(No Model.)

J. SHERIDAN.

APPARATUS FOR HANDLING PAVING BLOCKS.

No. 568,147. Patented Sept. 22, 1896.

Fig. 1.

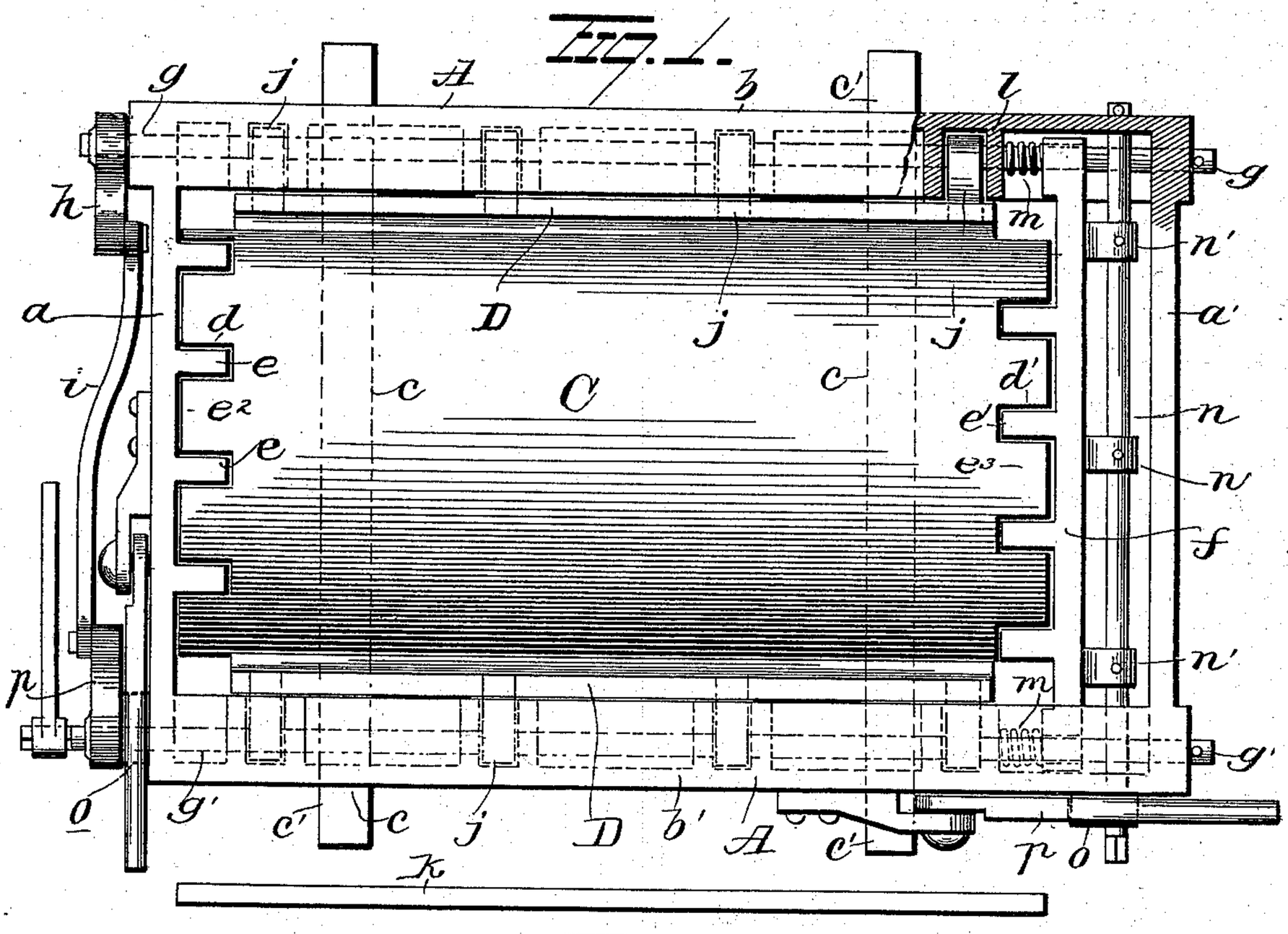


Fig. 2.

