upper or outer stay or brace *c* of the car-
riage top *T*, said arm being guided in a suit-
able sleeve *b²* on the carriage body. The
curved bar *b* carries at its outer end in rear
of rollers *b'* a cord or chain pulley *f*, and in
rear of said pulley *f* is arranged a stop lug or
pin *e* adapted to engage the free end or arm
of a spring *d* also secured to the carriage
body so that when the carriage top is nearly
raised to the position shown in dotted lines
in Fig. 1 the lug engages the free end of and
compresses the spring. The object of this
arrangement is to provide a means whereby
the carriage top, that is to say its outer or
front stay or brace *c* is automatically thrown
back beyond the dead center of its pivotal

connection *h'* so as to cause the top *T* to au-
tomatically collapse, the connecting rods *p* for
the stays or bows *c c'* if such are used being
made in sections hinged together at points
intermediate of said stays, as shown in said
Fig. 1. A cord or chain *C*, one end of which
is secured to the carriage body at a suitable
point, as at *c²*, Fig. 1, passes around the chain
pulley *f*, thence over a guide pulley *g* prox-
imate to the point of attachment *c²*, and from
the last-named pulley under a series of guide
pulleys *g'* mounted in the carriage body, to
the driver's box where the opposite end of
said cord or chain is secured to a winding
drum *j* that is connected through the medium
of a multiplying gear with a toothed sector
lever *k* whose toothed portion *k'* is in gear
with the driving wheel for said multiplying
gear.

In the front panel of the driver's box *B'* of
the carriage is formed a vertical slot to which
is secured a slotted plate *m* Fig. 4, the inner
face of one of the vertical sides of which is
constructed in the form of a toothed rack *m'*.
The lever *k* has pivoted thereto a spring-act-
uated locking arm or pawl *i* adapted to en-
gage the teeth on rack face *m'*, as shown in
said Fig. 4. When the parts are in the posi-
tion shown in full lines in Fig. 1 and the le-
ver *k* is depressed, the winding drum *j* will
be revolved to wind up the cords or chains *C*,
thereby drawing the curved arms *b* upward,
whereby the carriage top is raised as shown
in dotted lines in Fig. 1, and the spring *d*
placed under tension. If the locking arm or
pawl is now released from the driver's grasp
it will engage one of the teeth in the plate *m*
and hold the carriage top in its raised posi-
tion.

In order to lower the carriage top all that
is necessary is to grasp the lever and its lock-
ing arm, press the latter against the tension
of its spring toward said lever to disengage
the arm from the rack, after which the lever
is lifted to the upper end of the slot in the
plate *m*, revolving the multiplying gear in an
opposite direction, the spring *d* at the same
time exerting its power to move the outer
stay *c* beyond the dead center of its axis of
rotation, the top *T* then falling back of its

own weight, and the chain or cord C unwinding from drum *j*, the parts assuming again the position shown in full lines in Fig. 1.

In practice the mechanism hereinabove described, except the multiplying gear is duplicated, that is to say, there is a set of said devices on each side of the carriage body, while the power transmitting gear *j'* of the multiplying gear is fast on the shaft *h* that carries the two winding drums *j*.

Although we have shown the cords or chains C as connected at one end with the carriage body, it is obvious that they may be connected directly with the lifting bars at a suitable point, as for instance, at the point where the pulley *f* is located.

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

1. The combination with a revoluble stay of a vehicle top, a lifting bar connected thereto, and a spring adapted to be compressed and brought under tension by said lifting bar, of a lever operated winding gear located in the driver's box or seat and a flexible connection between said gear and the lifting bar operating to move the latter against the stress of the spring.

2. The combination with a revoluble stay of a vehicle top and a lifting bar connected with said stay, of a lever operated multiplying gear, a winding drum adapted to be revolved thereby, and a flexible connection between said drum and the lifting bar.

3. The combination with a revoluble stay of a carriage top, a curved lifting bar secured

to and concentric with the axis of rotation of said stay, said bar provided with two rollers, and a correspondingly curved fixed rail or track extending between the rollers, of a winding gear and a flexible connection between said gear and the lifting bar.

4. The combination with a revoluble stay of a carriage top, a curved lifting bar secured to and concentric with the axis of rotation of said stay, said bar provided with two rollers at its outer end and with a cord or chain pulley proximate thereto and a correspondingly curved fixed rail or track extending between the rollers, of a winding gear, and a flexible connection as a cord or chain between the winding drum of said gear, the carriage body, and the said cord or chain pulley, substantially as and for the purpose described.

5. The combination with a revoluble stay of a carriage top, a lifting bar connected with said stay and provided with a cord or chain pulley at its free end and with an abutment or lug, and a spring in the path of said abutment, of a winding gear located in the driver's box or seat and a flexible connection between the winding drum of said gear, the carriage body, and the chain pulley of the lifting bar, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ALOIS JOHANN HUBNER.

RUDOLF RATHOFF-SCHMIDL V. SEEBERG.

Witnesses:

EDMUND JONES,

A. SCHLESSING.