

J. M. Blake,

Horse Power.

N^o 34,559.

Patented Mar. 4, 1862.

Fig. 1

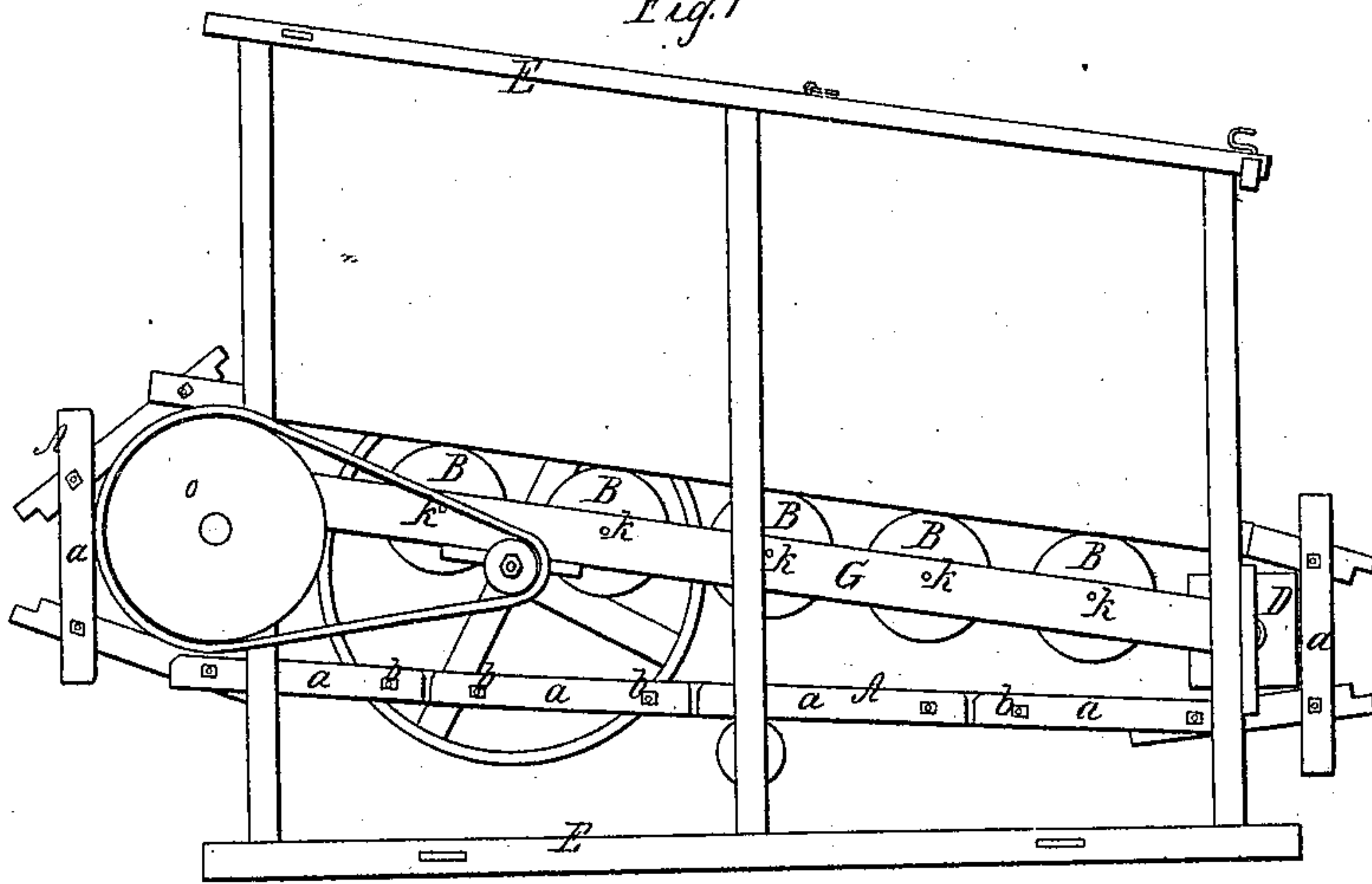