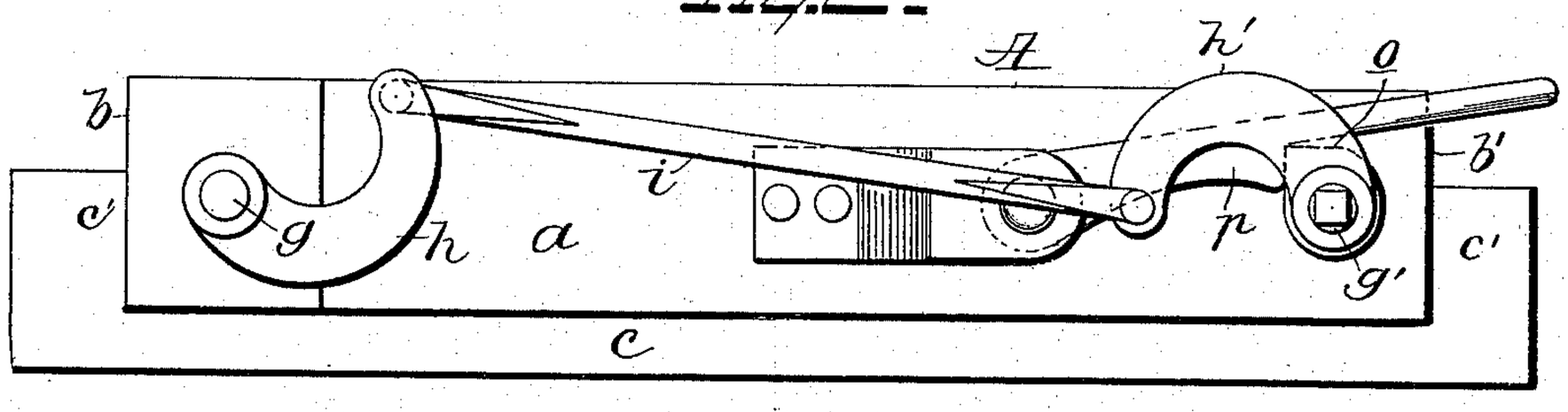
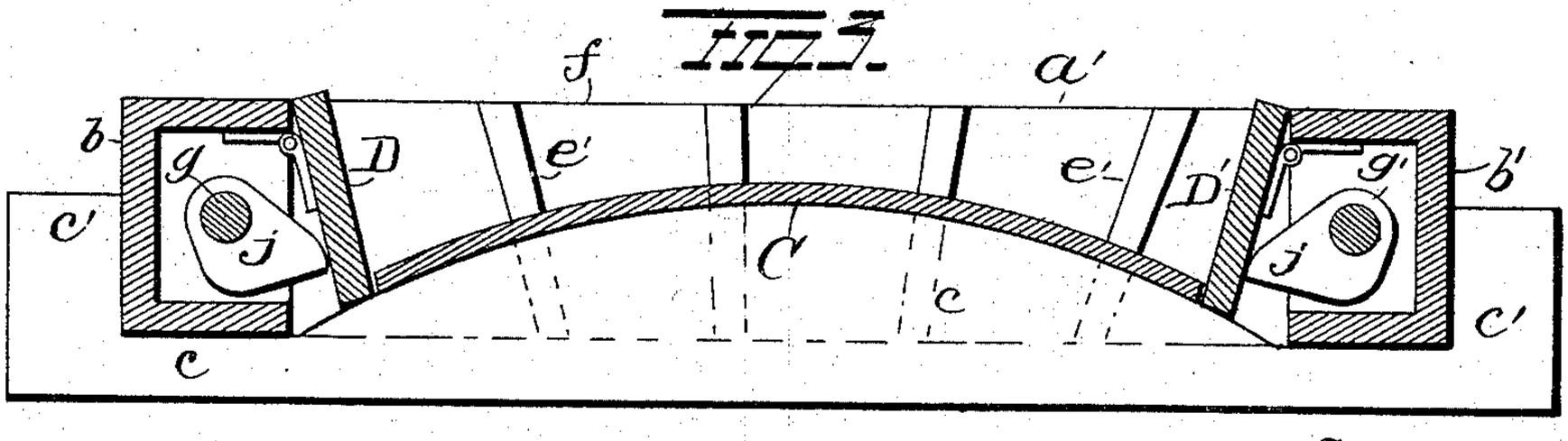


Fig. 3.



