H. WILL & C. UEBELE.

VELOCIPEDE.

No. 189,588. Patented April 17, 1877.

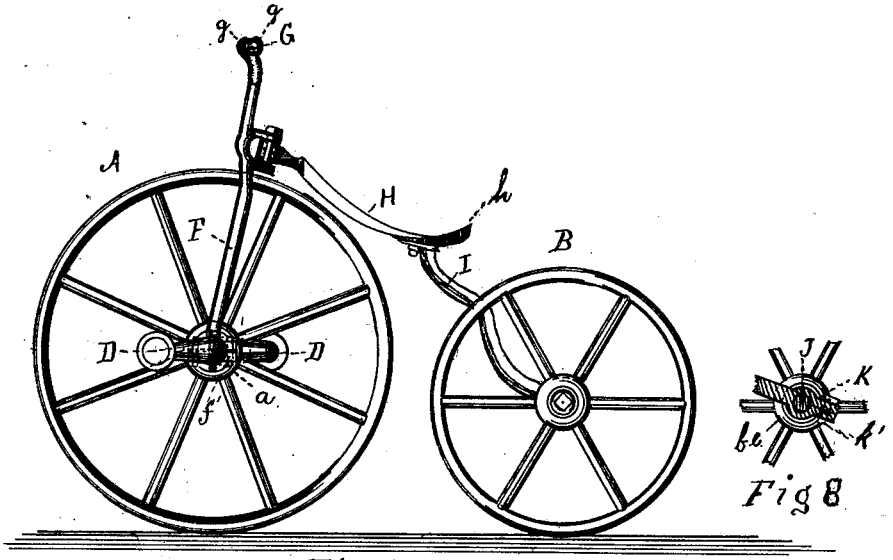

Fig 1

Fig 8

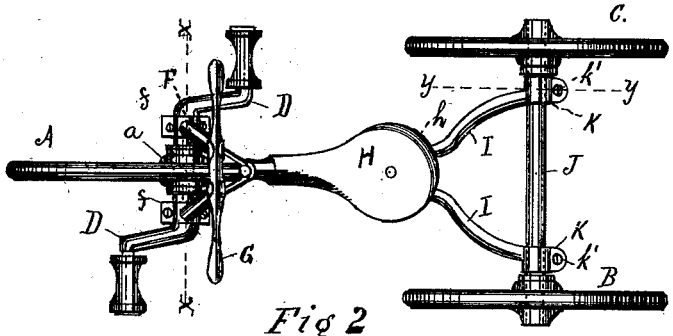

Fig 2

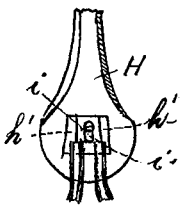

Fig 3

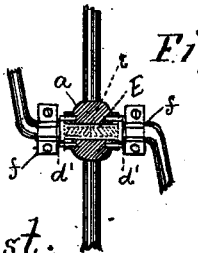

Fig 4

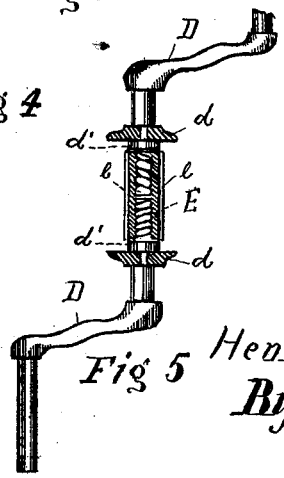

Fig 5

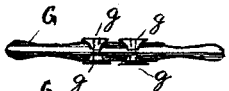

Fig 6

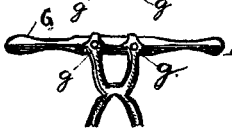

Fig 7

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UNITED STATES PATENT OFFICE.

HENRY WILL AND CONRAD UEBELE, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN VELOCIPEDES.

Specification forming part of Letters Patent No. 189,588, dated April 17, 1877; application filed December 16, 1876.

To all whom it may concern:

Be it known that we, HENRY WILL and CONRAD UEBELE, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Velocipedes, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of a velocipede embodying our improvements; Fig. 2, a plan view of the same; Fig. 3, a plan view of the seat attachment inverted; Fig. 4, a cross-section of the forward wheel-hub and crank attachment, taken on the line *x x*, Fig. 2; Fig. 5, a plan view of the crank attachment on an enlarged scale; Figs. 6 and 7 detail views of the handle attachment; and Fig. 8, a cross-section taken on the line *y y*, Fig. 2.

