2 Sheets--Sheet 1.

R. KRETER.

Children's Carriages.

No. 160,917. Patented March 16, 1875.

Fig. 1.

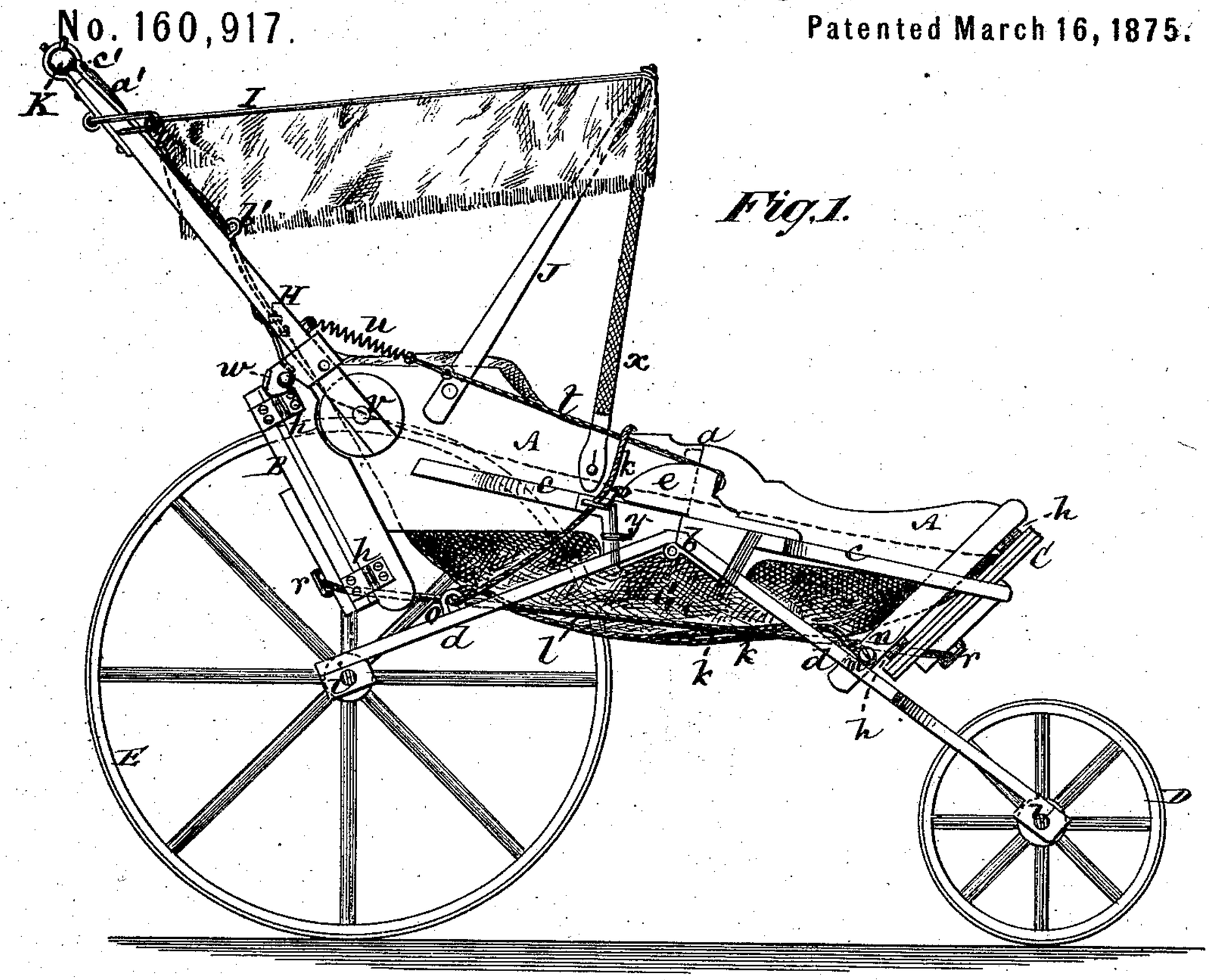
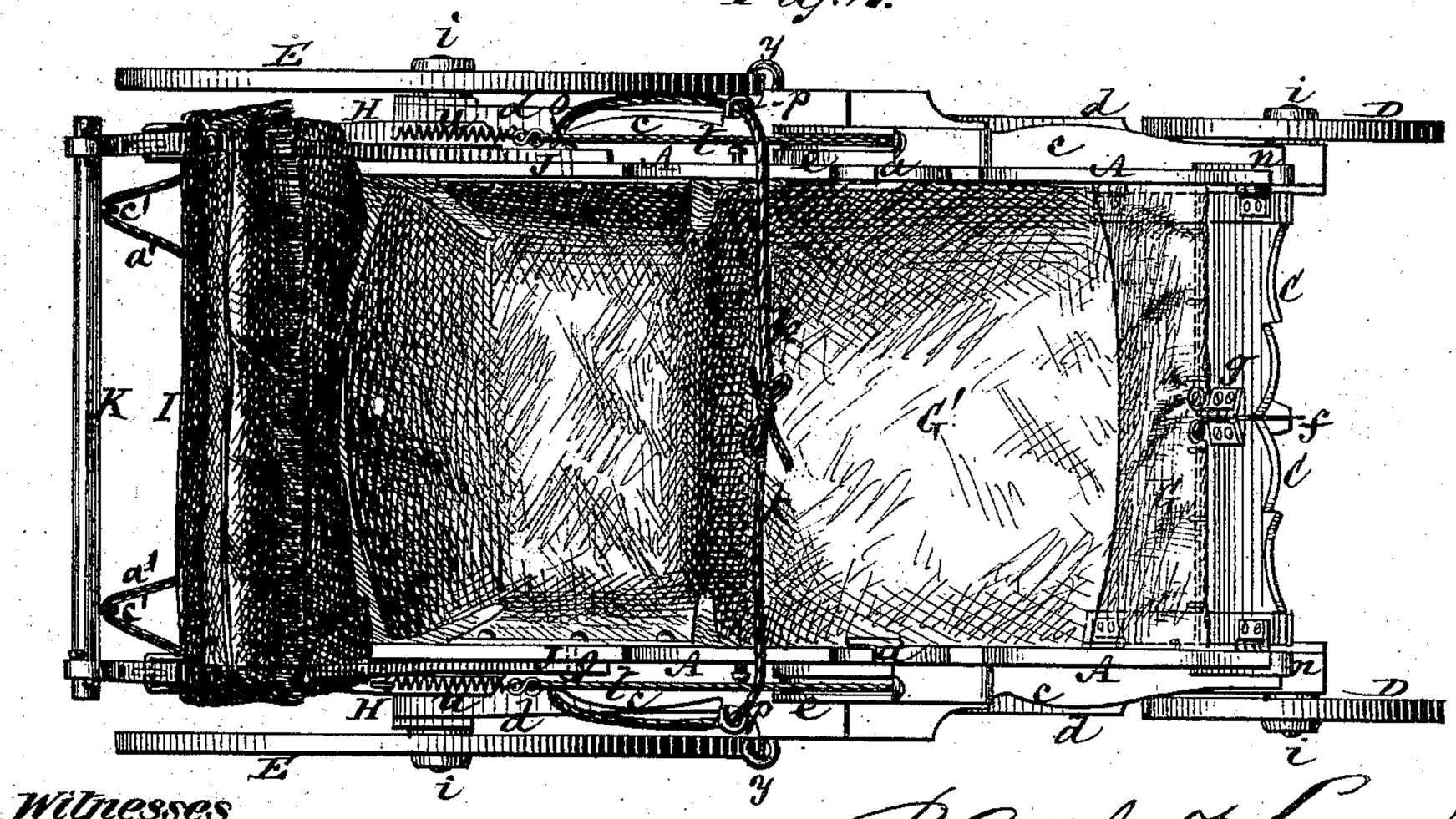


