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J. BECK.

Velocipede.

No. 86,495. Patented Feb. 2, 1869.

Fig: 2.

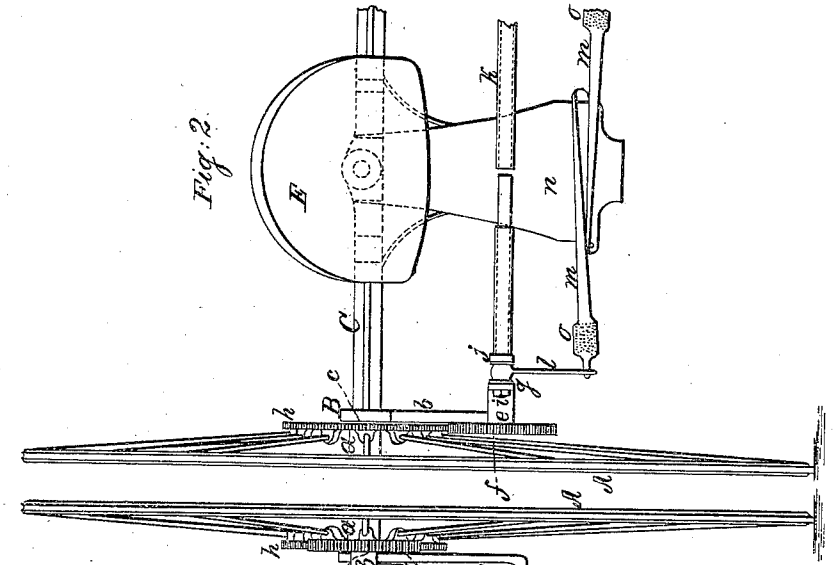
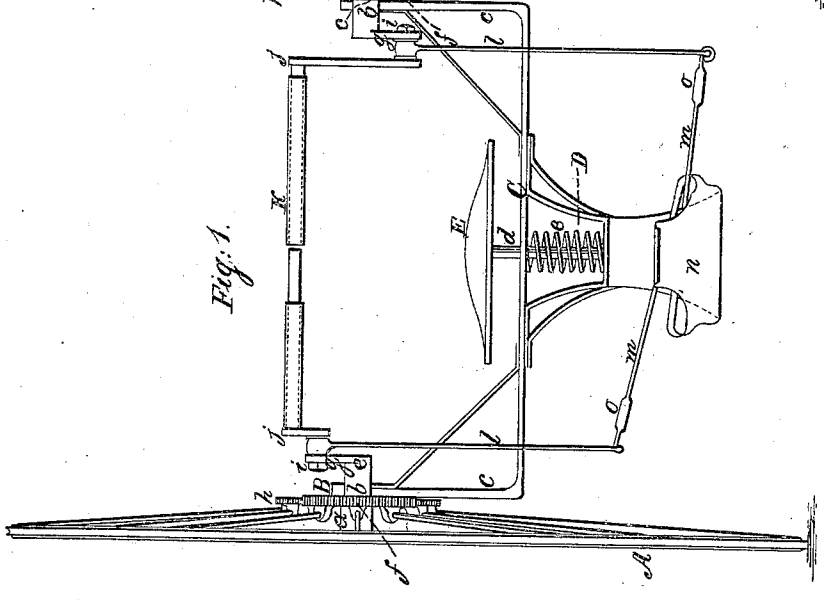


Fig: 1.



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2 Sheets—Sheet 2.

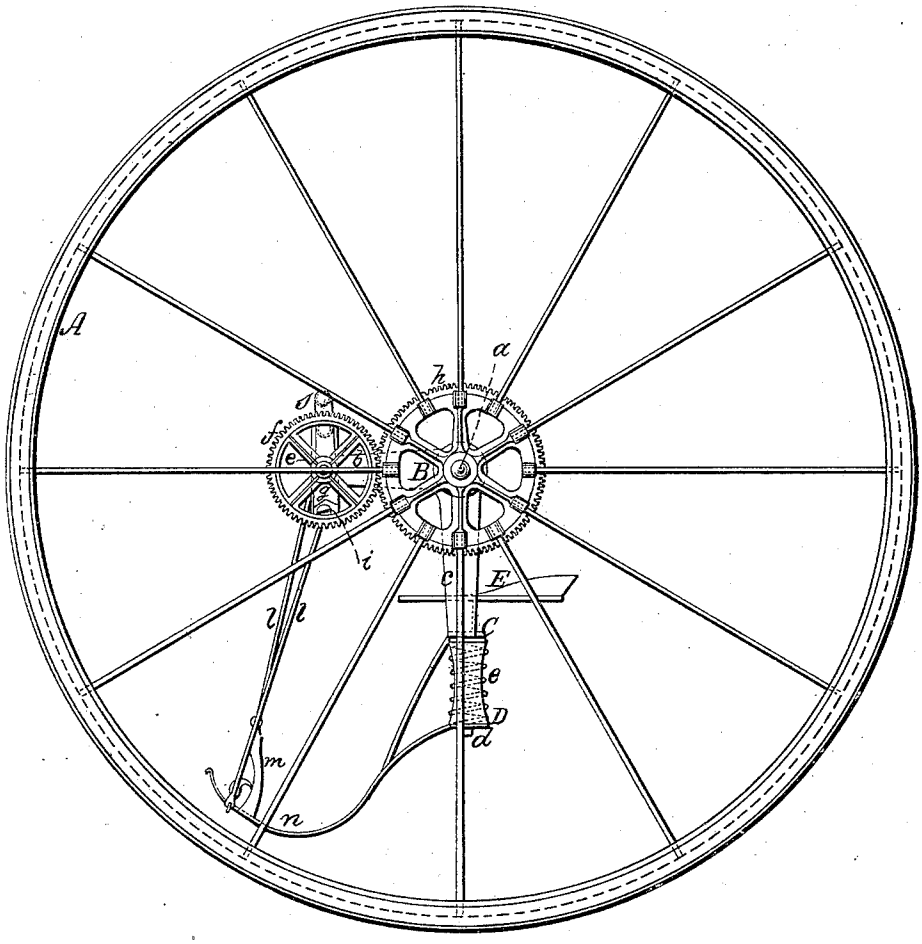
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Velocipede.