Our invention consists, first, in the improved method of connecting the cranks to the hub, whereby they may be easily connected or disconnected, and yet be rigidly and firmly seated while in operation; and, second, in the method of connecting the rear reaches to the under side of the seat by means of a wedge-shaped slotted plate fitting between corresponding guides or plates, so that the fastening-bolt may be put in place, and said plate afterward brought up tight between said guides.

Our improvements are intended to be applied to a three-wheeled velocipede, and, in the drawings, A represents the forward or drive wheel, and B C the rear wheels. The cranks D are attached to the hub *a* of the wheel A by means of a sleeve or box, E, which is driven through the center of the hub, and is provided with narrow flanges *e* on each side to prevent its turning. In each end of this sleeve is cut an internal screw-thread, one a right and the other a left hand thread. The inner ends of the cranks D have screw-threads cut upon them, one right and the other left, and are adapted to be screwed into the ends of the sleeve E, the sleeve and cranks being arranged so that the turning forward of the latter will secure them within the sleeve.

The threaded ends of the cranks are also provided with flanges *d*, about as large as the ends of the hub against which they abut when the cranks are turned up into position, and to which they are then secured by suitable screws passing through holes in the flanges.

The sleeve E is a little shorter than the hub *a*, and the shaft of the cranks D, just inside of the flanges *d*, is slightly enlarged, so as to make a shoulder or projection, *d'*, of about the same diameter as that of the sleeve E. When the cranks are turned up to fasten them to the sleeve, these shoulders *d'* enter the holes in the ends of the hub *a*, and abut against the ends of the sleeve E, as shown in Figs. 4 and 5 of the drawings.

The standard F is of the usual forked form, embracing the wheel A, and the lower ends of its branches have their bearings upon the cranks just outside of the flanges *d*. These lower ends have an enlargement or foot, *f*, which is recessed to partially embrace the crank-shaft, as shown in Figs. 2 and 4 of the drawings. A corresponding plate, *f'*, recessed in a similar manner, is placed upon the under side of the shaft, and securely bolted at each end to the foot *f*, thereby forming a journal box or bearing for the crank.

The standard F is forked at its upper end also, and to the branches the handle G is attached, the upper ends of the standard being split to form lips *g*, which are bent, as shown in Figs. 6 and 7 of the drawings, so as to form sockets or rests for the handle G, which is passed through them, and secured by bolts or screws in the desired position. The seat H reaches forward, and is hinged to the standard F, in the usual manner. This seat is made of plate metal, and has a flange, *h*, at its rear end, which serves as a support to the rider.

The reaches I are convergent, and join in a plate, *i*, at their forward ends, which is attached to the bottom of the seat H by means of lugs *h'*, between which it is received, the plate and lugs being constructed to form a dovetail joint. The seat is permanently fastened to the reaches by means of a screw-bolt, which passes down through the seat and the plate *i*, the latter being provided with a slot, *i'*, so that the bolt may pass through the plate, even though the latter is not accurately fitted to the seat. The rear ends of the reaches are divided, flattened, and bent, so as to embrace the rear axle J, as shown in Figs.

2 and 8 of the drawings, thus constituting journal-boxes K for said axle.

The branching pieces terminate in projections *k*, through which screw-bolts *k'* are passed for the purpose of tightening the boxes on the axle to hold it firmly in place.

The axle J is first passed through the boxes K, and the reaches are adjusted thereon so that there is just room outside of each box K to receive the hubs of the wheels B C, and in this position the boxes are fastened upon the axle tightly by means of the bolts *k'*, as above described. When thus secured the axle J will not turn or slip in the boxes K, and the latter form stops, against which the hubs *b c* of the hind wheels abut when mounted on their axle.

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

1. The cranks D, provided with screw-threads on their outer ends, and with flanges *d* and shoulders *d'*, as shown, combined with the screw box or sleeve E shorter than the hub, as set forth, and provided with ribs *e* on the outer side, for the purpose described.

2. The seat H, provided with lugs *h'* upon its under side, in combination with the reaches I and plate *i*, provided with a slot, *i'*, and bolted to the seat, substantially as described.

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