Fig. 2.



Witnesses
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Fred. Haynes

Rudolph Kreter
by his Attorneys
Brown & Allen

2 Sheets--Sheet 2.

R. KRETER.

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Fig. 3.

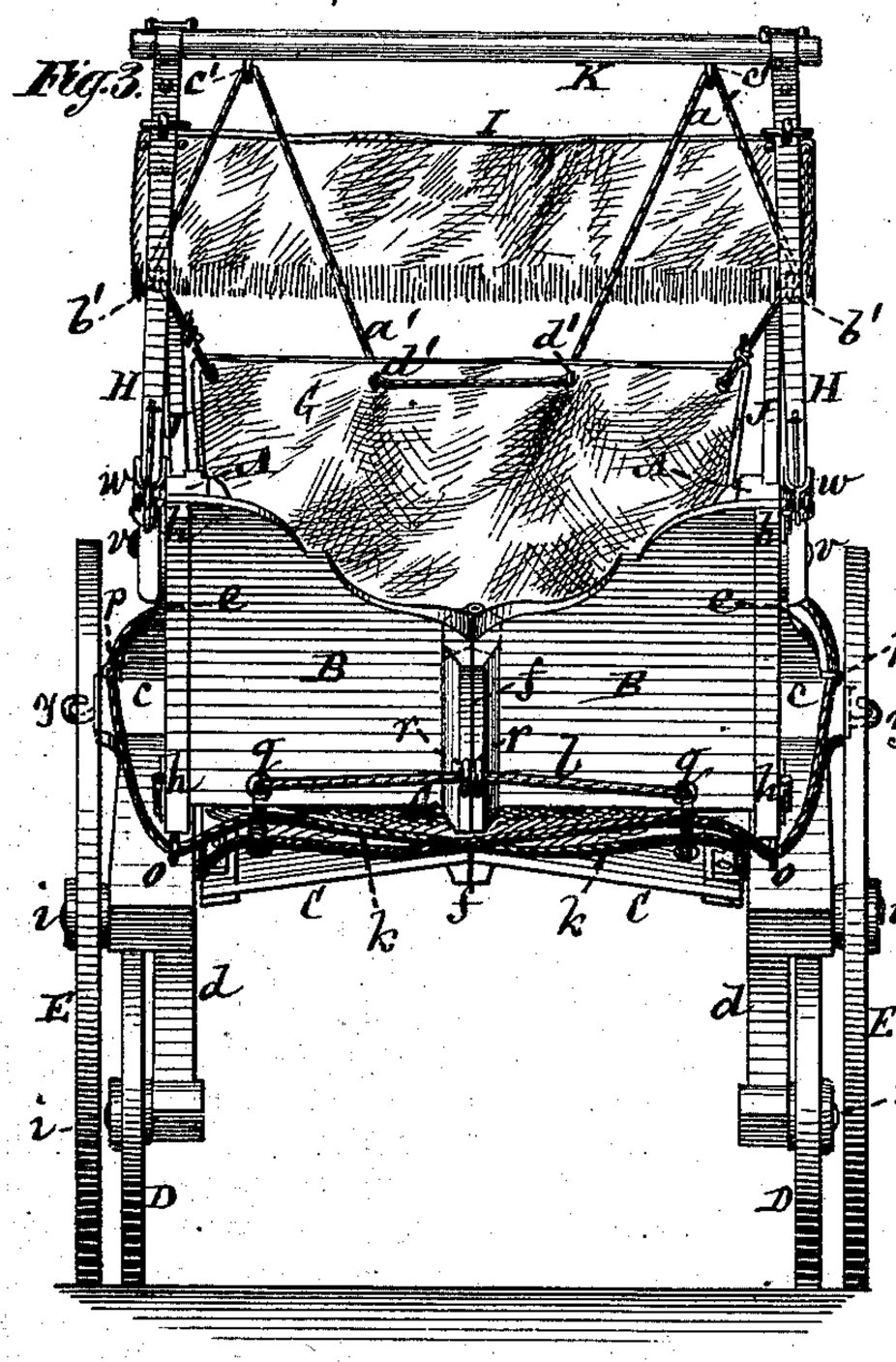


Fig. 4.