Fig. 2

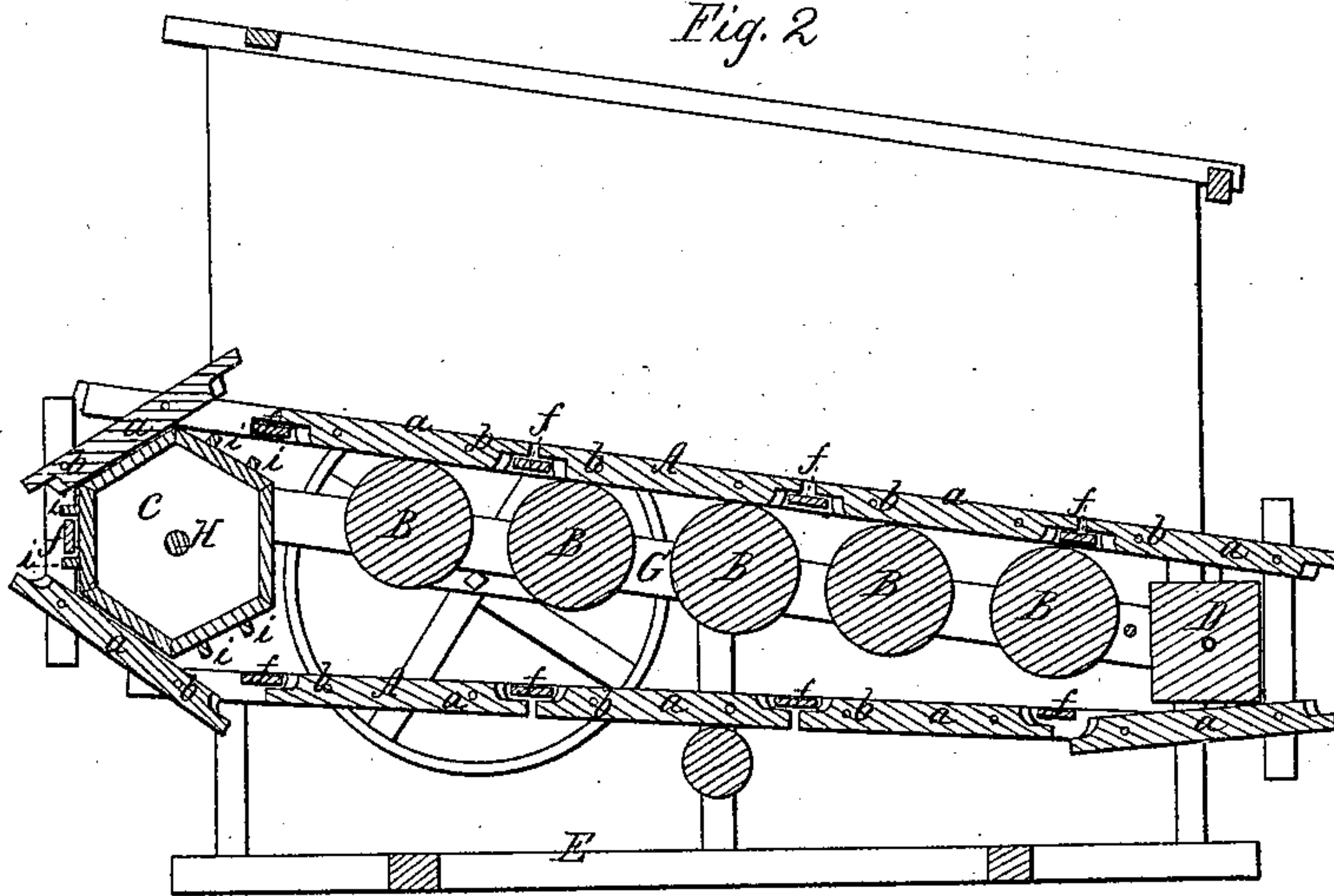
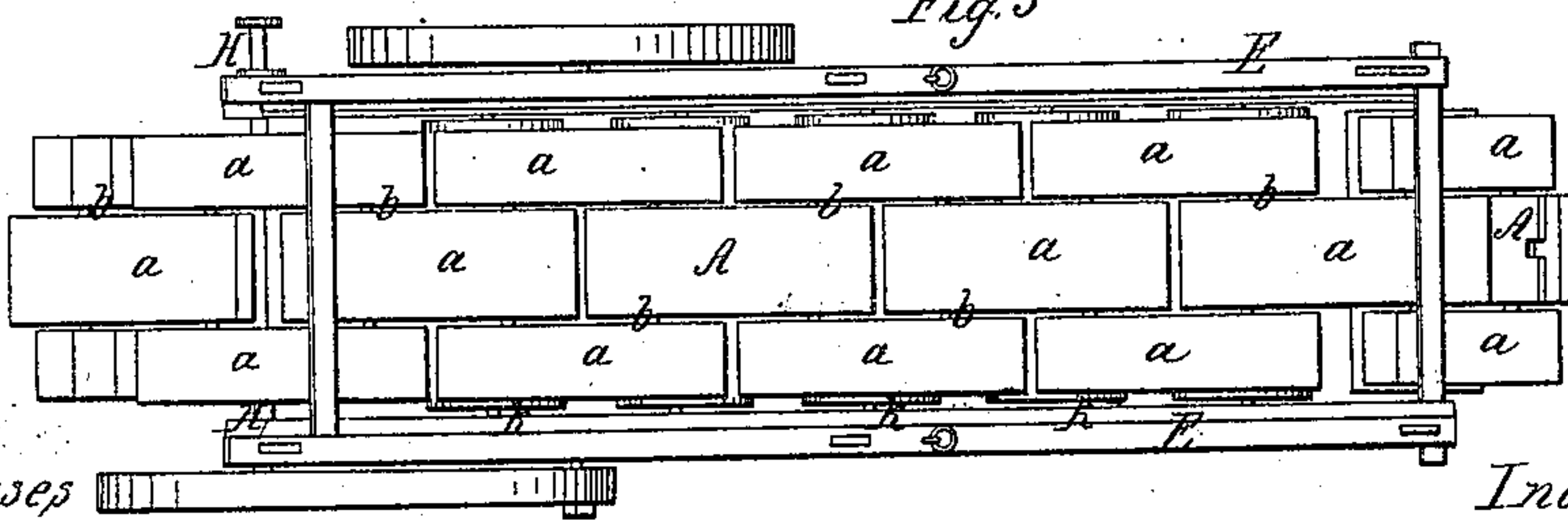