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JAMES SHERIDAN, OF FRANKLIN, PENNSYLVANIA.

APPARATUS FOR HANDLING PAVING-BLOCKS.

SPECIFICATION forming part of Letters Patent No. 568,147, dated September 22, 1896.

Application filed June 16, 1894. Renewed July 14, 1896. Serial No. 599,195. (No model.)

To all whom it may concern:

Be it known that I, JAMES SHERIDAN, a resident of Franklin, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Handling Paving-Blocks; and I 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.

My invention relates to an improvement in apparatus for handling paving bricks or blocks, the object of the invention being to produce a device by means of which paving blocks or bricks can be easily and quickly taken from a wagon or car on which they are stored or piled and place them in position on the road-bed without the necessity of rehandling, thus expediting the laying of the pavement and reducing the expense thereof.

A further object is to produce a device for the purpose stated which shall be simple in construction and effectual in all respects in the performance of its functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view illustrating my improved apparatus. Fig. 2 is an end view. Fig. 3 is a sectional view.

A represents a frame of sufficient size to receive one, two, or three yards of paving blocks or bricks, and comprises end bars a a' and side bars b b', the latter preferably being made hollow. The frame normally rests loosely on cross-bars c c, having upwardly-projecting lugs c' at their ends adapted to lie parallel with the side bars of the frame, and to said cross-bars an arched board or plate C is secured and constitutes a base on which the blocks or bricks placed within the frame rest. The respective ends of the plate or base C are made with notches d d' for the accommodation of lugs e e', projecting, respectively, from the cross or end bar a of the frame and a movable cross-bar f, the purpose and arrangement of which latter will be presently explained. Hinged at their upper edges to the side bars b b' of the frame A are clamping bars or plates D D', and in the hollow side bars b b', outside of said clamping bars or plates, shafts g g' are respectively mounted, one end of each shaft projecting beyond the end of the frame A, where they are provided with crank-arms h h', and said crank-arms are connected together by means of a rod or pitman i. One of the shafts will preferably be made angular at its free end for the reception of a suitable crank by means of which to turn it. To each shaft g g' a series of cams j is secured, said cams being adapted, when the shafts are turned in one direction, to engage the rear faces of the clamping bars or plates D D' and force them into intimate contact with the blocks or bricks in the frame, said clamping-bars constituting the bases of the arch of blocks or bricks. Should the arch of blocks be not sufficient to completely span the space between the clamping-bars, a filling-strip k may be employed.

The movable cross-bar f is mounted loosely at its ends on the shafts g g', and on said shafts, between the ends of said movable cross-bar and lugs or abutments l in the hollow side bars b b', springs m are placed, so as to return said cross-bar to its normal position when released. Between the end bar a' of the frame and the movable cross-bar f a shaft n is mounted and provided with cams n', which, when the shaft is turned, engages said movable cross-bar and forces it into intimate contact with the end of the blocks or bricks, thus clamping the blocks or bricks between said cross-bar f and the cross-bar a of the frame A. Each shaft g n is provided exteriorly of the frame A with a cam o, with which pivoted dogs p are adapted to engage and prevent the shafts from rotating when the arch of bricks or blocks shall have been clamped in the frame.

By providing the cross-bars a and f with lugs e e' recesses e^2 e^3 will be formed, and when the blocks or bricks are placed in position in the frame one end of each row will rest in a recess and the other end against a lug at the opposite end of the frame, and thus

the blocks or bricks of one row will break joints with those of the adjacent row.

A frame A, having an arched base, as above explained, will be first placed on a wagon or car and the blocks or bricks placed therein, as above described, and said blocks or bricks will then be clamped in the frame. Another frame will be placed on the first and another series of blocks or bricks placed and clamped in the second frame. Any desired number of frames A, containing blocks or bricks, will be piled one on another, but the bottom frame only will be provided with the arched board or base, the blocks or bricks themselves forming the base for those above.