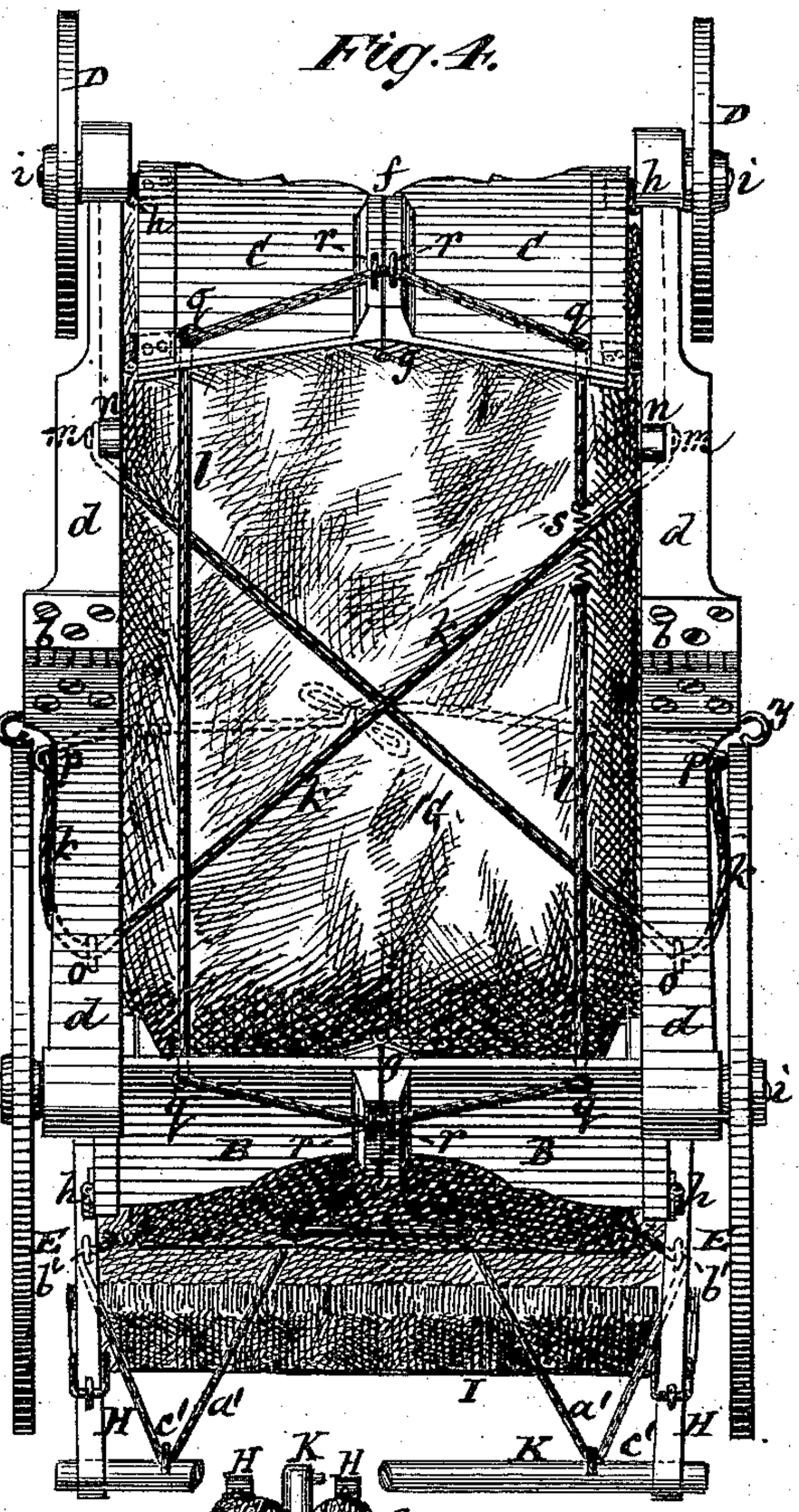


Fig. 5.