Fig. 3



Witnesses

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JOSEPH M. BLAKE, OF MADISON, WISCONSIN.

IMPROVEMENT IN HORSE-POWERS.

Specification forming part of Letters Patent No. 34,559, dated March 4, 1862.

To all whom it may concern:

Be it known that I, JOSEPH M. BLAKE, of the city of Madison, in the county of Dane and State of Wisconsin, have invented a new and useful Improvement in Endless-Chain Horse-Powers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation of the machine; Fig. 2, a vertical longitudinal section; Fig. 3, a plan or top view.

Similar letters of reference in each of the several figures indicate corresponding parts.

The nature of my invention consists, first, in so constructing the endless apron A of a series of connecting-blocks *a*, coupling-rods *b*, and supports *f* that the timber thereof constitutes both the track or flooring for the animal to travel upon, and the endless chain combined, as hereinafter described, and, second, in the arrangement of the large friction-rollers B, drum C, and end roller D, in combination with the endless apron A, for the purpose of resisting friction and increasing the efficiency of the machine, as hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The frame E is constructed in any of the known forms suitable for the purposes thereof substantially as represented, and a bed-piece G, for the support of the rollers B, is placed in each side of the frame E, and at the head of the frame E is placed a drive-shaft H, with the drum C, which drum is made of wood or iron, or both, with four, five, six, or any other number of equal sides desired and which can be made to fit into the angles of the apron A as it passes around it, and in the sides of which drum are fixed projecting teeth or cogs *i*, into which the supports *f* mesh, or their equivalent is provided to prevent the apron A from slipping thereon. At the foot of the frame E is placed a roller D, which is either round or of any desired number of sides, and which is made of wood or iron, or both, either hollow or solid, and upon the bed-pieces G, by means of journals *k* and boxes, are arranged a series of large friction-rollers B transversely to the apron A, which revolve upon their journals respectively as the apron

A passes over them in its revolutions. These rollers B are each constructed in the form of a cylinder, either hollow or solid and of wood or iron, or both, and are provided with journals *k*, which run in boxes upon the top of the bed-pieces G.

The apron A is constructed of any given number of connecting-blocks *a* of a uniform length and thickness and of any desired width, and through each end of all these connecting-blocks *a*, near the bottom or under side thereof, and one-quarter of the distance from either end to the other, holes are bored, through which pass the coupling-rods *b* transversely to the blocks *a*, and in the center of all the blocks *a*, in every second tier thereof, mortises are made, into which are fitted the supports *f* (or their equivalent) parallel to the above-mentioned rods *b* and in a line with them. The ends of all the blocks *a* in the other tier or tiers thereof are cut or framed in such a manner that they rest firmly on the supports *f* when any part of the apron A is in a straight line, thus making the apron A self-supporting and inflexible, so that the weight of the animal when traveling thereon bears uniformly upon all of the friction-rollers B, while the apron A passes smoothly over them in a straight line without sagging between or jostling against them, thereby forming a firm and even track or flooring for the animal to travel upon, and at the same time this flooring or apron A passes freely around the drum C and end roller D with all the flexibility of an ordinary endless chain.

The connecting-blocks *a* are put together and held in their respective places in the apron A by means of the coupling-rods *b* and supports *f*, so that either end of every block reaches to the center of some other block or blocks by its side, respectively.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The endless apron A, when constructed substantially as described, with supports *f* and connecting-blocks *a*.
2. The arrangement of the large friction-rollers B, drum C, and end roller D, in combination with the endless apron A, substantially as and for the purposes specified.

JOSEPH M. BLAKE.

Witnesses:

MONROE DEAN,
G. B. HOLDEN.