When the place where the pavement is to be laid is reached, a frame A, containing the blocks or bricks, will be lifted off the car or wagon and placed on the road-bed, preferably by means of a suitable crane or derrick. When the frame shall have been thus placed on the road-bed, the clamping devices will be released and the blocks or bricks permitted to fall upon the road-bed in the position in which it is desired they shall remain. The empty frames will be loaded on another wagon or car ready to be transported to the place of supply, where they will be again filled in the same manner as above explained.

My improvements are very simple in construction. By their use the repeated handling of the blocks or bricks will be avoided, thus saving much time and labor, and my improvements are effectual in all respects in the performance of their functions.

Various slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details of construction herein set forth; but,

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

1. In an apparatus for handling blocks or bricks, the combination with a frame, and clamps, of cam mechanism outside of the clamps for forcing them toward each other against the blocks or bricks to hold the latter between the clamps, substantially as set forth.

2. In an apparatus for handling bricks and blocks, the combination with a frame and base upon which the blocks or bricks are piled, of clamps at one edge at least adapted to fasten the bricks or blocks in the frame, substantially as set forth.

3. In an apparatus for handling paving blocks or bricks, the combination with a frame adapted to receive said blocks or bricks between its sides and, of clamping devices for retaining said blocks or bricks in the frame, and an arched base under said frame for the reception of said blocks or bricks, substantially as set forth.

4. In an apparatus for handling paving blocks or bricks, the combination with a frame adapted to receive said blocks or bricks, of clamping devices for retaining said blocks or bricks in the frame, lugs at the ends of said frame, and an arched base for the reception of said bricks or blocks, said base being constructed at its ends to enter the spaces between said lugs, substantially as set forth.

5. In an apparatus for handling paving blocks or bricks, the combination with a frame comprising side and end bars, of clamping-bars connected with said side bars, shafts carried by the side bars, and cams carried by said shafts and adapted to cause said clamping-bars to clamp the blocks in the frame, substantially as set forth.

6. In an apparatus for handling paving blocks or bricks, the combination with a frame comprising side and end bars, of clamping-bars connected with said side bars, shafts carried by the side bars, cams secured to said shafts and adapted to force the clamping-bars against the blocks or bricks in the frame, crank-arms carried by said shafts, a pitman connecting said crank-arms whereby to cause them to turn together, a cam carried by one of said shafts at or near one end, and a pivoted dog adapted to be made to engage said last-mentioned cam to retain the shafts in locked position, substantially as set forth.

7. In an apparatus for handling paving blocks or bricks, the combination with a frame, comprising end bars and hollow side bars, of clamping-bars hinged to said side bars, shafts mounted in the hollow side bars, cams secured to said shafts and adapted to cause the clamping-bars to clamp the blocks or bricks in the frame, and means for retaining said shafts in locked position, substantially as set forth.

8. In an apparatus for handling paving blocks or bricks, the combination with a frame comprising end and side bars, of clamping-bars connected with the side bars, shafts mounted in the side bars, cams carried by said shafts and adapted to operate the clamping-bars to clamp the blocks or bricks in the frame, a cross-bar mounted loosely at its ends on said shafts, springs interposed between said cross-bar and lugs in the side bars, a shaft in rear of said cross-bar and cams on said shaft adapted to move said cross-bar to clamp the blocks or bricks between it and the opposite end of the frame, substantially as set forth.

9. In an apparatus for handling paving blocks or bricks, the combination with a frame adapted to receive a series of paving blocks or bricks arranged in the form of an arch, of clamping devices adapted to constitute the bases of said arch, a movable cross-bar near one end of the frame, a shaft mounted in rear of said movable cross-bar, cams on said shaft adapted to engage said cross-bar and clamp the blocks or bricks between it

and the opposite end of the frame, a cam secured to said shaft at or near one end, and a dog pivoted to the frame and adapted to engage said last-mentioned cam and lock the shaft in position when the blocks or bricks are clamped in the frame, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES SHERIDAN.

Witnesses:
T. B. LA RUE,
E. H. LAMBERTON.