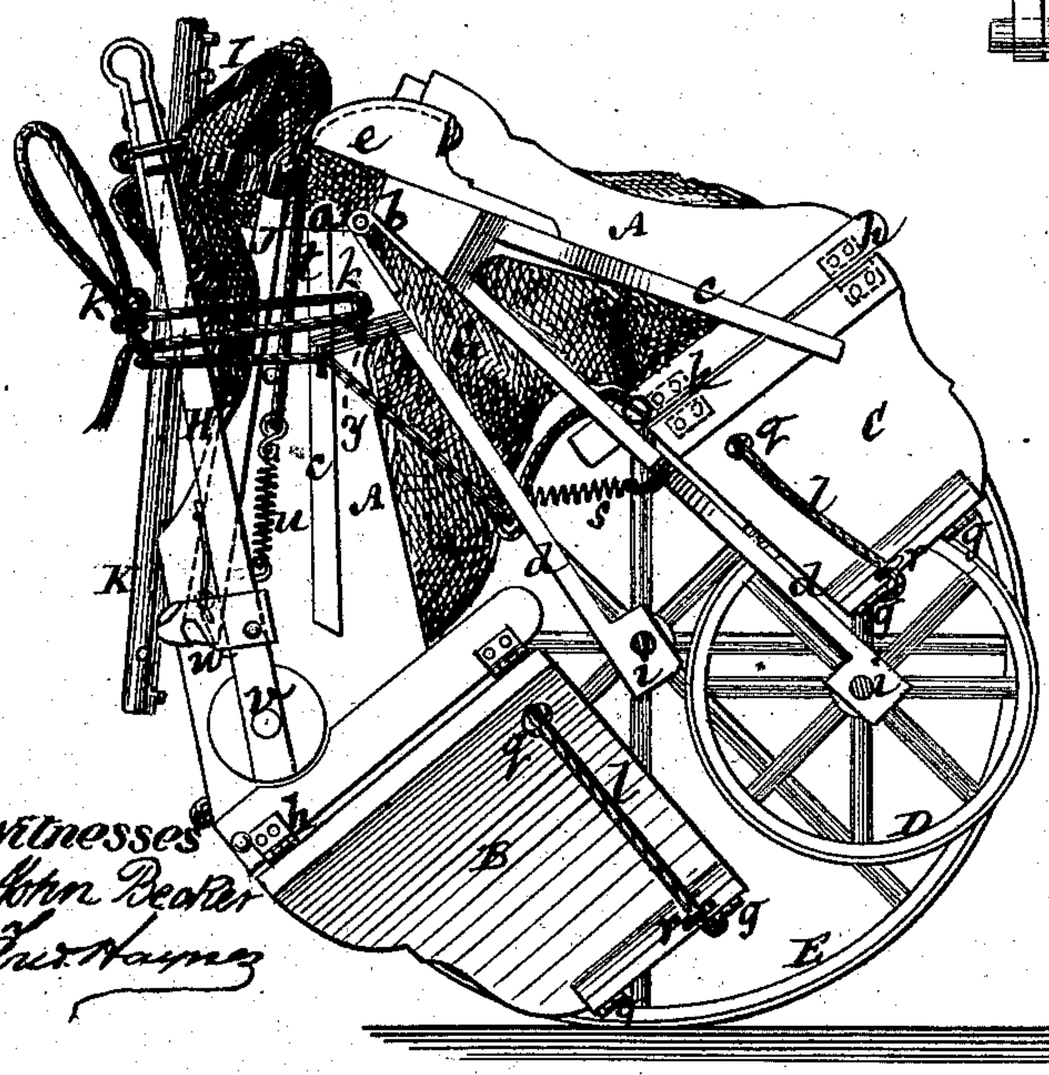
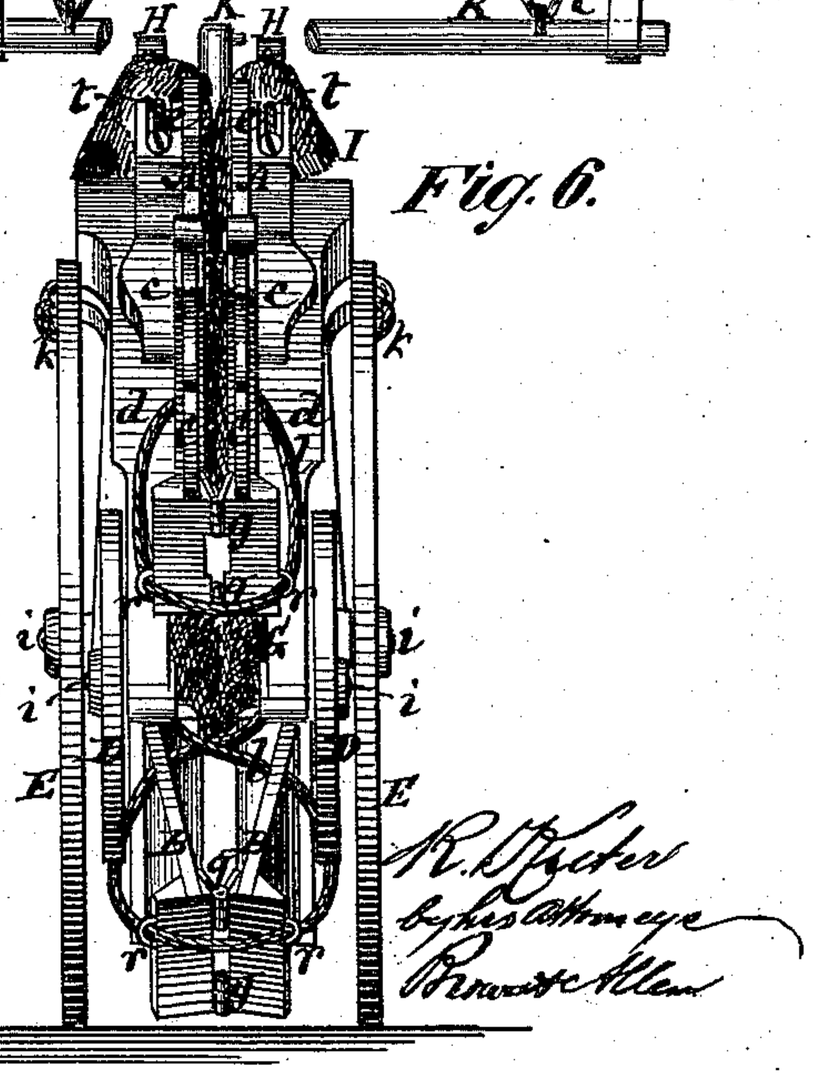