No. 86,495.

Patented Feb. 2, 1869.

Fig: 3.



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UNITED STATES PATENT OFFICE.

JOSEPH BECK, OF NEW YORK, N. Y.

IMPROVEMENT IN VELOCIPEDES.

Specification forming part of Letters Patent No. 86,495, dated February 2, 1869.

To all whom it may concern:

Be it known that I, JOSEPH BECK, of the city, county, and State of New York, have invented a new and useful Improvement in Velocipedes; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which drawings—

Figure 1 represents a front view of this invention. Fig. 2 is a plan or top view thereof. Fig. 3 is a side elevation thereof.

Similar letters indicate corresponding parts.

This invention relates to a velocipede composed of two wheels running side by side, and having a seat suspended between them at a point below the center line of the axles in such a manner that said seat forms a firm and steady support for the person occupying the same, and that no peculiar skill or practice is required to operate the two-wheeled velocipede. The frame supporting the seat is composed of two bell-crank levers the vertical arms of which are connected by a traverse, on which rests the seat, while their horizontal arms form the bearings for the driving-shafts, on which are mounted the hand-cranks and pinions gearing into toothed rims attached to the spokes of the wheels, and said bell-crank levers have their fulcra on pivots which form the axles of the wheels in such a manner that by the weight of the person occupying the seat the driving-shafts and cranks are retained in the proper position, and the velocipede can be propelled with ease and facility. The hand-cranks on the driving-shaft can be worked independent of each other for the purpose of turning the velocipede in any desired direction; or they can be coupled together by a sleeve and worked conjointly when the velocipede is to be run in a straight line. The cranks on the driving-shaft are also connected with foot-levers or treadles, which are made in the form of spring-levers, whereby the operation of the velocipede is facilitated.

A A represent two wheels, which run on axles *a*, formed by pivots which project from the connecting-points of the two arms *b c* of bell-crank levers B. The vertical arms *c* of these bell-crank levers are connected by a traverse, C, to the bottom surface of which is secured a U-shaped hanger, D, as clearly shown in Fig. 1 of the drawings.

E is the seat, which is provided with a stem, *d*, that passes through holes in the traverse and in the bottom of the hanger D, and rests upon a spring, *e'*, so that it forms a convenient support for the person occupying the same. By this arrangement the center of gravity of the person occupying the seat is thrown below the center line of the axles of the wheels, and a two-wheeled velocipede is obtained which has its wheels arranged side by side, and which can be readily operated by any person without previous practice and without the least danger of upsetting.

The horizontal arms *b* of the bell-crank levers B form the bearings for the driving-shafts *e*, each of which carries on its outer end a pinion, *f*, and on its inner end a crank, *g*. The pinions *f* gear into toothed rims *h*, secured to the wheels A, and the cranks *g* are provided with wrist-pins *i*, to which are firmly secured the hand-cranks *j*. The handles of these hand-cranks extend toward each other in front of the seat, so that they can be conveniently reached by the person occupying the seat, and by turning the cranks the wheels A are caused to revolve and the velocipede is propelled. The hand-cranks *j* are so arranged that they can be operated independent of each other; or they can be coupled together by means of a sleeve, *k*, which is fitted on one of the handles, and can be made to catch over the other at the pleasure of the operator. If the hand-cranks are coupled together or worked conjointly at the same speed, the velocipede is propelled in a straight line; but by working said cranks independent of each other and turning one faster than the other, the velocipede can be made to run on a curve; or by turning one crank forward and the other backward, the velocipede can be turned around on its own center. The wrist-pins *i* of the cranks *g* connect by rods *l* with foot-levers or treadles *m*, which are made in the form of springs, and attached to the foot-board *n*, which is attached to the hanger D. Each of the treadles is provided with a foot-rest, *o*, and by means of these treadles the velocipede can be propelled by the action of the feet; or, if desired, foot and hand

power can be applied simultaneously. By making the treadles in the form of spring-levers, their operation is materially facilitated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The two-wheeled velocipede having its wheels A A, provided with pinions and placed side by side, hung on separate crank-axles, and the seat E suspended between them, below the center line of their axles and on the extension thereof, the whole arranged substantially as set forth.

2. The bell-crank levers B, connected by a traverse, C, which forms the support for the seat, and provided with projecting pins forming the axles for the wheels, in combination with the driving-shafts, crank, and cog-wheels, substantially as shown and described.

3. The coupling *k*, in combination with the hand-cranks *j* and wheels A, constructed and operating substantially as and for the purpose set forth.

4. The spring-treadles *m*, in combination with lever *l*, the cranks *g*, pinions *f*, and wheels A, all as shown and described.

This specification signed by me this 6th day of January, 1869.

JOSEPH BECK.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.