Fig. 6.



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UNITED STATES PATENT OFFICE.

RUDOLPH KRETER, OF NEW YORK, N. Y.

IMPROVEMENT IN CHILDREN'S CARRIAGES.

Specification forming part of Letters Patent No. **160,917**, dated March 16, 1875; application filed December 30, 1874.

To all whom it may concern:

Be it known that I, RUDOLPH KRETER, of the city, county, and State of New York, have invented certain new and useful Improvements in Folding Carriages; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing forming part of this specification.

This invention mainly relates to collapsible carriages for the use of children and invalids; and consists in a carriage capable of being folded both longitudinally and transversely, the same having a sack-like bottom of soft or flexible material and flexible or hinged sides composed of rigid sections, and flexing or hinged ends, also composed of rigid sections. The invention likewise consists in various details of construction whereby this double collapsion is facilitated and other advantages are obtained.

A child's or invalid's carriage constructed in accordance with the invention is light and easily handled, and may be suspended or stowed away in a small space or compass when not in use, or when moving it about from place to place. Thus it may be folded and taken by a nurse into a street or steam railroad car from the interior of a city to a park in the suburbs, or wherever it may be desired to use the carriage.

In the accompanying drawing, Figure 1 represents a side view, with the wheels on the one side nearest to the eye removed, of my improved carriage when unfolded or fully extended, and with the top or canopy raised. Fig. 2 is a plan of the same with the top thrown back. Fig. 3 is a back view thereof with the top raised, and Fig. 4 an under view of the carriage when unfolded or in running condition. Fig. 5 is a side view of the carriage when folded or collapsed, the wheels on the nearest side being removed; and Fig. 6 is an end view of the folded carriage.

The body of the carriage is mainly composed of two sides, A A, and ends B C, of wood or other suitable material. Each side A is formed of two pieces or sections in direction of its length, the same being divided, as at *a*, and connected by a hinge, *b*, applied to outside braces *c c* and *d d*. The braces *c c* serve to stiffen the side A, to which they are applied, and, by means of a stop, *e*, fast to the one brace-section and resting on the other section, support the side when unfolded. The other braces *d d* carry the front and rear wheels D E. The hinge *b* of either side A is constructed so that the sections fold downward. Both the hinged sides A A and the hinged ends B C are of rigid material. A somewhat similar flexing construction is adopted for the back end B and front end C of the carriage—that is, each of said ends is divided intermediately of its length at its center, as at *f*, and connected at such division by a hinge, *g*, folding inward. Said sectionally constructed or divided back and front pieces B C are connected with the sectionally constructed or divided sides A by hinges *h*, arranged to provide for the folding outward of the front B and back C. The hind wheels E and front wheels D are each distinct the one from the other, and are arranged to turn on or with studs *i*, carried by or having their bearings in the braces *d d*. The bottom G of the carriage is composed of cloth or any other suitable flexible material, mounted by other flexible material, G′, if desired, and secured to the sectional portions of the frame or body by rods running through pockets and staples, or any other suitable means of securing may be adopted. This flexible bottom G is supported, when the carriage is unfolded or extended, by under straps, bands, or cords *k k* and *l*. The one end of each cord *k* is fastened, at *m m*, to bars *n n*, connecting the front braces *d* with the forward sections of the sides A of the carriage. From these points *m* the cords *k* are run diagonally, in reverse directions, under the bottom G, to eyes *o* in the back braces *d*, and from thence, through eyes *p* in the rear sections of the sides A, to and over said sides, and so that they may be tied or united, as shown in Fig. 2, to assist in supporting the bottom, and, if necessary, to hold the occupant of the carriage from pitching forward. The other bottom-supporting cord *l* is run through eyes *q* near the outer ends of the front and back pieces B C, through eyes *r* at their hinged joints *g*, and connected at its ends by a spring, *s*. The cords *k* and *l* being thus arranged, weight being applied to the bottom G will have the tendency of straining the bottom

on its supporting-cords and keeping the latter taut to their support of said body, the cord *l* receiving the principal strain and restraining the end boards or pieces B C from flexing; but the flexing of the frame of the carriage under the influence of the load is primarily borne by side cords *t* and springs *u*, connecting the one or forward section of each side A with the back section thereof, or with each back support H of the top I, pivoted at *v*, and united with the rear section of the side A by a catch, *w*. The front supports J of the top I are separately pivoted to the sides A, and are connected with the latter by detachable straps *x* when the top is extended. A seat or rise may be formed in the back end of the carriage by suitably hooking or buttoning the inner lining G′ of the carriage to the sides of the latter. K is the handle, fitting at its ends through loops in the upper ends of the back supports H, and provided with studs or pins that serve to lock it when in place, but that admit, when the handle is turned for the purpose, of being withdrawn from the supports H. The back lining or rear extension of the flexible bottom G of the carriage is drawn or kept taut when the carriage is unfolded or extended by means of a cord, *a′*, fastened at its ends to the back corners of the flexible bottom G, and from thence passing through eyes *b′* in the back supports H, through staples *c′* in the handles K, and eyes *d′* in the middle rear portion of the back part of the bottom G.

To fold and throw the top I back, it is only necessary, as usual, to unfasten the straps *x*.

When it is required to collapse the carriage, as represented in Figs. 5 and 6, the handle K is first unshipped from the rear top supports H H, the catches *w* lifted or released, and the cords *k k* untied or disconnected at their meeting ends. The straps *x* are then tucked in within or at back of the flexible top, and the handle K adjusted vertically, so that on lifting the whole vehicle by the loose or free ends of the cords *k k*, and, if necessary, slightly shaking or agitating the whole, the weight of the frame, assisted by the relaxing of the springs *u* and *s* of the cords *t* and *l*, will cause the carriage to collapse at the hinges *b* and *g*, thus folding it longitudinally and transversely, after which the free ends of the cords *k k* may be passed in opposite directions across the back top-supports H H, and through hooks *y y* in the sides of the carriage, and back again to the supports H H, where they may be tied, as in Fig. 5, to hold the whole together.

When it is required to extend or set up the carriage again, the cords *k k* are untied and the knee brought to bear on, or other pressure applied to, the flexed back end B, so as to straighten it, while or at the same time the levers or pivoted top-supports H are pulled backward till the catches *w* spring into lock with the rear sections of the sides A, as in Fig. 1, after which the handle K is inserted in the levers or supports H, as before.

Having thus described my invention, I desire to state that I do not claim a child's or invalid's carriage collapsible in direction of its length; but

What I do claim to be new and useful is as follows:

1. The combination of the sack-like bottom G and hinged sides A A, composed of rigid sections, and hinged ends B C, also composed of rigid sections, substantially as and for the purpose set forth.

2. The cord *l* and spring *s*, in combination with the sack-like bottom G and the back and front pieces B C, in sections, hinged together at *g g*, and united with the sides by hinges *h*, substantially as set forth.

3. The catches *w*, in combination with the pivoted supports H H, the cords *t*, springs *u*, and hinged sides A A, constructed in sections, substantially as set forth.

4. The cords *k k*, in combination with hinged sides A A and hinged ends B C and flexible bottom G, substantially as set forth.

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Witnesses:

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BENJAMIN W. HOFFMAN.